



TRENDS IN ECONOMICS OF TOBACCO AND ITS COMPETING CROPS IN NELLORE AND PRAKASAM DISTRICTS OF ANDHRA PRADESH

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ABSTRACT

The present study was conducted to know the trends in productivity, prices, cost of cultivation and net returns of FCV tobacco and non-tobacco crops from 2002-03 to 2011-12. Non – tobacco crops selected for the study were bengalgram, redgram and paddy. The results showed that, the productivity of all crops registered a negative growth, while paddy recorded a positive growth rate with mild fluctuations. Similarly, the prices and cost of cultivation of FCV tobacco and other crops showed a positive growth with an increasing trend, whereas net returns from all crops registered a negative growth rate except paddy crop, which recorded a positive growth with highly fluctuating trend.

KEYWORDS: Cost of cultivation, Net returns, Prices, Productivity, Trends.

INTRODUCTION

India has a prominent place in the production of tobacco in the world due to varied agro-climatic conditions and different types of tobacco it produces. Important among them, in terms of exports, is the flue-cured Virginia tobacco (FCV), the cultivation of which has been in vogue for the last 100 years. India stands third in production of tobacco, where as China and Brazil occupy the first and second positions respectively.

In exports, Brazil and USA are ahead of India. Presently, tobacco is being cultivated in an area of about 4.93 Lakh hectares (0.24 per cent of total arable land) in the country covering different styles / types of tobacco viz., cigarette tobacco, bidi tobacco, chewing tobacco, hookah tobacco, cheroot tobacco, cigar wrapper tobacco, cigar filler tobacco, oriental tobacco, dark fire cured tobacco, etc., with a production of 800 Million Kgs (M.Kgs). Out of the total production about 50 per cent is cigarette type and 50 per cent is non-cigarette type of tobacco. Out of this around 265 M. Kgs. is flue-cured Virginia tobacco (FCV) which is produced in an area of 2.17 Lakh hectares mainly in the states of Andhra Pradesh and Karnataka. Traditional growth zone is comprised Southern Black Cotton Soils (SBCS) and Southern Light Soils (SLS) and is one of the most important region among the different Flue Cured Virginia (FCV) growing regions in India. Tobacco is grown here in almost 958 villages of Prakasam and Nellore districts across 13 Tobacco Auction

Platforms (TAP). More than 35,000 farmers and 1,00,000 farm labourers are engaged in tobacco cultivation in this region, which makes it the most important commercial crop which influences the farm economy of the region. This study aims to assess the trends in farmers' economics between tobacco and other crops for the last ten years.

MATERIAL AND METHODS

For the purpose of the present study, two districts namely Nellore and Prakasam were selected. Data regarding productivity, prices, cost of cultivation and net returns from 2002-03 to 2011-12 were obtained from Directorate of Economic and Statistics (DES), Indiatat.com and Agmark.net websites.

Growth Model: The growth in productivity, prices, cost of cultivation and net returns of the tobacco and non-tobacco crops selected in the two districts were analysed using the exponential growth function of the form.

$$Y_t = ab^t e^{\dots\dots\dots} \quad (1)$$

where,

- Y_t : Dependent variable (Productivity in kg per hectare, Prices in Rs. Per tonne, Cost of cultivation in Rs. per hectare, Net returns in Rs. per hectare)
- t : Time period
- a : Intercept value (value of y when $t = 0$)
- b : Regression coefficient
- e : Error term

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Equation (1) was converted into the logarithmic form in order to facilitate the use of linear regression. Taking logarithms on both sides.

$$\ln Y_t = \ln a + t \ln b + u \dots\dots\dots(2)$$

$\ln a$ and $\ln b$ are obtained by application of Ordinary Least Squares (OLS) procedure to equation (2) and the growth rate CGR was derived using the relationship:

$$\text{CGR} = \text{Anti log } (b - 1) \times 100 \dots\dots\dots (3)$$

RESULTS AND DISCUSSION

Compound Growth Rates (CGR) for the productivity, prices, cost of cultivation and net returns were calculated and presented in the Tables 1, 2, 3 and 4 respectively. Trends for the same were worked out and portrayed in the Figures 1, 2, 3 and 4 respectively.

1. Trends in Productivity from Tobacco and other Crops

Table 1 presents the growth rates of productivity of FCV tobacco, bengalgram, redgram and paddy. It was evident from the table that only paddy crop registered a positive growth while rest of the crops recorded a negative growth. The growth rate in the productivity was highest in the case of paddy (0.84 per cent) followed by FCV tobacco (0.33 per cent), redgram (-1.64 per cent) and bengalgram (-3.98 per cent).

The Figure 1 depicts that the productivity of FCV tobacco, bengalgram, redgram, paddy ranges from 1,142 to 1,377 kg per hectare, 742 to 1790 kg per hectare, 550 to 1,420 kg per hectare and 4,970 to 5,600 kg per hectare respectively.

It was observed that productivity of FCV tobacco recorded lesser fluctuated growth trend, while the growth trends for other crops are with fluctuating passion. The trend reflects the lacunae of research to improve the productivity of FCV tobacco when compared to other crops.

2. Trends in Prices of Tobacco and other Crops

It was apparent from the Table 2 that there was a positive growth in prices of all the crops. It was highest in FCV tobacco (10.93 per cent) followed by redgram (9.64 per cent), bengalgram (7.80 per cent) and paddy (7.45 per cent).

Figure 2 illustrates that the prices of FCV tobacco, bengalgram, redgram and paddy, which ranged from ₹ 39,155 to ₹ 95,060, ₹ 12,160 to ₹ 29,400, ₹ 15,430 to ₹ 35,360 and ₹ 5,467 to ₹ 11,500 respectively.

It was clearly observed that there was an increasing trend in the prices of all the crops and it was also noticed that there was a sudden raise in the prices of FCV tobacco in 2008-09 and continued the increasing trend, while rest of the crops showed an increasing trend in fluctuated passion.

Trends in cost of Cultivation between Tobacco and other Crops.

Table 3 narrates that there was a positive growth in cost of cultivation of all the crops. The highest growth rate was seen in redgram (11.05 per cent), followed by bengalgram (10.88 per cent), paddy (9.50 per cent) and FCV tobacco (9.46 per cent).

The Figure 3 portrayed that there was an increasing trend of cost of cultivation in all crops. The cost of cultivation of FCV tobacco, bengalgram, redgram and paddy ranges from ₹ 47,156 to ₹ 1,02,850, ₹ 12,747 to ₹ 28,608, ₹ 12,201 to ₹ 33,990 and ₹ 28,570 to ₹ 58,105 respectively. It was conspicuous that there was two folds increase in the cost of cultivation of all the crops over a period of 10 years.

Figure 3 showed the increasing trends in cost of cultivation of all crops with a consistent growth indicating that the cost of input and input services in farm enterprise are increasing over year by year

4. Trends in Net Returns between Tobacco and Other Crops

A perusal of Table 4 revealed that, the net returns from paddy crop only registered a positive growth rate of 6.56 percent, whereas the net returns from bengalgram, redgram and FCV tobacco recorded negative growth rates.

Figure 4 showed that the net returns from FCV tobacco, bengalgram, redgram and paddy varied from ₹ 5,300 to ₹ 48,851, ₹ 17,63 to ₹ 10954, ₹ -1058 to ₹ 11610 and ₹ 2646 to ₹ 10652 respectively.

It was noticed that the net returns from all crops are in highly fluctuating trend. The net returns from FCV tobacco reached a peak of 48,851 in 2008-09 due to sudden raise in the price for FCV tobacco in the same period.

Table 1. CGR for productivity of tobacco and other competing crops

S. No.	Productivity	CGR (in percentage) (from 2002-03 to 2011-12)
1	FCV tobacco	-0.33
2	Bengalgram	-3.98
3	Redgram	-1.64
4	Paddy	0.84

Source: Agmark.net and Indiastat (2002-03 to 2011-12)

Table 2. CGR for prices of tobacco and other competing crops

S. No.	Prices	CGR (in percentage) (from 2002-03 to 2011-12)
1	FCV tobacco	10.93
2	Bengalgram	7.80
3	Redgram	9.64
4	Paddy	7.45

Source: Agmark.net and Indiastat (2002-03 to 2011-12)

Table 3. CGR for cost of cultivation of tobacco and other competing crops

S. No.	Prices	CGR (in percentage) (from 2002-03 to 2011-12)
1	FCV tobacco	10.93
2	Bengalgram	7.80
3	Redgram	9.64
4	Paddy	7.45

Source: Agmark.net and Indiastat (2002-03 to 2011-12)

Table 4. CGR for net returns from tobacco and other competing crops

S. No	Net returns	CGR (in percentage) (from 2002-03 to 2011-12)
1	FCV tobacco	-0.76
2	Bengalgram	-7.42
3	Redgram	-11.91
4	Paddy	6.56

Source: DES and Indiastat (2002-03 to 2011-12)

Trends in economics of tobacco crop

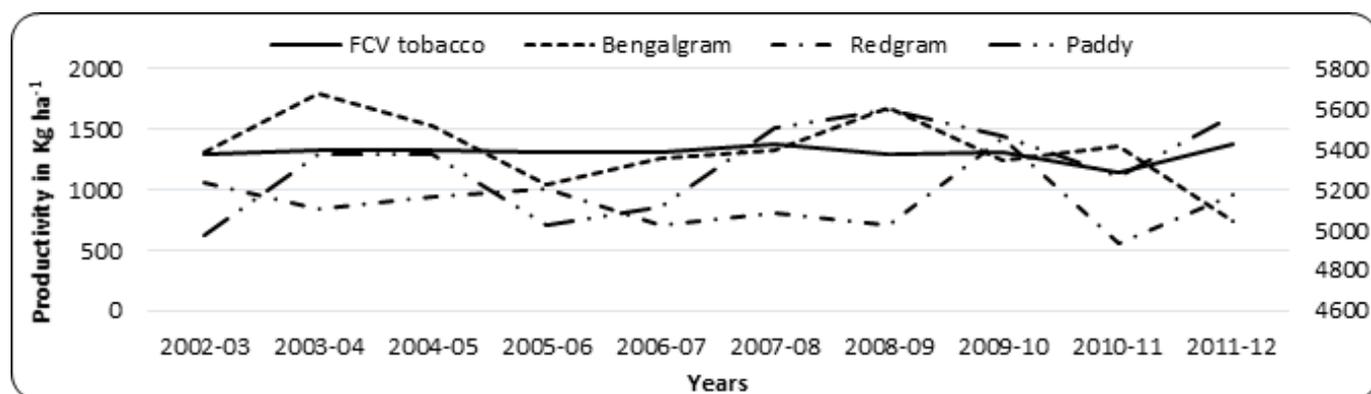


Fig. 1. Trends in Productivity of tobacco and other crops

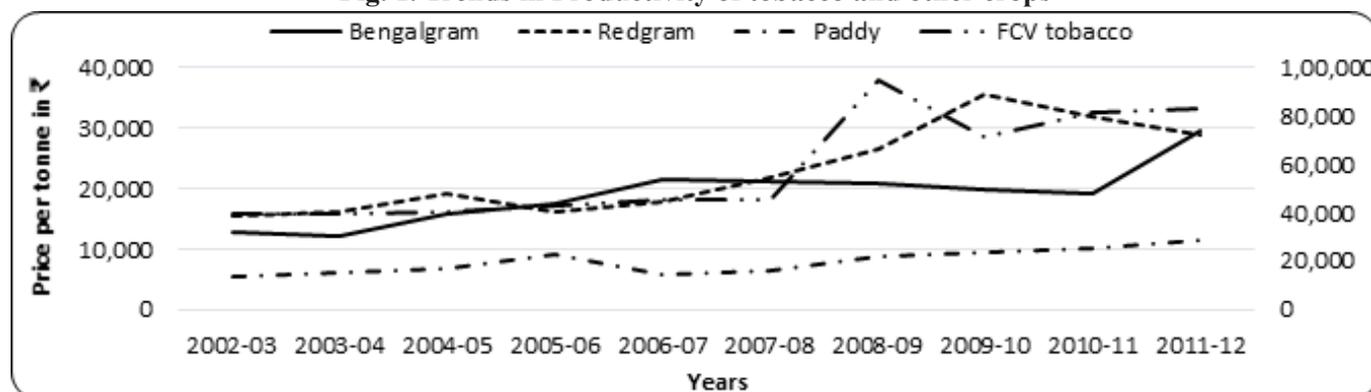


Fig. 2. Trends in prices of tobacco and other crop

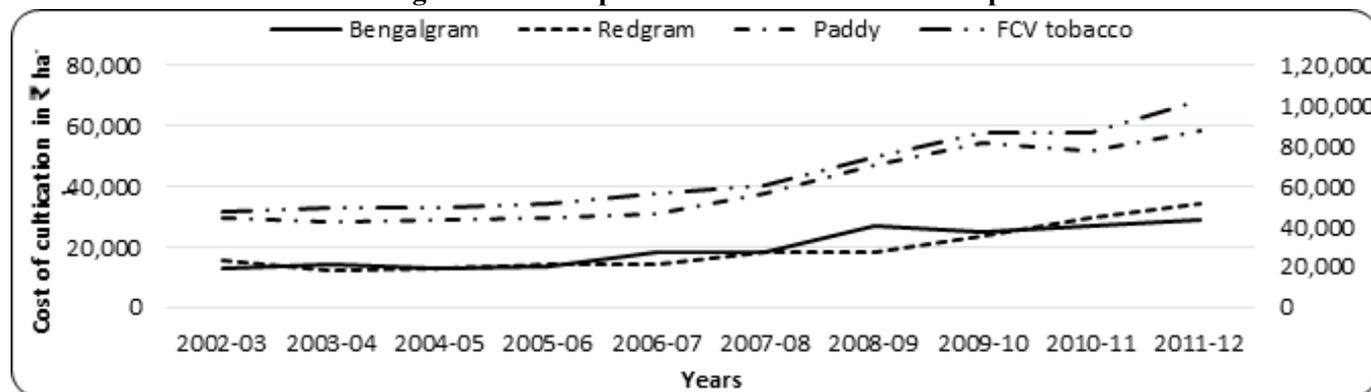


Fig. 3. Trends in cost of cultivation of tobacco and other crops

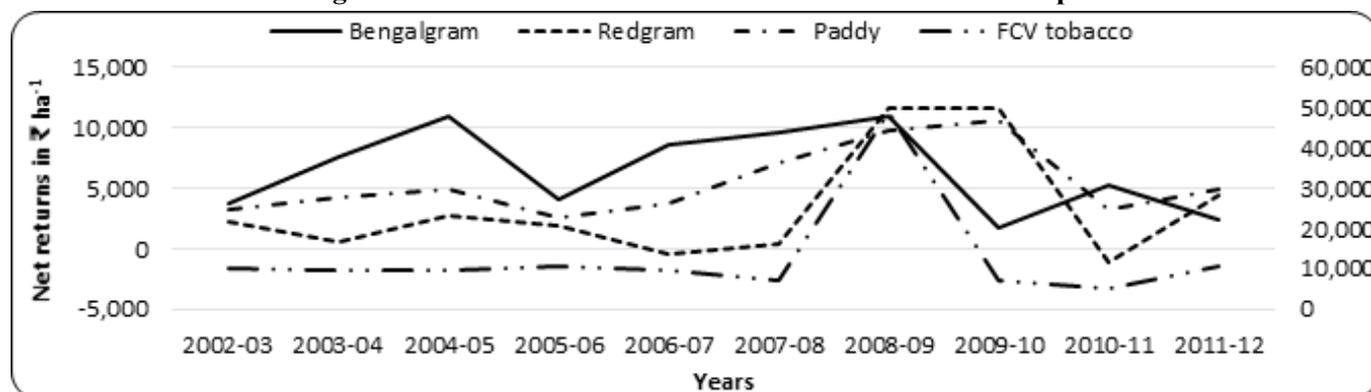


Fig. 4. Trends in net returns from tobacco and other crops

It was also observed that redgram had recorded negative net returns in 2006-07 and 2010-11. The overall scenario of these fluctuating trends of net returns indicate the need for research on the areas which curb the returns to farmers.

CONCLUSIONS

The growth rate in the productivity was highest in the case of paddy (0.84 per cent) followed by FCV tobacco (0.33 per cent), redgram (-7.64 per cent) and begalgram (-3.98 per cent). There was a positive growth in prices of all the crops. It was highest in FCV tobacco (10.93 per cent) followed by redgram (9.64 per cent), bengalgram (7.80 per cent) and paddy (7.45 per cent). Cost of cultivation too recorded positive growth for all the crops. The highest growth rate was seen in redgram (11.05 per cent), followed by bengalgram (10.88 per cent), paddy (9.50 per cent) and FCV tobacco (9.46 per cent). The net returns from FCV tobacco, bengalgram, redgram and paddy ranged from ₹ 5,300 to ₹ 48,851, ₹ 1,763 to ₹ 10,954, ₹ -1,058 to ₹ 11,610 and ₹ 2,646 to ₹ 10,652 respectively.

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