

## CONSTRAINTS OF FCV TOBACCO GROWERS FOR ALTERNATIVE CROPS IN NORTHERN LIGHT SOILS OF ANDHRA PRADESH

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(Received on 2<sup>nd</sup> April, 2021 and accepted on 13<sup>th</sup> May, 2021)

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**The FCV tobacco is grown in Northern Light Soil (NLS) region (East Godavari, West Godavari and Khammam districts. The tobacco grown in NLS region is of semi flavourful to flavourful types, which has got international market demand to Europe and UK. The enterprising farmers of the region are not leaving the tobacco crop due to many reasons. In this backdrop, there is a need felt to identify the constraints faced by the farmers in the production of FCV tobacco. A total of 500 farmers were selected equally from both progressive and non progressive villages from NLS area on stratified random sampling procedure. A list of constraints in farming were prepared and categorized into personal constraints, socio-economic constraints, technical constraints, soil and climate constraints and organizational constraints. Data was collected by interviewing and focused group method and by obtaining information through a pre-tested schedule. The results indicated that some of the constraints viz., high cost of inputs, untimely supply of credit, low net returns, less availability of labour, poor farm mechanization, inefficient use of resources forced the farmers to continue to cultivate the crop. Lack of assured income in other crops, non-availability and inadequate supply of critical inputs, lack of proper technical and extension guidance, high pest and disease incidence in other crops were the main constraints coming in way to adopt suitable alternative crops. The study concludes that the tobacco crop acts as a ready reckoner for the farmer in case of bank loans, inputs and other beneficial factors motivating the farmers to continue the crop. The study also suggests Government to implement agricultural policies and to provide sufficient economic support for the farmers to achieve the outcome of nation's economy.**

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### INTRODUCTION

In the present scenario of tobacco production, where there is a lack of buoyancy in the world tobacco market prices, anti tobacco campaign etc., crop diversification is highly essential. Flue Cured Tobacco (FCV) grown under irrigated conditions in northern light soils of Andhra Pradesh (NLS). During 2019-20 crop season, the Tobacco Board has fixed a crop size of 236 million kg for cultivation of FCV tobacco. Total plantation in Northern Light Soil region this year was 17,911.60 ha., which is less by 12% when compared to 20,288.45 ha. planted in 2018-19. In NLS Region, the area under FCV tobacco has declined during this crop season due to scarcity of skilled labor and increase in area under plantation crops. The tobacco produced in India has a wide range in quality such as semi-flavorful to flavorful in NLS area.

Tobacco produced in this zone is considered as quality crop and fetches remunerative prices to the farmer. However, India being a signatory to Framework Convention on Tobacco Control (FCTC) under World Health Organization (WHO), the tobacco production in our country is to be regulated and the farmers need to be encouraged in adoption of remunerative farming systems in place of tobacco. Hence, the present study was taken up with an objective to assess the extent of the cultivation of other crops in NLS region and constraints that are preventing the NLS tobacco farmers in cultivating crops other than tobacco.

### MATERIALS & METHODS:

A survey was conducted in FCV tobacco growing villages of Northern light soils (NLS) of

**Keywords:** Constraints, Alternate crops, Assured income, FCV tobacco and Awareness

**Table 1: Selection of farmers from NLS area**

Sl.No	Name of the APF	List of villages	Marginal	Small	Large	Total No. of farmers
1	Devarapalli	Gandhinagaram Yernagudem Dhuanthunigudem Krishnampalem Kodigudem	30	30	40	100
2	Gopalapuram	Gopalapuram Vadalakunta Chityala, Rajampalem Vella chintalagudem	30	30	40	100
3	Koyyala-gudem	Dippakayalapadu Atchiahpalem Pothavaram	30	30	40	100
4	Jangareddy-gudem I	Thirumalapuram DevulapalliGangavaram	30	30	40	100
5	Jangareddy-gudem II	Makkenavarigudem Venkatapuram Chillavarigudem Vutlapalli, Taduvai	30	30	40	100

Andhra Pradesh by randomly selecting a sample of 500 NLS farmers 100 each from Devarapalli, Jangareddygudem I & II (Table 1), Gopalapuram and Koyyalagudem tobacco Auction Platforms (APFs) in order to know the cropping pattern and extent of cultivation of other crops in NLS area.

## RESULTS AND DISCUSSIONS:

### I. Crops grown in NLS area:

In order to know the other remunerative crops adopted and extent of cultivation by the FCV tobacco farmers in Northern light soils (NLS) of Andhra Pradesh, a study was conducted in FCV tobacco growing villages. NLS soils are sandy to sandy loam with irrigation facilities through borewells. The tobacco grown in this region is considered as semi flavorful and fetches more price when compared to other zones.

In Devarapalli platform, out of the total area surveyed, 55.13 % area is occupied by tobacco, followed by eucalyptus (29.02%), oil palm (8.19%), sugarcane (5.67%) and maize (1.98%). In

Jangareddygudem-I, out of the total area surveyed, 50.35 % of the area is under tobacco cultivation, followed by eucalyptus (29.60%), oil palm (12.68%), sugarcane (5.08%) and maize (2.25%). From Jangareddygudem-II platform, out of the total area surveyed, 53.14% of the area is under tobacco cultivation, followed by eucalyptus (31.33%), oil palm (12.28%), maize (1.79%) and sugarcane (1.44%). Regarding Gopalapuram platform, out of the total area surveyed, 59.17% of the farmers are cultivating tobacco, followed by eucalyptus (33.08%), oil palm (6.03%), maize (0.93%) and sugarcane (0.77%). In Koyyalagudem, out of the total area surveyed, 73.22 % of the farmers are cultivating tobacco, followed by maize (10.06%), oil palm (8.31%), eucalyptus (6.06%) and sugarcane (2.33). Thus out of the total NLS area, 57.42% is occupied by tobacco followed by eucalyptus (26.68%), oil palm (9.8%), maize (3.14%) and sugar cane (2.94%). It is observed from the above table that oil palm and eucalyptus are slowly occupying the tobacco cropped area in NLS region. The farmers opined that the eucalyptus can be recommended in low fertile barren lands of NLS as its cultivation is remunerative.

**Table2: Alternative Crops grown by tobacco farmers in NLS region (N=500)**

Sl. No.	Auction Platform	Total Area under tobacco cultivation in ha * (acres surveyed)	Data collected area (acres)	No. of farmers	Tobacco (acres)	Oil-palm (acres)	Maize (acres)	Sugarcane (acres)	Eucalyptus (acres)
1	Devarapalli	2664.85 *(12549.5)	2222	100	1225 (55.13)	182 (8.19)	44 (1.98)	126 (5.67)	645 (29.02)
2	Jangareddy Gudem-I	4206.90 *(16125.00)	2790	100	1405 (50.35)	354 (12.68)	63 (2.25)	142 (5.08)	826 (29.60)
3	Jangareddy Gudem-II	4190.00 *(17586.75)	3453	100	1835 (53.14)	424 (12.28)	62 (1.79)	50 (1.44)	1082 (31.33)
4	Gopalapuram	2862.00 *(13115.00)	2569	100	1520 (59.17)	155 (6.03)	24 (0.93)	20 (0.77)	850 (33.08)
5	Koyyalagudem	3987.85 *(16085.00)	2226	100	1630 (73.22)	185 (8.31)	224 (10.06)	52 (2.33)	135 (6.06)
	NLS Area	17911.60 *(75461.25)	13,260	500	7615 (57.42)	1300 (9.80)	417 (3.14)	390 (2.94)	3538 (26.68)

Figures in the parenthesis indicate percentages of farmers.

## II. Constraint analysis for non-adoption of other crops to tobacco

One hundred and twenty progressive farmers were selected on stratified random sampling procedure from NLS region from Devarapalli, Jangareddygudem I & II (Table 1), Gopalapuram and Koyyalagudem tobacco Auction Platforms (APFs). A structured pre-tested interview schedule was constructed to elicit information regarding constraints faced by the tobacco farmers for non-

adoption of other crops. The farmers were interviewed personally. Different categories of the constraints were identified, tabulated ranked and presented. Uma Rani (2010) and Mary et.al (2013) have also studied the socio-economic and technological constraints for adoption of mechanization in rice cultivation and found that the classification of constraints was found to be effective.

Table II (a) indicates the criteria of selection of farmers. A total of 120 farmers from twelve

**Table II (a) : Criteria of selection of farmers**

Sl.No	Name of the APF	List of villages	Marginal & small
1	Devarapalli	Gandhinagaram Yernagudem Krishnampalem	10 10 10
2	Gopalapuram	Gopalapuram Vadalakunta Vella chintalagudem	10 10 10
3	Koyyala-gudem	Dippakayalapadu Atchiahpalem	10 10
4	Jangareddy-gudem I	Thirumalapuram Gangavaram	10 10
5	Jangareddy-gudem II	Makkenavarigudem Venkatapuram	10 10
<b>Total</b>	<b>100</b>		

progressive villages were constituted as sample for the study representing 10 each from selected villages of 5 auction platforms by stratified random sampling procedure.

The types of constraints that were considered are personal constraints, socio-economic, technical/extension constraints, soil and climatic constraints and government/organizational constraints. The farmers ranked socio-economic constraints as the primary constraints followed by government/organizational constraints, technical / extension constraints, soil and climatic constraints and finally the personal constraints.

It is inferred from Table II (b), that majority of the farmers (76.6%) lack risk taking ability in cultivating other crops to tobacco as there are loan facilities readily available for tobacco crop. 51.6% of the farmers lack awareness in cultivating other crops as they have adopted tobacco crop from generations together. 45% of the farmers lack

initiative and innovation and they do not have assurance of net returns in other crops. 41.6% farmers lack entrepreneurial ability to cultivate and market the farm products. Out of all personal constraints, lack of risk taking ability was ranked high. A study conducted by Kalyani et.al, 2012 revealed that there is a significant improvement in the yields and net returns of NLS tobacco farmers and hence they are comfortable in continuing the crop.

Table II (c) indicates 95.83% of the farmers felt that 'lack of assured income' as the major constraint followed by non-availability of critical inputs in other crops (91.66%), low net returns in other crops (85%); lack of minimum support price for other crops (80%), untimely and inadequate supply of credit facilities (73.33%) lack of assured irrigation (65%), interference of middle men in the marketing (54.16%) for non adoption of other alternative crops.

**Table II (b): Personal constraints for non adoption of other crops (N=120)**

Sl.No.	Constraints	Frequency	Percentage	Rank
1	Lack of awareness and knowledge of other crops	62	51.6	II
2	Lack of risk taking ability	92	76.6	I
3	Lack of entrepreneurial behavior	50	41.6	IV
4	Lack of initiative and innovation	54	45	III

**Table II (c) : Socio-economic constraints for non adoption of other crops (N=120)**

Sl.No.	Constraints	Frequency	Percentage	Rank
1	Non availability of critical inputs in other crops	110	91.66	II
2	Interference of middle men/ mediators in the marketing	65	54.16	VII
3	Lack of assured irrigation & growing cost of fertilizers	78	65	VI
4	In-adequate & untimely supply of credit	88	73.33	V
5	Lack of minimum support price	96	80	IV
6	Low cost benefit ratio & low net returns in other crops.	102	85	III
7	Lack of assured income in other crops	115	95.83	I

**Table II (d) : Technical / Extension constraints (N=120)**

Sl.No.	Constraints	Frequency	Percentage	Rank
1	Lack of proper technical guidance	115	95.83	II
2	Inadequate support facilities and services	102	85	III
3	Lack of follow-up activities	80	66.66	V
4	Lack of specific marketing board like Tobacco Board and for encouraging farmers	118	98.33	I
5	Lack of support from extension agencies	100	83.33	IV

Regarding technical/extension constraints given in Table II (d), majority of the farmers (98.33%) opined that 'lack of specific marketing functional structures like Tobacco Board' for encouraging farmers as the primary constraint followed by lack of proper technical guidance (95.83%), inadequate support facilities (85%), lack of support from extension agencies (83.33%) and finally lack of follow up activities (66.66%) as the constraints for non-adoption of other crops to tobacco. The study by Naidu et al (2009) is in congruence with the present study revealing that the technical support from the extension and research institutions viz., tobacco board, trade and CTRI is high in tobacco crop. Hence the farmers felt that there is encouragement in tobacco crop.

Regarding soil and climatic conditions given in Table II (e), 85 percent of the farmers felt that there are weather vagaries and high pest and disease incidence in other crops, followed by rainfall variability (79.16%) and non-suitability of tobacco soils to other crops (70.83%) as the constraints for non adoption of other crops to tobacco. NLS soils are highly suitable for cultivation of tobacco with low N, K and Carbon levels, which can be easily manipulated to produce quality tobacco.

It is inferred from Table II (f), majority of farmers (87.5%) opined that lack of subsidy and loan facilities as the primary constraint, followed by lack of marketing and cold storage facilities

(76.66%), low scale of finance for other crops (73.33%), low minimum support price for other crops (66.66%) and no/low encouragement for other crops (58.33%) as the constraints for non-adoption of other crops. The studies by Naidu et.al. (2009) and Kalyani et.al. (2012) were in concurrence with the above results indicating that the farmers are very comfortable with tobacco cultivation with minimum risk.

From the present study it can be concluded that the major area occupied in Northern Light Soils is tobacco crop as it is highly remunerative compared to other crops. Tobacco farmers have no option for other crops due to various socio-economic and technical constraints. Lack of assured income, non-availability and inadequate supply of critical inputs, lack of proper technical and extension guidance, high pest and disease incidence were the main constraints in adoption of suitable alternative crops. The study concludes that the tobacco crop acts as a ready reckoner for the farmer for bank loan facility, supply of critical inputs and other beneficial factors and hence the farmer continues to cultivate the crop. At this juncture, tobacco research also indicates that transition strategies are to be initiated in the context of mobilizing farmers to shift from conventional chemical-based mono-cropping towards practices that are ecological, biodiversity-based, and socially and economically sustainable (U B I N I G, 2008).

**Table II (e): Soil and climatic constraints (N=120)**

Sl.No.	Constraints	Frequency	Percentage	Rank
1	Non suitability of tobacco soils for other crops	85	70.83	III
2	Rainfall variability and changing climatic conditions	95	79.16	II
3	Weather vagaries, high pest and disease incidence in other crops	102	85	I

**Table II (f): Government/ organizational constraints N= 120**

Sl.No.	Constraints	Frequency	Percentage	Rank
1	Lack of minimum support prices for other crops	80	66.66	IV
2	Low / no encouragement for other crops	70	58.33	V
3	Low scale of finance for other crops	88	73.33	III
4	Lack of subsidies and loans facilities in other crops	105	87.5	I
5	Lack of marketing and cold storage facilities	92	76.66	II

**REFERENCES**

- Annual Report, Tobacco Board, 2019-20.
- Mary Regina, F., P.Shaji James, P. Ahamed (2013) Constraints and Determinants in the Adoption of Mechanisation in Rice Cultivation. Journal of Agricultural Extension Management. Vol XIV No. 1
- Naidu S.K., Y.Subbaiah and K.S.Kalyani (2009). Constraints in adoption of recommended practices among FCV tobacco farmers of Andhra Pradesh. **Tob. Res.** 35(1&2): 27-30
- Kalyani, S.K, S.K. Naidu, S. N. Rao and N. A. Kumari (2012). Changing socio-economic scenario of FCV tobacco farmers in NLS area of Andhra Pradesh. **Agril. Sci. Digest.** 32(1):58-60.
- Uma Rani, K. (2010) Constraints Faced by the Farmwomen in Women Headed Households. **J. Agril. Exten. Mgmt.** Vol: XI(1).
- U B I N I G (Policy Research for Development Alternative) (2008). From Tobacco to Food Production: Assessing Constraints and Transition Strategies in Bangladesh. Final Technical Report. Dhaka, Bangladesh.
- Yogesh, HC and Srivastava, SK (20). Constraints Faced by the Flue-Cured Virginia Tobacco Growers in Andhra Pradesh and Karnataka. IARI, New Delhi. <http://dx.doi.org/10.12944/CARJ.6.3.22>.