

## A Study on Reasons for Crop Shift in Case of Sugarcane Crop in Visakhapatnam District of Andhra Pradesh

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### ABSTRACT

This study has been conducted to know the constraints for cultivation of sugarcane crop in Visakhapatnam district of Andhra Pradesh. The command area of sugar factories was selected purposively for the selection of villages. Six villages were selected out of three factory areas. The constraints faced by sugarcane farmers were classified in to four broad categories namely socio-economic constraint, technical constraints, administrative constraints and psychological constraints. The results revealed that major socioeconomic constraints faced by the sample growers were high labour cost (97.2%), unavailability of farm machinery (90.0%), labour shortage (67.2%) and low profits (61.7%). Important technological constraints faced by the sugarcane growers were unavailability of high promising varieties (91.7%), high cost of seed and no subsidy on seed (85.5%). Moreover, existing varieties are highly prone to viral diseases (73.2%). While coming to the administrative constraints lack of intimate payments (88.8%), delayed cutting orders (85.0%), less input support from factories (77.7%). Less interest on sustainable use of resources in the study area whereas, (12.2%) low risk-taking ability, (11.1%) fear of indebtedness (8.8%) is the major psychological constraint which drove them to shift to other crops. From the present study we can conclude that farmers are facing several problems in cultivation of sugarcane. It is recommended that there is a necessity of intensification of extension services to address their constraints and to increase their level of adoption of recommended practices. The study also suggested the need to enhance the efforts in transfer of technology and credit availability to the small and marginal farmers.

*Key words:* Sugarcane growers, Constraints, Marketing, Crop shift

Sugar industry is the backbone to Indian economy and it is the second largest agro-based industry which contributes significantly to the economic development of the nation. Around 50 million farmers are depending on sugar industry for their livelihoods. It provides employment to many skilled and semi-skilled labourers. Andhra Pradesh state is one of the major sugarcane growing states of India. Here sugarcane is grown for making jaggery and to supply raw material to sugar factories. Visakhapatnam district is one of the major sugarcane growing districts of Andhra Pradesh. In Andhra Pradesh during 2017-18, the area under sugarcane crop was 0.99 lakh hectares and production was 79.48 lakh tonnes with productivity of 80.3 tonnes/ha. In the year 2010-11 the area under sugarcane was 40,038 ha which was reduced to 32,153 ha in 2017-18. Farmers in Visakhapatnam district of Andhra Pradesh for the last two years have been shifting from sugarcane production to other alternative crops due to various reasons. Keeping in view of the above discussion, the present study has been undertaken to know the constraints for cultivation of sugarcane crop in the Visakhapatnam district of Andhra Pradesh.

### MATERIALS AND METHODS

The present study was conducted in Visakhapatnam district of Andhra Pradesh where six villages from sugar factory command areas were selected purposively. From each village 30 farmers were selected randomly and the total sample size was 180 farmers. Interview schedule was developed and pre tested. Data collection was done by using interview schedules. The research was conducted in the year 2017-18. The constraints faced by sugarcane farmers were classified in to four broad categories namely socio-economic constraint, technical constraints, administrative constraints and psychological constraints. Simple statistics frequency and percentages were used to rank the constraints.

### RESULTS AND DISCUSSION

#### *Constraints faced by sugarcane growers*

The constraints faced by sugarcane growing farmers were divided into four broad categories namely socioeconomic constraints, technological constraints, administrative constraints and psychological constraints.

#### *Socio economic constraints*

The various types of socio-economic constraints faced by the sample growers were evaluated and given in (Table 1). Results highlight that major socioeconomic constraints faced

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by the sample farmers were high labour cost (97.2%), unavailability of farm machinery (90.0%), labour shortage (67.2%), low profits (61.7%), no machinery used for Sugar Cane was covered under subsidy (58.3%), high transport cost (49.4%), expensive farm machinery (33.3%), no capital flow

due to late payments by the sugar factories (31.1%), less loaning ability (22.2%) etc. Farmers were of opinion that these factors were greatly affecting their production and submitted their recommendations to address the issue with urgent attention [1].

Table 1 Distribution of sugarcane growers according to their socio-economic constraints

Reason/constraints	Frequency	Percentage	Rank
Small and marginal holding	38	21.1	XI
No capital flow due to late payments by the sugar factories	56	31.1	VIII
Low profits	111	61.7	IV
High labour cost	178	97.2	I
Unavailability of labour at peak time	121	67.2	III
Un availability of machinery	162	90.0	II
Expensive farm machinery	60	33.3	VII
No machinery used for sugarcane was covered with subsidy	105	58.3	V
High transport cost	89	49.4	VI
Poor transportation facilities	50	27.8	IX
Less loaning ability	40	22.2	X
Fluctuations in price	37	20.5	XII

#### Technological constraints

The data depicted in (Table 2) revealed that, the twelve important technological constraints faced by the sugarcane growers were unavailability of high yielding/promising varieties (91.7%), high cost of seed and no subsidy on seed (85.5%), existing sugarcane clones are highly prone to viral

diseases (73.2%), continuous cultivation of old varieties with redrot susceptibility (66.7%), neglected ratoon management (60.5%), not practicing improved agronomic practices (55.6%), low yields (48.8%), improper irrigation facilities with power interruption (35.5%), no subsidy on inputs (33.3%) etc. [2].

Table 2 Distribution of sugarcane growers according to their technical constraints

Reason/constraints	Frequency	Percentage	Rank
Unavailability of high yielding/promising varieties	165	91.7	I
High cost of seed and no subsidy on seed	154	85.5	II
No subsidy on inputs	60	33.3	IX
Improper irrigation facilities with power interruption	64	35.5	VIII
Frequent droughts/floods	51	28.3	X
Existing varieties are highly prone to viral diseases	132	73.2	III
Continuous cultivation of old varieties with redroot susceptibility	120	66.7	IV
Not practicing improved agronomic practices	100	55.6	VI
Neglected ratoon management	109	60.5	V
Low yields	88	48.8	VII

#### Administrative constraints

From (Table 3), it can be inferred that there were six important administrative constraints as faced by the sugarcane growers among them, lack of intimate payments (88.8%), Delayed cutting orders (85.0%), less input support from

factories (77.7%), less attention of factories to sustain the area under sugarcane (66.6%), less technical support from factories (56.1%), less efforts to sustain farmers under cultivation of sugarcane crop (22.2%) were some of the important administrative constraints faced by the sugarcane growers [3].

Table 3 Distribution of sugarcane growers according to their administrative constraints

Reason/constraints	Frequency	Percentage	Rank
Delayed cutting orders	153	85.0	II
Lack of intimate payments	160	88.8	I
Less attention of factories to sustain the area under sugarcane	120	66.6	IV
Less input support from factories	140	77.7	III
Less technical support from factories	101	56.1	V
Less efforts to sustain farmers under cultivation of sugarcane crop	40	22.2	VI

#### Psychological constraints

The data in (Table 4) shows that (18.8%) respondents faced less interest of sustainable use of resources in the study area whereas, (12.2%) respondents had less risk-taking ability,

(11.1%) fear of indebtedness and (8.8%) lost interest in sustainable use of resources. Due to these problems, the cultivated area under sugarcane crop is decreasing which in turn influence the socio-economic status of the farmers and

also influence overall production of the country. These results are in accordance to [4-5].

Table 4 Distribution of sugarcane growers according to their psychological constraints

Reason/constraints	Frequency	Percentage	Rank
Less risk-taking ability	22	12.2	II
Lost interest on agriculture	16	8.8	IV
Less interest of sustainable use of resources	34	18.8	I
Fear of Indebtedness	20	11.1	III

*Suggestion to overcome the constraints and to sustain the farmers in sugarcane cultivation*

The distribution of respondents for the suggestions made to overcome the given constraints are presented in (Table 5). Results revealed that supply of high yielding, pest and disease-free seed material was a major request put forward by 100 per cent of the respondents. Lack of awareness of improved production practices was also a major challenge faced by the growers therefore, 84.4 per cent of the growers suggested government to improve extension activities to create awareness on production technologies and thereby to promote adoption of the recommended technologies. Eighty-three point three per cent of the growers demanded government and private millers to work together and subsidy on mechanized harvesting should be provided by government in conjunction with private millers in crushing season. The input cost such as seed and fertilizer were having significant impact on overall cost of production. Eighty-two point two per cent of growers

suggested that Subsidy on sugarcane seed and other inputs should be made available. Fifty point five per cent of the respondents revealed that timely cutting orders and timely payments will be the best strategy to hold the sugarcane farmers from crop shift. Non-availability of easy credit facility (bank loan) at nominal interest rate was also hindering sugarcane production in the study area; therefore, forty-nine point four per cent of the growers suggested more credit facilities should be provided to farmers at nominal interest rate. The problem of stray animals was suggested to be addressed by the government. Forty-seven point two per cent of the growers suggested that crop damage by stray animals should be assessed by Agricultural Officers and accordingly desirable compensations should be made to the growers. In summary all sampled growers strongly suggested that above recommendations should be taken onboard with top priority if sugarcane farming is to be improve to a better standard in Visakhapatnam district.

Table 5 Distribution of sugarcane growers according to their suggestions to prevent crop shift

Suggestions	Frequency	Percentage	Rank
Timely cutting orders and timely payments	91	50.5	V
Supply of high yielding, pest and disease-free seed material	180	100	I
Subsidy on mechanized harvesting should be provided by government in conjunction with private millers in crushing seasons	150	83.3	III
Subsidy on sugarcane seed and other inputs	148	82.2	IV
Continuous technical support	152	84.4	II
More credit facilities should be made available to farmers at nominal interest rate	89	49.4	VI
Government to assess crop damage by stray animals and make appropriate compensation for losses	85	47.2	VII

## CONCLUSIONS

The results obtained from the study reveals that many of the sugarcane growing farmers are facing several problems and they were decided to take crop holiday and shifting to other remunerative crops. It is therefore recommended that, all the constraints should be addressed with the recommended suggestions and solutions. It is further recommended that transfer of technology need to be strengthened for addressing

technical constraints. It is proved from the study that there was a lot of gap between technology development and its adoption by the farmers. Intensified awareness programmes, training programmes and demonstrations plays a major role in adoption of technology and thereby increasing the productivity of sugarcane. Government should take initiative for financial support through financial institutions and also to provide subsidy for inputs and seed for the cultivation of sugarcane and to encourage the sugarcane cultivation in the district.

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