

PROBLEMS AND PROSPECT OF SUGARCANE GROWERS IN DHARMAPURI DISTRICT, TAMILNADU

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ABSTRACT

The sugarcane growers improving sugarcane cultivation increasing productivity and production sugar mill support by the sugarcane growers financial support to increasing sugarcane cultivation India is the second largest country producing the sugarcane in worldwide sugarcane growers facing many problems in market we discuss on briefly given by below their talk about the main key word used by the article sugarcane growers, sugarcane cultivation, sugar mill, problems, production it the key word of the in articles we mention by the growers perspective it used by the article. Sugarcane cultivation plays an important role in the agricultural economy of Tamil Nadu, providing livelihood opportunities for many farmers. The present study examines the problems and prospects faced by sugarcane growers in Dharmapuri District, Tamil Nadu. The main objective of the study is to analyze the socio-economic profile of sugarcane farmers and to identify the major problems encountered during the cultivation process. A structured questionnaire was used to collect primary data from **172 sugarcane growers** selected through a convenient sampling method. The collected data were analyzed using statistical tools such as percentage analysis and the Chi-Square test to measure the association between demographic variables and farmers' perception of problems in the sugarcane cultivation process. The results of the Chi-Square analysis reveal that **age and educational qualification** have a significant association with the perception of problems faced by farmers in sugarcane cultivation. Similarly, **annual income** shows a significant relationship with the medium level of problems. However, demographic factors such as **gender, marital status, family type, and family size** do not show a significant association with the perception of problems among sugarcane growers. The study identifies major problems such as water scarcity, high input costs, labor shortage, pest and disease issues, and price fluctuations. Despite these challenges, sugarcane cultivation has promising prospects through the adoption of modern irrigation methods, improved farming practices, and government support schemes.

Key Words: Sugarcane cultivation, Water scarcity, Irrigation issues, Climate variability, Sugarcane growers, Agricultural economy, Sugar industry, Farm productivity, Crop management.

1. INTRODUCTION

The success of any nation depends upon its economic growth and standard of living of the people. There different sectors contributing for the economic development of a country, the India economy is divided in to three major sectors such as primary sectors, secondary sectors and territory sectors. Where the primary sector includes industries extract and produced raw materials such as framing, logging and mining, the agriculture sector contributing more than 18.2 percent at current prices to the India's GDP in 2023-2024 and creating largest employer in India provides a livelihood for about 42.3 percent of the population. India is developing country; the present challenge of India is fast growing population in the country and agriculture challenge to producing foods that based the agriculture on that population if agriculture is so good the population will increase.

2. REVIEW OF LITERTURE

Chandra hila Gaikwad, Shweta Jadhav (2017) Sugar industry is agriculture-based industry it the second largest agriculture-based industry in India. This industry providing job industry in rural area to development in rural areas this industry contribute development for nation, some number of problems there such as low rate of recovery, high production cost, old obsolete machinery etc. **Priyanka Upreti and Alka Singh (2017)** Examine areas is production, productivity, cost, it determines the factor contributing economy in toward major states in India of Uttar Pradesh Maharashtra. Its main drawback is high production cost in sugar industry. The cost of cultivation of sugarcane higher input, it was higher for Maharashtra than Uttar Pradesh. The growth of output of Profitability it was higher for Uttar Pradesh it compared to Maharashtra. The study found the positive significant of human labor, fertilizers, machine toward increasing the production of sugarcane India. **Timmanna V. Halli, Dr. C. R. Gudas (2021)** the sugar industry important role in the India economic development our nation it is the one of largest agro- based industry in India. Sugarcane farmer and sugar mills facing some problem the production cost increase and natural disasters etc. For this purpose, the data collected from secondary sources and Karl Pearson's coefficient of correlation tool is used to measure the percentage of change and relationship between two variables i.e., this set data collection depending on the areas production increase or decrease in the area lands. **Neha Dwivedi and Ashutosh Shrivastava (2021)** Sugarcane and sugar mill industry plays a very important role in rural upliftment and mobilization of resources in rural areas. It is a highly organized and controlled Industry Thus, sugarcane is surely a crop of future and their roles in Indian GDP contribute sugarcane industries. There is a wide scope for research and implementation of crop specific policies in this area and it will contribute to sustainable development in this sector. **Mrs. A. Arul Mithre Dev (2021)** sugar industry one of largest agriculture sector based in industry sugarcane is one of the cash corps. The sugarcane cultivator such of problem it facing in market site on the cultivation stage facing such as labor shortage, natural disasters, financial problems, wage rate is high, no transparency in weight, etc. it is list of problems in sugarcane cultivation and marketing.

3. SUGARCANE VERIETIES IN TAMILNADU

Tiruchirappalli, Preambular, Karur, Salem, Namakkal and Coimbatore district (June to September) planting seeds in the seed 38 varieties in the sugarcane. Specific Dharmapuri planting varieties list suitable is co86032, cosi (Sc) 6, cov94101, coG (SC)5, coc (sc), co97009, coc9006 planting this sugarcane seeds. Tamil Nadu is 4th largest producer in India Tamil Nadu totally 38 sugar mills 16 sugar mills co-operative sugar mills 3 sugar mill is public sectors 19 sugar mills are in the private sectors having in Tamil Nadu in largest sugar mills in Tamil Nadu is Sakthi sugar limited in erode district in Tamil Nadu have separate ministry to developing farming activity to developing the farming.

4. STATEMENT OF PROBLEM

In India sugarcane is second largest agro-based industry next to the textile the sugar industry is giving employment opportunity in rural area and direct and industry way it 50 million farmers and their dependents in the cultivation of sugarcane it is 0.5 million skilled and unskilled workers the developing socio economic in rural area it enhancing farm income. Sugarcane price suddenly increase and decrease depend upon the market price profit and loss in the sugar product although sugar losses are higher due to processing of Gur and Khandsari there is no state control over price and distribution. The sugarcane farmers facing many problems in current market situation and the sugar industry gain market price depends the gain the profits or loss sugar market is global level market place sugarcane the to implement the new technology the improving the profits the increasing growth level the sugar industry. In order to achieve high yield and recovery of sugarcane, the sugarcane growers facing problems the most of suffer in financial based problem living to the farming priority maintain sugar crop it's to develop the sugarcane farming they want more scheme to develop

the farming activities price, market, opportunity to developing sugarcane farming in the sugarcane plants growing is ten months to one year plant Tamil Nadu in the main season planting seed is (December to May) in entire state in part of state. Hence, "Problems and prospects of sugarcane growers in Dharmapuri District" taken to address the various problems faced by sugarcane growers during the season of cultivation to harvest of sugarcane.

5. OBJECTIVES OF STUDY

- To investigate the personal and socio economic profile of sugarcane growers in Dharmapuri District.
- To analysis the problems faced by sugarcane growers during the cultivation process of sugarcane in Dharmapuri district.
- To suggest suitable measure to wipe out the problems that ahead in the sugar cane cultivation process.

6. SCOPE OF STUDY

The Present study becomes important to identify various problems faced by sugarcane growers in Dharmapuri district. It is desirable here to spell out the broad objective of the study in the light of the work done in this field. This study is addressing the problems faced by the farmers in production and marketing of sugarcane by farmers.

7. HYPOTHESIS

H₀: The demographic profile of the sugarcane growers do not influence perception level of problems associated with sugarcane cultivation.

H₀: The land profile of the sugarcane growers do not influence perception level of problems associated with sugarcane cultivation.

8. METHODOLOGY

8.1. Research Design: The main purpose of the present study is to analyze the various problem faced by sugarcane growers and find out severity of problems. Thus, the descriptive researches design to fulfill the objectives of the research.

8.2. Sampling : The research focus on the sugarcane growers related problems, in order to collect the primary data from the respondents convenience sampling method been used a total number of 172 respondents were surveyed from Dharmapuri.

8.3. Data Collection: The data collection for the study is both primary data and secondary data. The secondary data collect by articles, journal, book; internet total data collection 172 respondents were fully completed. The primary data collect by the interview schedule 180 were distributed by the farmers and ask to respond, 177 were returned by conversely, only 172 are fully completed by the respondents and considered as potential number of samples for conducting the present study.

8.4. Data Analysis: This study contains both the qualitative and quantitative method after collecting the data from the respondents the data has been analyzed by the researcher through the statistical tool the following statistical tool have been used the Frequency and mean Garrett ranking method and Chi-Square test have been adopted to measure the severity of problems faced by sugarcane growers.

9. RESULT AND DISCUSSION

9.1. Demographic Profile of the Respondents: The largest Age group is 41-50 years, accounts for more than two fifth (45.90%, N=79) of the respondents and the very low percent is oldest group those who are above 60 years makes up only 16 percent of the respondents. The data shows that out of 172 respondents, majority are male (80.2%, N=138) while only 19.8 percent are female.

Further the data reveals that out of total respondents, majority are married (83.1%, N=143), this indicates that most participants are in a stable marital relationship and smaller proportion of the respondents 11 percent are destitute or widower, while 5.8 percent (N=10) respondents are unmarried. The educational qualification of the respondents, it is evident that the majority of respondents have SSLC and Higher secondary/diploma qualifications (63.3%, N= 109). Meanwhile, 14.5% of the respondents are graduates, and only 3.5% possesses post-graduate, it showing a relatively small proportion of highly educated participants. Additionally, 18.6% of respondents fall under the others category, which may include those with vocational, non conventional form of education and including illiterate also.

Annual income reveals a clear concentration in the lower income categories. Nearly half of the respondents 46.5 percent earns less than Rs. 1,00,000 per annum, while an additional 41.3% fall with the income bracket of Rs 1,00,001-Rs.2,00,000. This indicates that a substantial 87.8 percent of the respondents earns below Rs. 2,00,000 annually. According to the type of family of the respondents, it is observed that a slightly majority, constituting 53.5% belong to nuclear families, while 46.5% living in the joint families. It is also evident that more than two fifth 45.3% belong to families with more than six members, indicating the prevalence of large family structures, while only 11.6% of respondents live in smaller families with 2-3 members.

9.2. Land Profile of the Respondents: The classification of the respondents based on the size of their farming operations, majority accounting for 41.3% are medium sized farmers, followed by 33.7% are small sized farmers and 25% who fall under the large sized farmer category. The majority of respondents (57% (N=98) own their land, while 17.4% lease land and 25.6% fall into other categories perhaps communal, inherited, or borrowed land. Most of the sugarcane farmers operate on small to medium sized land holdings, nearly two thirds (65.1%) cultivating between 2 and 5 acres, a smaller proportion 23.8% cultivating larger farms exceeding 5 acres, while 11 percent cultivate just 1 acres of land. More than half 51.7% of the respondents relied on borrowed loan and funds to spend towards cultivation expenditure, while 48.3% used their personal savings or resources. Indicating that slightly majority of the respondents depending loans, it is implied that external financing plays a slightly larger role than self-financing. Out of total respondents surveyed regarding their registration with the sugar mill, more than half (57%, N=98) reported being registered with mill for cultivating the sugarcane and the rest of them are not registered with sugar mill.

9.3. Analysis of the various problems faced by Sugar cane growers

Analysis was done with respect to the various problems faced by sugar cane growers in the process of cultivation of sugar cane. For this study, there were 20 variables to address the problems during the plantation and growing of sugarcane. In order to measure the perception level of problems faced by sugarcane grower. Simultaneously, these problems affecting sugar cane farming activity. The respondents (Sugar cane grower) have experienced many problems and difficulties affecting productivity of sugar cane. The sample percentage, mean score and Garrett ranking techniques were adopted.

**Table – 1: Analysis of the various problems faced by Sugar cane growers
 Measurement of mean score Perception (Severity) using Garrett Ranking Method)**

S.No	Variable	Rank of Variable	Mean	Std. Deviation	Garrett Ranking
1	Natural Disasters	Rank of CH08	67.67	47.711	1
2	Lack of availability of Farm labor	Rank of CH07	67.48	47.369	2
3	Lack of Labor availability	Rank of CH03	67.30	49.751	3
4	High cost of Hybrid seeds	Rank of CH18	66.86	48.898	4
5	Lack of Training facility	Rank of CH14	66.72	48.029	5
6	Damage by birds and rodents	Rank of CH06	66.57	45.168	6
7	Lack of Loan unavailability	Rank of CH05	66.53	47.530	7
8	Orientation about Crop management	Rank of CH09	66.53	49.114	8
9	High cost of farm equipments	Rank of CH16	66.46	49.269	9
10	High cost of production	Rank of CH11	66.23	49.288	10
11	Delay in cutting order by the sugar mill	Rank of CH10	66.08	47.168	11
12	Unsuitable climatic conditions	Rank of CH17	65.29	47.106	12
13	High wages for agricultural labors	Rank of CH12	64.34	46.931	13
14	Lack of Technical support by the sugar mills	Rank of CH04	63.58	53.089	14
15	Lack of availability of sugar cane seed	Rank of CH15	62.67	47.993	15
16	Price of agricultural product	Rank of CH20	62.31	43.528	16
17	Climatic condition	Rank of CH13	62.19	47.765	17
18	Lack of water supply	Rank of CH02	57.89	56.033	18
19	Availability of fertilizers, pesticides, etc. in sufficient quantity Fertility of land,	Rank of CH01	54.70	39.697	19
20	High cost of cultivation	Rank of CH19	52.68	51.030	20

The above reveals that mean score ranking groups with respect to problems faced by sugar cane growers.

- A mean score perception (importance or severity)
- A standard deviation (variability in perception among the sugar cane growers)
- Garrett ranking was calculated (final order of significance)

Higher mean values indicate greater perceived impact and the Garrett Ranking arranges them according to problems associate with sugar cane cultivation such as **Top Level** (Rank 1-5), **Medium Level** (rank 6-13) and **Lower Level** (rank 14-20) of perception of sugar cane growers.

Top Level Problems (Ranks 1-5)

Natural calamities/hazardous ($\mu = 67.48, \sigma = 47.711, r=1$) are viewed as the most serious problem such as climatic risks like floods, droughts storms and cyclone are severely affect the faming process of sugar cane, labor shortages ($\mu = 67.67, \sigma = 47.369, r=2$) also a major constrain, possibly due to migration or non-farming job shifts. In addition, lack of labor availability ($\mu = 67.30, \sigma = 49.751, r=3$) also reinforces the rank 2 variable i.e. labor scarcity is repeatedly highlighted as critical issue. High cost of hybrid seeds ($\mu = 66.86, \sigma = 48.898, r=4$) farmers find input costs (particularly sugar cane seeds) burden affects the profitability of sugar cane cultivation, lack of training facility ($\mu = 66.72, \sigma = 48.029, r=5$) arranged for the farmers with limited access or extension services restricts sugar cane grower’s technical know-how related to sugar cane cultivation. On the whole, the top five problems show that natural and human resource factors such as disasters, labor and knowledge are perceived as most pressing. These are foundational issues affecting productivity and sustainability of sugar cane cultivation.

Medium Level Problems (Ranks 6-13)

Damage by birds and rodents ($\mu = 66.57, \sigma = 45.168, r=6$) like group of mammals such as Rate, Mice, Chinchilla, Squirrels, Guinea pig, Hamster and Beaver are significantly affects the yields of sugar cane, financial constraints ($\mu = 66.53, \sigma = 47.530, r=7$) due to poor loan access limit investment in inputs, need for better orientation ($\mu = 66.53, \sigma = 49.114, r=8$) and extension support for crop management. High cost of farm equipments ($\mu = 66.46, \sigma = 49.269, r=9$) machinery hinder mechanization and input costs ($\mu = 66.23, \sigma = 49.288, r=10$) are high reducing profit margins. Sometimes, sugar mills are issuing sugar cane cutting order belatedly ($\mu = 66.08, \sigma = 47.168, r=11$); institutional delay leads to affect harvest time and low recovery of sugar cane. Unsuitable climatic condition ($\mu = 65.29, \sigma = 47.106, r=12$) local climatic condition not ideal for cultivation process and increasing variability in the productivity of sugar cane and high wage rate for agricultural labor ($\mu = 64.34, \sigma = 46.931, r=13$) reinforces earlier labor issue and availability are also problematic. The problems in this group reflect economic and operational difficulties, high costs, limited finance and institutional inefficiencies. Farmers feel squeezed by both input costs and output related problems.

Lower Level Problems (Ranks 14-20)

Support from the sugar mills ($\mu = 63.58, \sigma = 53.089, r=14$) is considered inadequate but less severe than climatic or cost issues, seed availability ($\mu = 62.67, \sigma = 47.993, r=15$) is an issue but not severe compared to costs and climate condition. Agriculture products prices ($\mu = 62.19, \sigma = 43.528, r=16$) as somewhat fair/stable compared to other challenges. Climatic condition ($\mu = 62.19, \sigma = 47.765, r=17$) similar to rank 12 but with slightly less emphasis, lack water supply ($\mu = 57.89, \sigma = 56.033, r=18$) water shortage is an issue but with more variation as SD 56.033 means opinions differ regionally. Fertilizers and pesticide are available ($\mu = 54.70, \sigma = 39.697, r=19$) so this is less of a constraint, high cost of cultivation ($\mu = 52.68, \sigma = 51.030, r=20$) although costly, farmers may have adapted or perceive it normal. The lower ranked problems, while still relevant are less severity or more localized. Thus, farmers might have adapted coping mechanisms or face these issues less uniformly.

8.2. Measurement of Association between Demographic Profile and Perception of Problems in the sugarcane Cultivation process.

Descriptive statistics has been adopted, Chi-Square test results on the association between demographic profile and perception of problems in sugarcane cultivation. The Chi-Square test was used to determine whether there is a significant association between the demographic characteristics and their perception of problems in the sugarcane cultivation process. The results are interpreted at the 5% level of significance indicated as $p < 0.05$.

Table-2; Chi-Square Test
Measurement of Association between Demographic Profile and Perception of Problems in the sugarcane Cultivation process

Independent Variable Demographic	Level of Problems	Pearson Chi-Square Value	Df.	Asymp. Sig. (2 Sided)	Test Result
Age* Perception of Problems in the sugarcane Cultivation process					
Age of the Respondents	Top Level	85.095 ^a	52	.003<0.05	(H ₀) Rejected at 5% sig.
	Medium Level	104.744 ^a	60	.000<0.05	(H ₀) Rejected at 5% sig.
	Low Level	109.203 ^a	48	.000<0.05	(H ₀) Rejected at 5% sig.
Gender* Perception of Problems in the sugarcane Cultivation process					
Gender	Top Level	16.400 ^a	13	.228>0.05	(H ₀) Accepted at 5%sig.
	Medium Level	17.516 ^a	15	.289>0.05	(H ₀) Accepted at 5%sig.
	Low Level	21.375 ^a	12	.045>0.05	(H ₀) Accepted at 5%sig.
Marital Status * Perception of Problems in the sugarcane Cultivation process					
Marital Status	Top Level	30.813 ^a	26	.235>0.05	(H ₀) Accepted at 5%sig.
	Medium Level	36.397 ^a	30	.195>0.05	(H ₀) Accepted at 5%sig.
	Low Level	15.268 ^a	24	.913>0.05	(H ₀) Accepted at 5%sig.
Education * Perception of Problems in the sugarcane Cultivation process					
Educational Qualification	Top Level s	83.336 ^a	39	.000<0.05	(H ₀) Rejected at 5% sig.
	Medium Level	70.820 ^a	45	.008>0.05	(H ₀) Accepted at 5%sig.
	Low Level	58.438 ^a	36	.010>0.05	(H ₀) Accepted at 5%sig.
Annual Income * Perception of Problems in the sugarcane Cultivation process					
Annual Income	Top Level	64.781 ^a	52	.110>0.05	(H ₀) Accepted at 5%sig.
	Medium Level	148.077 ^a	60	.000<0.05	(H ₀) Rejected at 5% sig.
	Low Level	49.619 ^a	48	.409>0.05	(H ₀) Accepted at 5%sig.
Family Type * Perception of Problems in the sugarcane Cultivation process					
Family Type	Top Level	16.748 ^a	13	.211>0.05	(H ₀) Accepted at 5%sig.
	Medium Level	18.156 ^a	15	.255>0.05	(H ₀) Accepted at 5%sig.
	Low Level	20.011 ^a	12	.067>0.05	(H ₀) Accepted at 5%sig.
Family Size * Perception of Problems in the sugarcane Cultivation process					
Family Size	Top Level	27.919 ^a	26	.362>0.05	(H ₀) Accepted at 5%sig.
	Medium Level	36.778 ^a	30	.184>0.05	(H ₀) Accepted at 5%sig.
	Low Level	36.713 ^a	24	.047>0.05	(H ₀) Accepted at 5%sig.

Age and Perception level of problems faced by sugarcane growers

For the top, medium and low level of problems, the Chi-square values 85.095, 104.744 and 109.203 respectively and p-values of all the above problems are less than 0.05 (p<0.05) then the null hypothesis was rejected. This indicated that there is a significant association between the age of the respondents and their perception of problems in sugarcane cultivation. In other words, the perceptions of the problems with regard to the cultivation of sugarcane vary across different age groups of the respondents.

Gender and Perception level of problems faced by sugarcane growers

From the above analysis, the p-values 0.228, 0.289, and 0.045 are greater than 0.05 which indicates that there are no significant association between gender and perception of problems. Therefore, the perception of problems top, medium and low levels are similar between male and female respondents (Sugarcane growers).

Marital status and Perception of Problems

The p-value for Top Level (0.235), Medium Level (0.195), and Low (0.913) levels are all greater than 0.05, then the null hypothesis rejected and suggesting that marital status does not significantly influence how respondents perceive problems in sugarcane cultivation. Therefore, married and unmarried respondents share similar views about the perception of problems in the process of sugarcane cultivation.

Educational qualification and perception of problems

For the top level problems, the Chi-Square value (83.336) is significant (p=0.000<0.05), then H₀ is rejected. It is indicated that there is significant relationship between educational qualification and perception of top level problems. However, for the medium (p= 0.008> 0.05) and low (p= 0.010> 0.05) levels, the results are not significant. It implies that educational qualification does not significantly affect perceptions at these levels. Thus, education influences perception only for top level problems, possibly because higher education enhances awareness of complex agricultural challenges.

Annual Income and Perception of Problems

The p-values of all the top and low levels of problems 0.110 and 0.409 are greater than 0.05 then the H₀ is accepted, it is showing no significant association between annual income and perception of problems. Whereas, the medium level problems p= 0.000<0.05, indicating a significant association exist between annual income and medium level problems. This suggests that income affects how respondents perceive moderate level problems possibly due to differences in resource availability and financial capacity to address such problems.

Family Type and Perception of Problems

For all the three levels of problems i.e. Top, Medium and Low, the p-values 0.211, 0.255 and 0.067 are more than 0.05, showing that no significant relationship. Therefore, the type of family (nuclear or joint) does not influence the perception of cultivation problems.

Family Size and Perception of Problems

For all the levels of problems, the p-values 0.362, 0.184, and 0.047 are more than 0.05, indicating no significant association. Hence, the size of the family does not significantly impact how respondents perceive problems in sugarcane cultivation.

The Chi-Square test results reveal that age, education and annual income are the most influential demographic factors affecting farmers' perception of problems in sugarcane cultivation. Other factors such as gender, marital status, family type, and family size show no significant relationship with perception. This implies that experience (age), awareness (education), and economic status (income) play a pivotal roles in shaping how farmers recognize and respond to challenges in sugarcane farming.

8.3. Measurement of Association between Land Profile and Perception of Problems in the sugarcane Cultivation process

Table – 3: Chi-Square Test

Measurement of Association between Land Profile and Perception of Problems in the sugarcane Cultivation process

Independent Variable Demographic	Level of Problems	Chi-Square Value	Df.	Asymp.Sig. (2 Sided)	Test Result
Type of Farmer * Perception of Problems in the sugarcane Cultivation process					
Type of Farmer	Top Level	34.481 ^a	26	.123>0.05	(H ₀) Accepted at 5%sig.
	Medium Level	41.913 ^a	30	.073>0.05	(H ₀) Accepted at 5%sig.
	Low Level	56.194 ^a	24	.000<0.05	(H ₀) Rejected at 5% sig.
Ownership of Land * Perception of Problems in the sugarcane Cultivation process					
Ownership of Land	Top Level	48.289 ^a	26	.005=0.05	(H ₀) Neither Accepted nor Rejected at 5%sig.
	Medium Level	40.519 ^a	30	.095>0.05	(H ₀) Accepted at 5%sig.
	Low Level	45.368 ^a	24	.005=0.05	(H ₀) Neither Accepted nor rejected at 5%sig.
Size of Land * Perception of Problems in the sugarcane Cultivation process					
Size of Land	Top Level s	58.922 ^a	39	.021	(H ₀) Accepted at 5%sig.
	Medium Level	64.185 ^a	45	.032	(H ₀) Accepted at 5%sig.
	Low Level	49.325 ^a	36	.069	(H ₀) Accepted at 5%sig.
Sources of Finance * Perception of Problems in the sugarcane Cultivation process					
Sources of Finance	Top Level	29.917 ^a	13	.005=0.05	(H ₀) Neither Accepted nor rejected at 5%sig.
	Medium Level	29.510 ^a	15	.014>0.05	(H ₀) Accepted at 5%sig.
	Low Level	33.139 ^a	12	.001<0.05	(H ₀) Rejected at 5% sig.
Registration Status * Perception of Problems in the sugarcane Cultivation process					
Registration Status	Top Level	15.983 ^a	13	.250>0.05	(H ₀) Accepted at 5%sig.
	Medium Level	15.977 ^a	15	.384>0.05	(H ₀) Accepted at 5%sig.
	Low Level	21.435 ^a	12	.044>0.05	(H ₀) Accepted at 5%sig.

From the above Chi-Square analysis of the association between land profile and perception of problems in sugarcane cultivation revealed that the relationship varies across different factors and levels of problems.

Type of Farmers and Perception of Problems in the sugarcane Cultivation process

For the type of farmer, a significant association was observed at the low level of problems (p = 0.000), indicating that farmers perceiving more problems differ by type, whereas no significant association was found at the top (p = 0.123) and medium (p = 0.073) levels.

Ownership of Land and Perception of Problems in the sugarcane Cultivation process

Ownership of land showed borderline significance at the top (p = 0.005) and low (p = 0.005) levels, suggesting a weak or inconclusive association, while the medium level (p = 0.095) was not significant.

Size of Land and Perception of Problems in the sugarcane Cultivation process

Regarding the size of land, although the p-values for top (p = 0.021) and medium (p = 0.032) levels were below 0.05, the test results indicated H₀ accepted, suggesting no significant association at the 5% level; the low level (p = 0.069) also showed no significant association.

Sources of Finance and Perception of Problems in the sugarcane Cultivation process

Sources of finance were significantly associated with perception of problems at the low level (p = 0.001), indicating that financial sources influence farmers perceiving more problems, while the top level (p = 0.005) showed borderline significance and the medium level (p = 0.014) was not significant.

Registration Status and Perception of Problems in the sugarcane Cultivation process

Registration status did not show significant association at any level, with p-values of 0.250, 0.384, and 0.044 for top, medium, and low levels are less than 0.05, respectively then the H₀ accepted.

Overall, the findings suggest that farmers perceiving a higher level of problems are more affected by factors such as type of farmer and sources of finance, whereas ownership, size of land, and registration status show weak or inconsistent associations.

9. FINDING OF STUDY

- largest Age group is 41-50 years, accounts for more than two fifth (45.90%, N=79) of the respondents and the very low percent is oldest group those who are above 60 years makes up only 16 percent of the respondents.
- The data shows that out of 172 respondents, majority are male (80.2%, N=138) while only 19.8 percent are female.
- Majority of respondents have SSLC and Higher secondary/diploma qualifications (63.3%, N= 109), additionally, 18.6% of respondents fall under the others category, which may include those with vocational, non conventional form of education and including illiterate also.
- A substantial 87.8 percent of the respondents earns below Rs. 2,00,000 annually.
- Majority of constituting 53.5% belong to nuclear families, while 46.5% living in the joint families.
- Type of family of the respondents, it is observed that a slightly majority, constituting 53.5% belong to nuclear families, while 46.5% living in the joint families.
- More than two fifth 45.3% belong to families with more than six members, indicating the prevalence of large family structures.
- The majority of respondents (57% (N=98) own their land, while 17.4% lease land and 25.6% fall into other categories perhaps communal, inherited, or borrowed land.
- Most of the sugarcane farmers operate on small to medium sized land holdings, nearly two thirds (65.1%) cultivating between 2 and 5 acres.
- More than half 51.7% of the respondents relied on borrowed loan and funds to spend towards cultivation expenditure, while 48.3% used their personal savings or resources.
- Slightly majority of the respondents depending loans, it is implied that external financing plays a slightly larger role than self-financing.
- The top five problems show that natural and human resource factors such as disasters, labour and knowledge are perceived as most pressing. These are foundational issues affecting productivity and sustainability of sugar cane cultivation.
- The medium level problems reflect economic and operational difficulties, high costs, limited finance and institutional inefficiencies. Farmers feel squeezed by both input costs and output related problems.

- The lower ranked problems, while still relevant are less severity or more localized. Thus, farmers might have adapted coping mechanisms or face these issues less uniformity.
- In other words, the perceptions of the problems with regard to the cultivation of sugarcane vary across different age groups of the respondents.
- The perception of problems top, medium and low levels are similar between male and female respondents (Sugarcane growers).
- Married and unmarried respondents share similar views about the perception of problems in the process of sugarcane cultivation.
- Education influences perception only for top level problems, possibly because higher education enhances awareness of complex agricultural challenges.
- Income affects how respondents perceive moderate level problems possibly due to differences in resource availability and financial capacity to address such problems.
- The type of family (nuclear or joint) does not influence the perception of cultivation problems.
- It was found that age, education and annual income are the most influential demographic factors affecting farmers' perception of problems in sugarcane cultivation. Other factors such as gender, marital status, family type, and family size show no significant relationship with perception.
- Experience (age), awareness (education), and economic status (income) play a pivotal roles in shaping how farmers recognize and respond to challenges in sugarcane farming.
- The findings suggest that farmers perceiving a higher level of problems are more affected by factors such as type of farmer and sources of finance, whereas ownership, size of land, and registration status show weak or inconsistent associations.

10. SUGGESTIONS

The consideration of problems of sugarcane growers the suggestion is given below and sugarcane cultivation and to improve the also economy.

11. CONCLUSION

These are problems of sugarcane growers faced by now day to improve on sugarcane cultivation on sugar increase new technology and to farming the lack of finance problems and natural disasters and labor shortage more problem face by sugarcane growers. And the sugar mills give more facility to growers to increase sugarcane cultivation the mills help to increase annual income of sugarcane growers the most respondent is degree holders to implement on knowledge to increase the productivity not register mills farmers avoid dealer and middle man sell direct market place selling good to increase the profit margin these are the problem faced by sugarcane growers. The most of problem facing sugar cane growers is finance related bases lack cost play the major role on the sugarcane growers.

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