



## AWARENESS LEVEL TOWARDS SUGARCANE CULTIVATION AND THEIR FARMING PRACTICES WITH SPECIAL REFERENCE TO THE ERODE DISTRICT

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### ABSTRACT

Sugarcane holds a very important place because of its importance and advantages. A mature Sugarcane stalk is typically composed of 11–16% fiber, 12–16% soluble sugars, 2–3% non sugar carbohydrates, and 63–73% water. They have medicinal properties. The objective of the study is to assess the farmers level of awareness towards sugarcane cultivation, post-harvest practices and on the marketing practices. Primary data were used in the present study. Three hundred and fifty (350) sample cultivators were randomly selected and information was collected on the awareness of sugarcane cultivators through a pre-scheduled questionnaire. Weighted arithmetic mean, Likert's Summated scales and Percentage analysis were the statistical tools used. The study concluded that out of 350 sample farmers 28 % of the sample farmers are having low level of Awareness and 72% of the sample farmers are having high level of Awareness about the functioning of cultivation of sugarcane. The study suggested that the sugarcane cultivators need to improve their awareness levels on the irrigation system, and Fertilizer application is important for obtaining optimum yield of sugarcane harvesting and crop management practices.

**KEYWORDS :** Sugarcane planting, Seedbed preparation, Fertilizer application, Weeds, water distribution and irrigation

### INTRODUCTION

As per revenue land records, the total geographical area of the district is 572,264 hectares. Among other non-food crops raised here, the most important items are cotton, sugarcane and tobacco, sugarcane is raised in 30903 hectares. Cotton is grown in few hectares while tobacco is raised in 4923 hectares in the district. In respect of all commercial crops also improved varieties have been adopted by the farmers and this has helped them to maintain high yields.

The sub-soil in most parts of the district being sandy and surface soil thin and of poor quality, the farmers have to depend heavily on irrigation facilities. The uncertain aspects of North-Eastern monsoon and not too favorable contribution from the South-West monsoon make the plight of local agriculturists miserable. The chief sources of irrigation in the district are the canals and wells and these constitute the main stay of the farmers. As noted earlier, the main sources of irrigation are the canals and wells. Canals under various irrigation projects together help to irrigate about 98,805 hectares of land while the wells irrigated 68,570 hectares. Area irrigated by tanks and springs and channels are negligible. The net area irrigated under various sources together constitute 58.9% area irrigated to total area sown in the district. The net area irrigated in the district totals to 209,432 hectares. Rivers in the western ghats and fed mostly by the south-west monsoon are the chief sources of irrigation in the district. The main irrigation projects of consequence in the district is the Lower Bhavani project. The completion of Lower Bhavani project under First-Five-year Plan has boosted the irrigation resources considerably.

Sugarcane planting usually carried out in spring and autumn season. Incentives given by the Sugar factories Provides development and benefits to the sugarcane cultivators (Price reduction for Sugar, mud). Good seedbed preparation in order to get good germination and better crop stand, Sugarcane is a deep rooted crop and proper land preparation is an important role in the development of cane root system, Important role of development of cane root system for achieving the expected yield, Adopt with Changing globe ploughing and planking were used for seedbed preparation, Autumn planting is recognized as high yields and high sugar recovery, compared to spring planting.

Specialized Techniques in October month planting of sugarcane gives very luxuriant growth, Sugarcane crop gives good appearance till June and July but even earlier if there is windstorm or excessive rains, Utilizing elements and principles of the most common methods of sugar cane planting is "overlapping", "end to end" and "double set", Sugarcane crop generally use large quantity of farmyard manure to the restore soil fertility for better yield, Well rotten farm yard manure should be applied prior to land preparation press mud from sugar industry is another excellent source of organic matter and nutrients, Cultivation of these varieties on account of certain characteristic of these Co 86032, CoSi 95071, Co 86249, CoG 93076, CoV 94102, Co 85019 Co Si (Sc) 6, Co G (Sc)5, Co C (Sc)22, CoC(SC) 24 varieties, especially for quality of white colour Gur (molasses), etc., Sugarcane varietal adoption in Erode was analyzed and found that overall Co 86032 was the dominant variety, Sugarcane varietal of overall Co11015 and Co86032RSV varieties are mainly adopted because of high sucrose content, Fertilizer application is important for obtaining optimum yield of sugarcane, Unbalanced and inadequate application of chemical fertilizer is important for obtaining optimum yield of sugarcane, Most of the cultivators use only nitrogenous fertilizers while others use an unbalanced combination of N(Nitrogen) and P(Phosphorous), Meagre use of K(Potassium) in cultivation of sugarcane, Phosphorus and potash and one fourth N(Nitrogen) should be applied at the time of planting, Weeds in sugarcane restrict the light, nutrients and moisture to the crop and also serve as alternative hosts for many insect pests Pests reduce the yield and adversely affect the cane quality but I Believe That Proper land management is a key factor to control weeds, Weedicide should be used with the technical experts advice, Irrigation water distribution and irrigation application methods are very useful, Difficult to manage the surplus water in fields and cane fields get inundated submerged in water. Inundated submerged surplus water is not only depresses tillering, roots growth and cane yield but also leads to inundate water logging, Inundated surplus water on the other hand some root zones are water stricken and lead to salinity, Underground water was not good enough for irrigation, Most of the farmers do their harvest without experimenting with modern techniques, Due to the lack of modernization and technology, sugarcane

farmers suffer from high costs of production and low yields, Cane harvesting is done by hand, which employ labor intensively. Roots are left in the ground as they will eventually sprout and grow to form the next crop and Harvested cane should be sent to the sugar factory within 24-48 hours of cutting, otherwise later transportation will be affected in loss in sugar contents.

**Statement Of The Problem**

In this present scenario, sugarcane cultivation is very important in agriculture society. It could be facing the everyday new problems. Anyhow, the farmers feel much secured because of sugarcane cultivation. The cultivation of sugarcane is mainly depends on monsoon condition, high yield varieties of sugarcane crop, consumption of fertilizers, pesticides, etc., Against this background an attempt has been made to find out answers to the following research Questions:

- What is the cultivators Awareness Level towards Sugarcane Cultivation and their Farming Practices?

**Review Of Literature**

It is necessary to reviews the available previous studies and literature to frame objectives hypotheses and methodologies considering this, reviews of previous studies are as follow.

**Siddu Hanabar et. al (2021)** entitled constraints in the production and marketing of sugarcane in the Belagavi district of Karnataka state. In the choice of district, tehsil, village and sample farmers, multi-stage sampling design was used. Using a pre-tested organized schedule by personal interview form with relevant data on different types of restrictions faced and anticipated solutions were collected. Garrett's ranking technique was used to estimate the constraints encountered in the production and marketing of sugarcane.

**Nida Bee and Fazlur Rahman (2020)** reveal that compound annual growth rate in case of area, production and yield showing a positive sign. The area under sugarcane cultivation is reported an increase of 5.63 percent in a duration of thirty years between 1985 and 2015 and the sugarcane production was increased by 7.40 percent in the same period. The area and production of crop is showing a fluctuating trend because there are many factors which is responsible sugarcane cultivation like monsoon conditions, government price polices etc.

**Scope Of The Study**

Though the main objective of this study is known the level of awareness' about the cultivation of sugarcane, but the study is also extended to cover the problems faced by sugarcane cultivators in cultivating the sugarcane. Efforts were also to know the marketing problems in marketing of sugarcane in addition to the above socio-economic characteristic of the sample respondents were also studied. Factors motivation the farmers to cultivate the sugarcane were discussed, Sugarcane planting, Seedbed preparation, Fertilizer application, Weeds, water distribution and irrigation system of sugarcane the cultivators and channels used by the cultivators in farming practices were also studied.

**OBJECTIVES OF THE STUDY**

- To Analyse the Awareness Level towards Sugarcane Cultivation and their Farming Practices
- To offer valuable suggestions to improve Awareness Level towards Sugarcane Cultivation and their Farming Practices

**METHODOLOGY**

**Sample Design**

This study is an empirical research based on survey methods

the data collected for the study includes both primary & secondary data. The data were collected from direct personal interview. To select 350 sample respondents for this study, multi-stage sampling techniques used. The study is confined to Erode District, selected three Taluks of this Gobichettipalayam Taluk, Bhavani Taluk and Sathyamangalam Taluk.

**Data Collection**

For the present study, primary and secondary data were used required primary data were collected from 350 sample respondents by using "pre-tested and well-structured interview schedule "and secondary data collected form journals, internet, newspaper, etc. the first hand information has been collected from the Sugarcane farmers in Gobichettipalayam taluk.

**Field Work**

The field work was carried out during the month of November 2020 to March 2021 interview was carried on the conventional manner with the help of the interview schedule for farmers. Each interview lasted from half an hour. The farmers in the selected village were interviewed either at their home or garden.

**Techniques Analysis**

Data collections through interview schedule were presented in a master table and sub table were prepared from it, the statistical techniques include quantification of data to measure the awareness level towards sugarcane cultivation and their farming practices by using Likert's Scaling Technique.

**Quantification Of Data To Measure The Awareness Level Towards Sugarcane Cultivation And Their Farming Practices: Likert's Scaling Technique**

The score of 350 sample respondents are calculated the maximum scope that assigned by a respondent from the 33 statement would be 165 (33×5) and minimum score of 33 (33×1). For the purpose of analysis the respondents are grouped into two on the basis of their level of awareness as high and awareness level. The respondents who scored below 116 were classified as have high level of satisfaction and those who scored 116 and above were classified as low level of awareness towards sugarcane cultivation and their farming practices.

**Table 3.1 Distribution of Overall Awareness Level towards Sugarcane Cultivation and their Farming Practices**

Awareness Level	Sample Size	Percentage
Low level of Awareness (score < 116)	98	28
High level of Awareness (score > 116)	252	72
<b>Total</b>	<b>350</b>	<b>100</b>

Table 3.1 indicates that out of 350 sample farmers 28 % of the sample farmers are having low level of Awareness and 72% of the sample farmers are having high level of Awareness about the functioning of cultivation of sugarcane.

**Relationship Between Socio Economic Variables And Awareness Level Towards Sugarcane Cultivation And Their Farming Practices**

The identified socio economic variables which might influence the awareness level towards sugarcane cultivation and their farming practices are as follows:

- Type of Irrigation
- Years of Experience

For analyzing the relationship between socio-economic characteristic of sample respondents and awareness level towards sugarcane cultivation and their farming practices and chi-square test has been applied at 5% level of

significance.

**Type of Irrigation**

Based on the source of irrigation, the sugarcane cultivators are classified into the following four categories. Source of water in lands are following namely, Drip Irrigation, Sprinkler, Direct irrigation and Others (Drip Irrigation, Sprinkler and Direct Irrigation). The below table is classified that the respondents are usually based on their method of irrigation in sugarcane cultivation.

**Table 2 Type of Irrigation Wise Awareness Level towards Sugarcane Cultivation and their Farming Practices**

Irrigation System	Awareness Level		Total	
	Low	High		
Drip Irrigation	85 (70.83)	35 (29.17)	120	(100)
Sprinkler	19 (61.29)	12 (38.71)	31	(100)
Direct Irrigation	137 (75.27)	45 (24.73)	182	(100)
Others	11 (64.71)	6 (35.29)	17	(100)
<b>Total</b>	<b>252 (72.00)</b>	<b>98 (28.00)</b>	<b>350</b>	<b>(100)</b>
Figures in parentheses denote percentage	D. f :	4.00	<sup>2</sup>	: 1.84

Table apparent that 75.27 % of the level of Direct Irrigation system used by the cultivators in sugarcane to the highest awareness level and the 61.29 % of the level of awareness about the Sprinkler system used by the cultivators to cultivate sugarcane to the low level awareness about the farming practices.

It is found that the calculated value (1.84) of chi-square is less than the Table value (7.815). Hence, the framed null hypothesis is accepted and it can be concluded that there is no significant association between the Irrigation system and the awareness level towards sugarcane cultivation and their farming practices.

**Years of Experience**

It is felt that Farm Experience would influence the awareness level of cultivators. Hence, an attempt has been made to examine the association between the Farm Experience and awareness level. For analyzing this, the cultivators are grouped in three categories viz., Upto 5 Years, 6 to 10Years, 11 to 20 Years and Above 20 Years. The below table represents the experience in years in the classification of respondents.

**Table Farm Experience Wise Awareness Level towards Sugarcane Cultivation and their Farming Practices**

Farm Experience	Awareness Level		Total	
	Low	High		
Upto 5 Years	84 (74.34)	29 (25.66)	113	(100)
6 to 10Years	21 (63.64)	12 (36.36)	33	(100)
11 to 20 Years	133 (71.51)	53 (28.49)	186	(100)
Above 20 Years	14 (77.78)	4 (22.22)	18	(100)
<b>Total</b>	<b>252 (72.00)</b>	<b>98 (28.00)</b>	<b>350</b>	<b>(100)</b>
Figures in parentheses denote percentage	D. f :	4.00	<sup>2</sup>	: 1.45

Table apparent that 77.78 % of the level of farm experienced cultivators in sugarcane to the highest level of influencing the factors and the 63.64 % of the level of farm experienced cultivators to cultivate sugarcane to the low level of influencing the factors.

It is found that the calculated value (1.45) of chi-square is less than the Table value (7.815). Hence, the framed null hypothesis is accepted and it can be concluded that there is no significant association between the farm experience and the awareness level towards sugarcane cultivation and their farming practices.

**CONCLUSIONS**

The study concluded that out of 350 sample farmers 28 % of the sample farmers are having low level of Awareness and 72% of the sample farmers are having high level of awareness level towards sugarcane cultivation and their farming practices.

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