



# STUDY ON CULTIVATION OF SUGARCANE IN TELANGANA

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## ABSTRACT

Sugarcane is an important commercial crop cultivated in Telangana, a state located in southern India. The cultivation of sugarcane in Telangana is mainly done in the districts of Nizamabad, Karimnagar, Khammam, Warangal, and Adilabad. The cultivation of sugarcane in Telangana is done both in irrigated and rain-fed conditions. The crop requires a warm and humid climate with an average temperature ranging from 20 to 35 degrees Celsius. The soil requirements for the cultivation of sugarcane in Telangana are well-drained loamy soils with a pH range of 5.5 to 8.0. The major challenges faced by sugarcane farmers in Telangana are the lack of access to credit facilities, inadequate irrigation facilities, and pest attacks. The government of Telangana has taken several initiatives to address these challenges and provide support to the sugarcane farmers. The state government has implemented several schemes such as the Telangana State Agricultural Extension Program and the Rythu Bandhu scheme to provide financial assistance and technical support to the farmers.

In conclusion, the cultivation of sugarcane in Telangana is an important source of livelihood for many farmers in the state. With the government's support and proper agricultural practices, the sugarcane industry in Telangana has the potential to contribute significantly to the state's economy.

## INTRODUCTION

India has been known as the original home of sugarcane and sugar. India is the second largest producer of sugar in the World after Brazil and produces more of cane sugar and not beet sugar. Sugarcane is the important commercial crop of the

country. In India, sugarcane is the key raw material, planted once a year during January to March. It is the major cost driver for the production of sugar. The following chart 1 indicates the region and states producing sugarcane. Chart 1 indicating the region

and the states involved in sugarcane production in India REGION STATES Subtropical Uttar Pradesh, Bihar, Haryana Tropical Maharashtra, Gujarat, Tamil Nadu, Andhra Pradesh, Karnataka The production of sugar is spread across the country. In the above states, they are classified into three groups according to its production capacity. They are, the high sugar producing states are Maharashtra and Uttar Pradesh. The second category was the medium sugar producing states. They are Gujarat, Andhra Pradesh, Tamil Nadu, Karnataka, and Haryana. The remaining States are low producing States.

Sugarcane is a major cash crop in India responsible for the overall socio-economic development of the farming community. Molasses, sugar and khandsari etc, are produced from the juice of sugarcane. Production of the crop is mainly located in the states of Uttar Pradesh, Maharashtra, Tamil Nadu, Karnataka and Gujarat. Sugarcane cultivation needs temperature of 15 degree to 40 degree and rainfall of 100 to 150 centimeters and fertile loamy soil or hard soil. Sugarcane is a long duration crop which produces huge amounts of biomass, requiring large quantities of water, which typically are supplied through 25-30 irrigation cycles per crop season sugarcane is cultivated from Kanyakumari (southern Part) to Punjab (north – west) but it is more cultivated in Uttar Pradesh, except these States, sugarcane is an important crop in Maharashtra, Tamil Nadu, Andhra Pradesh, Karnataka, Punjab, Haryana, and Bihar etc.

US, China and Japan. Contribution of these countries to the world Gross Domestic Products (GDP) are - US- 21.1%,China - 12.1%,Japan- 7%and India - 5.7%. In India, sugar industry is the second largest after cotton textiles which contributes around 6% of the agricultural GDP. Sugarcane is the main source of sugar (80%) globally and holds a prominent position as a cash crop. It is one of the main crops of earning foreign exchange. The sugar juice is used for making white sugar, brown sugar (khandsari) and jaggery (gur). The main by-products of sugarcane industry are bagasse and molasses. Bagasse is mainly used as fuel. It is also used for production of compressed board paper, plastic and others.

Molasses is used in distilleries for the manufacturing of ethyl alcohol, butyl alcohol, citric acid etc. Rum is the best potable spirit made from molasses. Molasses is also used as an additive to feeds for livestock. Press mud can be used as soil amendment in saline and

alkali soils. Green tops of cane are good source of fodder for cattle. There are two distinct agro-climatic regions of sugarcane cultivation in India, viz., tropical and subtropical. Tropical region has about 45% area and contributes 55% of the total sugarcane production in the country. Thus, sub-tropical region accounts for 55% area and shares 45% of total production of sugarcane. The average sugarcane yield in the country is about 69.4 t/ha.

The sugarcane cultivation and sugar industry in India plays a vital role towards socio-economic development of the rural areas by mobilizing rural resources and generating higher income and employment opportunities. About 7.5 percent of the rural population, covering about 60 million sugarcane farmers is dependent and a large number of agricultural labours are involved in sugarcane cultivation, harvesting and ancillary activities. The country had

produced 28.1 mt of sugar in the 2014-15 marketing year (October-September). India is the world's second biggest sugar producer.

### **Objective of the study:**

- 1) Find out the production of sugarcane in Telangana state
- 2) Calculate the Sugarcane cultivation
- 3) To study the market analysis
- 4) Cost of sugarcane farming

## **LITERATURE REVIEW**

1.Author: 1. Guntukula Raju

Review: India is one of the largest producers of sugarcane in the world, covering an area of 18.52% and accounting for 18.45% of the world's sugarcane production. Medak is the main producer of sugarcane in Telangana. Four field trials were conducted in the sugarcane fields of Kohir Mandal, Medak district, with the aim of developing performance indicators for sugarcane harvesting. The cutting height of cane from the ground surface by the sugar cane harvester was 1.4 cm on average and 10.8 cm on average by hand harvesting. The total time to harvest one hectare with a sugarcane harvester was 3 hours, while manual harvesting took about 9 hours. The field capacity obtained with mechanical harvesting was

0.141 hectares per hour and with manual harvesting was 0.045 hectares per hour. From the present study, in four different field experiments, the total harvesting cost per ton was calculated as Rs.841 and Rs.1500 for mechanical and manual harvesting, respectively. Wider row spacing with mechanical harvesting, rather than narrower spacing with manual harvesting equipment, is advantageous in terms of cane yield and harvesting costs.

2. Authors: 1. Sami Ullah Khan  
2. Ejaz Ahmed Khan  
3. Iqtidar Hussain

Review: It can be concluded that in dry conditions in silt-clay soils, the mutual effect of paired strip planting pattern with a distance of 90.30 cm brings optimal taxidermy sting performance. The 30/90 cm row strip planting plating pattern has advantages over other planting patterns, saving irrigation water, saving about 50% of the labor and time required for soil preparation, and pulling by tractor or bull. . Preparation of cultural soil using tools. Influencing sugarcane companion crops and, in addition, planting the main crop and mixed crop in separate independent strips not only reduces competition between crops, but also allows farmers to meet different fertilizer needs. Facilitates easy application of herbicides and prevents lodging due to bands or sufficient space for strips to support plants against each other, improve air circulation and light penetration, and increase the photosynthetic efficiency of plants, without being affected by wind or rain.

3. Authors: 1. Mahesh C  
2. Rajeshwar Malavath

The main constraints are lack of organic components in the soil. To improve the fertility of soil the technique of green manuring to be implemented, press mud technique, own farmyard manures which is organic and improves fertility, crop rotation. Major issue in these lands is erosion due to heavy rainfall to control it the surface drainage to be implemented. The elements like iron and aluminium causes toxicity and nutrient imbalances in soil. Application of lime is the most cost effective and the most effective remedy for soil acidity.

4. Author: 1. Dr. Vivek Kumar Mishra

The study is about the production scales of sugarcane in states of India past 12 years. The research explores that increase in yield of sugarcane is high in Tamil Nadu than Maharashtra for a hector and similarly the production scales is different in states per hector as the reason of climate changes are different and technical as well as manual skills are different from each state. Traditional ways of agriculture is different and the fertility in soils are variate. Transfusing the techniques in between the states of India could increase in production of sugarcane.

5. Authors: 1. Gowtham R  
2. Geethalakshmi V  
3. Panneerselvam S

To eliminate the marginal yield of sugarcane production the sustainable sugarcane initiate and integrated nutrient management is implemented and covert the crop zone into most effective crop zone .Micro irrigation increases production in some parts of India and the water spread to be increase with increase in area if this technique results in loss the ultimate alternative farming helps in cost of production for farmers. Delineation of efficient cropping zone for sugarcane helps in possibilities of high sugarcane production through the above process.

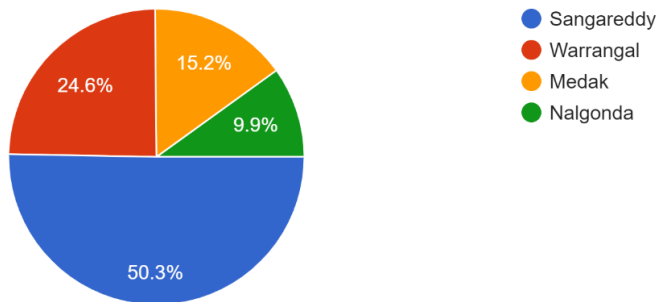
**RESEARCH METHODOLOGY** In this project, descriptive research has been used. In descriptive research, description of state of affairs, as it exists is presented. Hence, it has no control over the variable, it could only report what has happening. Descriptive research technique is concerned with describing the characteristics of particular individual or group.

## DATA ANALYSIS AND INTERPRETATION

Region where sugarcane is cultivated?

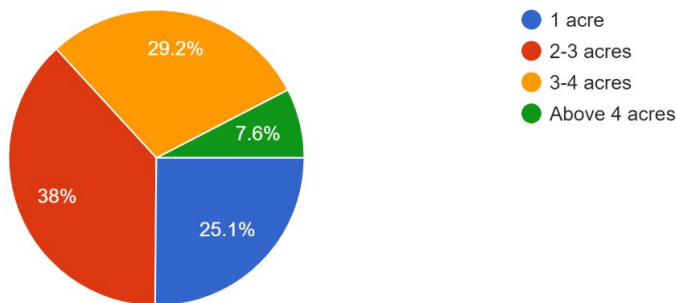
Region

171 responses



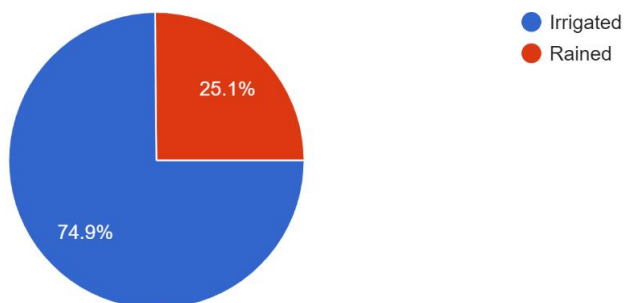
How many acres do you cultivate Sugarcane?

171 responses



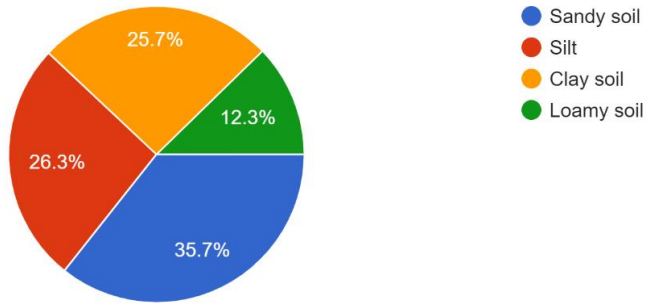
Which type of farming land?

171 responses



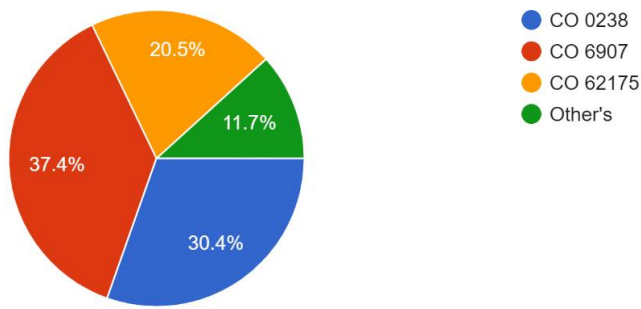
### In which type of soil are you cultivating sugarcane?

171 responses



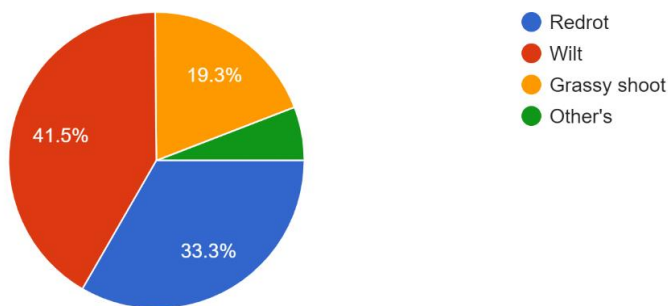
### Sugarcane variety that are been cultivated

171 responses



### Major disease that occur in Sugarcane

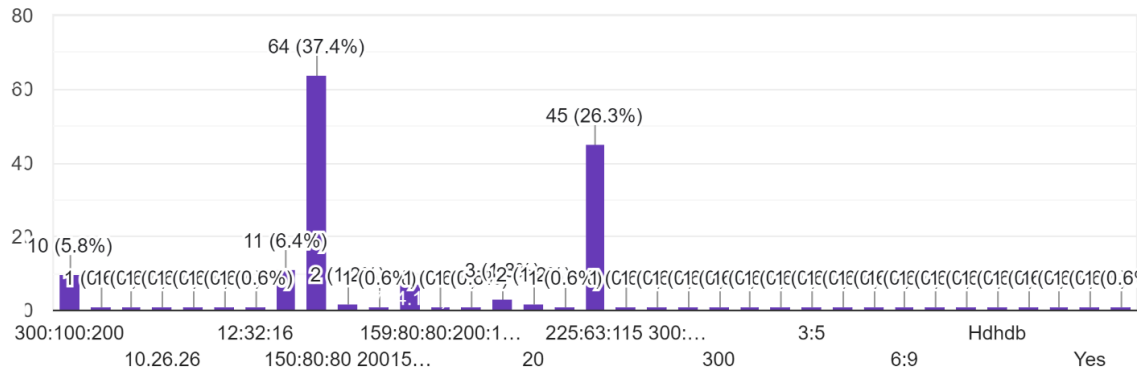
171 responses





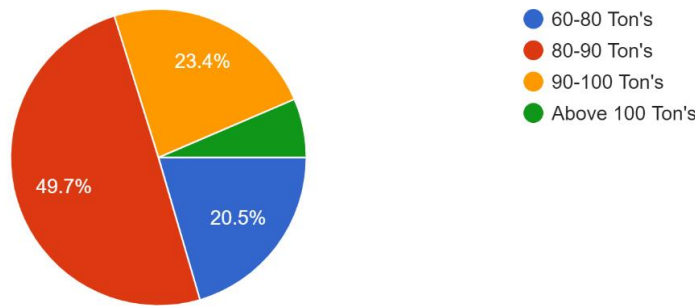
### Ratio of fertilizer's @npk

171 responses



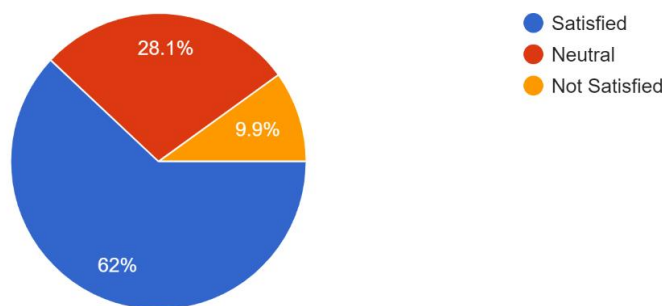
### How many ton's of yield do you get for one acre?

171 responses



### Are you satisfied by cultivating sugarcane?

171 responses



## LIMITATION OF STUDY

The limitation of this study was that the responses gathered were only gathered from the farmers of Medak regions, telangana state.

## CONCLUSION

- **Feasibility:** The project's success will depend on the feasibility of sugarcane cultivation in Telangana. If the project has proven to be economically and technically feasible it could be concluded the sugarcane cultivation is viable option in the region.
- **Profitability:** If the project has resulted in profitable yield for the farmers, it could be concluded that sugarcane cultivation can be lucrative business for them.
- **Sustainability:** A conclusion could be drawn on the sustainability of the project in terms of its impact on the environment, water

resources, and social well-being of the farmers.

- Market demand: a conclusion could be drawn on the demand for sugarcane and its by-products in the market. If the market demand is high end the prices are favourable it could be concluded that sugar cane cultivation is valuable enterprise.
- Lessons learned: The project could yield valuable lessons learned that can be applied to future sugarcane cultivation projects in Telangana or other regions. Project's success

or failure could be analyzed to understand the key factors that contribute to the outcome.

Overall, the conclusion of the project on sugarcane cultivation in Telangana will depend on the project's specific details, goals, and other outcomes. The project's success can be evaluated in terms of feasibility, profitability, sustainability, market demand, and lessons learned, among other factors.

## SUGGESTIONS

Potassium, like nitrogen, also boosts strong cane development, long internode growth, wider cane girths and yield. Supplies need to be balanced alongside those of N. Magnesium, sulfur and iron increase photosynthetic activity maintaining good growth for high yields.

Conventional planting method, where the ridges and furrows are spaced at 90 cm and irrigation is given through the furrows.

Paired row planting where a pair of rows is drawn at 60 cm with the distance between two pairs being 120 cm.

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