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# *Trash Mulching Importance in Moisture Conservation in Sugarcane under Drought Situation*

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**Moisture stress is one of the most important and wide spread limiting factors for successful sugarcane cultivation. However under severe stress, yield loss could be as high as 60-70 per cent. Trash mulching is one of the techniques to conserve the moisture. De-trashed and harvested sugarcane trash utilized as trash mulching. Experiment results revealed that mulching @ 3 t/ha and irrigation given in alternate furrows recorded higher cane yield in sugarcane under drought situations.**

## **INTRODUCTION**

Sugarcane is an important commercial crop grown under varied ecological conditions. Sugarcane being a 12-14 months crop it has to pass through all the seasonal vagaries in a year. Burning of sugarcane trash is a major issue. Burning of sugarcane trash initiates environment pollution and human health problems. In peninsular zone sugarcane planted through-out the year after field preparation furrows were with tractor drawn ridge. Moisture stress is one of the most important and wide spread limiting factors for successful sugarcane cultivation. Sugarcane crop can with stand certain degree of moisture stress without any yield (or) quality. However under severe stress, yield loss could be as high as 60-70 per cent. Trash mulching is one of the techniques to conserve the moisture. De-trashed and harvested sugarcane trash utilized as trash mulching.

Sugarcane crop often suffers due to acute moisture stress during formative stage. In order to overcome this situation different irrigation techniques are used in sugarcane to economize the requirement of irrigation (Kumar *et al.*, 1991) therefore an experiment was conducted for two consecutive years to find out suitable irrigation management practice. The soil of the experimental field was sandy loam in texture, neutral in P<sup>H</sup> normal in EC low in available nitrogen medium in available phosphorus and high in available potassium. After field preparation furrows were with tractor drawn ridge planting was done with three budded sets along with irrigation water. Phosphorus and potassium fertilizers were applied as basal @ 112 kg /ha in the form of SSP and MOP respectively in the furrows.



**After trash shredding in ratoon crop**

Nitrogen in the form urea was applied in two equal splits at 45 and 90 days after planting. All other agronomic practices like hand weeding, earthing up and trash twist propping were carried out as per recommendation. Treatments *viz.*, irrigations given in all furrows with a depth of 50mm, irrigation in alternate furrows, skip furrow irrigation in 80 cm in furrow from 60 DAT, Trash mulching @ 3 t/ha and irrigation in alternate furrows were imposed. The experimental results revealed that yield and yield attributes were significantly influenced by the irrigation management practices. Longer millable canes with higher cane diameter and higher cane yield were recorded with trash mulching @ 3t/ha and irrigation given in alternate furrows. This might be due to efficient utilization of soil moisture, moderation of soil temperature and suppression of weeds. These results are in conformity with (Prasad *et al.*, 1998 and Ved Singh, 2002).

## CONCLUSION

Sugarcane mulching @ 3 t/ha and irrigation given in alternate furrows recorded higher cane yield in sugarcane under drought situations.

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