Yields from Tennessee sweet sorghum varieties per optimal harvests for biofuel and fodder usages.

The sugary water from sweet sorghum can be readily fermented for biofuel production. Four tall growing *Sorghum bicolor* cultivars with high sugar content, i.e., Achi Turi, Dale, Dasht Local, and Topper. 76-6 along with a seed sorghum variety RTx 430, were maintained at Tennessee State University's main campus farm. Stalks of sorghum plants were harvested from the field during peak growing season in the late summer of 2023. Through the harvests of the sorghum plants, this study compared multi-use potential of these varieties. It was sought if the harvest of plants would show intriguing sugar and forage yields for comparative analyses. Growth data from all five sorghum cultivars were obtained along with recording for the amount of juice produced as well as their sugar contents in $Brix^0$ values. Stalks after juice extractions were fed to the goats to confirm their usage as fodder. Sorghum cultivars were comparatively found to be producing juice with higher Brix values for sugar yields while left over stalks remained usable as animal feeds. Such data from each sorghum cultivar confirms whole plant usage of this crop without any wastage which can benefit agricultural production endeavors while sustaining environment.