



SDI Review Form 1.6

Journal Name:	Journal of Experimental Agriculture International
Manuscript Number:	Ms_JEAI_38309
Title of the Manuscript:	Biomass Production and Water Economy of Sugarcane and Energy Cane Genotypes Grown in Water-Deficient and Well-Watered Regimes
Type of the Article	Short Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	The manuscript is about the characterization and quantification of the whole-plant water economy and above-ground biomass production of one sugarcane and two energy cane genotypes under water-stressed conditions during plant cane and under well-watered conditions two consecutive ratoon cane phases. The research is interesting and has potential for publication but should be better discussed, since only four references were cited in Results and Discussion. Although it is a Short Research Article should have more references to support and explain the results.	This subject area has limited research therefore reference sources are limited. Added discussion can be seen in lines 369-374.
Minor REVISION comments	Follow my suggestions to improve the paper: Abstract: I suggest removing titles (Aims, Study design, Methodology, Results and Conclusion) and prepare a text without paragraphs. near Corpus Christi or at Corpus Christi? The same on line 58. Line 14: I suggest removing drought tolerance because it was not evaluated other physiological, biochemical and morphological variables that could characterize the genotypes as tolerant or susceptible to drought. Line 26: I suggest reviewing the sentence because is redundant: Furthermore, since soil water availability is a dominant factor affecting plant productivity, with drought being the most dominant environmental factor limiting yields and irrigation being the common practice to maintain biomass production [8,9], ... Line 55: Correct Materials and Methods instead of Material and Methods. Line 66: I suggest writing 13.5 L pots instead of large 13.5-L pots because it depends on the point of view, for me a pot of 13.5 L it's not large. Line 64: I suggest including a paragraph or phrase clarifying which are the treatments to facilitate the understanding of the readers. For example: The treatments consisted of three genotypes of sugarcane (TCP94-5753, TUS56 and TUS59), three growth phases (plant cane, first ratoon cane and second ratoon cane) and two water regimes (water-deficient and well-watered). Include in the abstract. Lines 94 and 98: The second and third growth phases were irrigated in excess or well-watered regime? Excessive irrigation can be understood as a type of stress for plants. Please review this term. Line 126: Inform that the LSD test was used. Figures: Review the figures if they are in the correct format and according to the standards. Comments: I suggest using the acronyms in the axes of the figures as cited in the text (DWPT, CDWPT, RPET or CRPET) and specify in the legend its meaning. For example: Figure 1 - Put the acronym RPET (mm d⁻¹) on the y axis da figure instead of Potential Evapotranspiration (mm d⁻¹). Line 129: Figure 1. Progression of daily reference potential evapotranspiration (RPET) throughout the three phases of the study. Data source: The Crop-Weather Program for South Texas available online at http://cwp.tamu.edu. - Do the same for all other figures to standardize, as some do not follow the standard acronym cited in the text. For example in figures 3, 5 and 7 on the x axis: Cumulative Reference PET (mm or L m⁻²). Another suggestion is to choose the unit in figures 3, 5 and 7 (mm m⁻²) or (L m⁻²). It is not relevant to cite two units (mm or L m⁻²). And properly specify in the legend the distinct periods that make up the figures A, B and C. For example: Line 166: Figure 3. Linear regression of cumulative whole-plant transpiration (CDWPT) on cumulative reference potential evapotranspiration (CRPET) calculated for distinct periods within the plant cane phase of the study: 1 to 10 days (A), 11 to 20 days (B) and 21 to 99 days (C). Cumulative whole-plant transpiration values were calculated with daily whole-plant transpiration averaged across the three studied genotypes. Modify in figures 5 and 7. Line 142: In sentence "Progression of daily RPET during phase 1 (Fig. 1) was characterized by the normal day-to-day variation and an overall increasing trend throughout the 99-day length of this first phase, which included three short periods of decreased atmospheric evaporative demand, two of them during the middle and one toward the end of the phase", I suggest citing the dates and the average values of RPET.	This is the style of this journal I'd rather say 'near' Corpus Christi 'drought tolerance' removed L29-32..revised L57..changed L70..changed L65-67..added, but not included in abstract due to word limit L98 and 102..understand what the reviewer is saying but left as is L130-131..added Correct Revised Changed to 'mm' Revised Changed (L145-150)



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	Line 147: As mentioned on line 85, all three experimental lines were subjected to a moderate water deficit, I believe that the most appropriate title in figure 2 would be: Progressions of the daily whole-plant transpiration of the three genotypes growing under a moderate water-deficient regime during the initial plant cane phase of the study. Line 177 and 181: energycane or energy cane? Please review. Lines 170, 175, 183, 230, 236, 251, 297, 303: All of these paragraphs begin with the term “There were differences” or “There were no differences”. I suggest that the authors rephrase the paragraphs because it is a repetitive reading. Suggestion: Line 170: The genotypes during the plant cane first phase of the study under a water-deficient regime presented similar above-ground dry biomass production or its partitioning. Or: The genotypes during the plant cane first phase of the study under a water-deficient regime did not differ above-ground dry biomass production or its partitioning. Line 193, 263, 319: Correct 0.05 level instead of .05 level. Line 306: Correct transpiration instead of transpiration. Line 321: Review the conclusions. Approach only the relevant statements found from the research. What can be affirmed from your results? Modify also in the abstract. Would like to emphasize that the manuscript should be better discussed, addressing the physiology and morphology of sugarcane plants to explain the differences in plant characteristics in certain growth stages and water regime. Report other works of sugarcane or energy cane that was evaluated to biomass production under water-deficient or well-watered conditions. Finally, I wonder if the authors evaluated the root system? Since the experiment was potted, it is easier to wash the roots and evaluate their mass. It would be interesting these results mainly in the cane plant phase under water-deficient regime.	Changed Energy cane Changed Changed Changed Changed (L369-374)
<u>Optional/General</u> comments	I recommend this manuscript for publication if the authors agree to review my suggestions with the intention of improving and adjusting the manuscript to the scope of the journal.	