

Review Form 1.6

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_85741
Title of the Manuscript:	Growth, productivity, economics and water use efficiency of rabi castor (<i>Ricinus communis</i>) as influenced by drip fertigation
Type of the Article	Original 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:

(<https://www.journalijecc.com/index.php/IJECC/editorial-policy>)

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)
<u>Compulsory</u> REVISION comments	1) Why does drip irrigation result in lower male flowers compared to surface irrigation? 2) How the drip irrigation affects the increase in oil content? 3) Conclusion is missing in the manuscript	1) Castor is a cross-pollinated crop with monoecism and is sensitive to genotype-environment interactions. Abiotic stresses (nutrient and moisture) during critical stages promote more male flowers which in turn lead to reduction in castor crop yield. This situation is frequented in castor production in Alfisols further modified due to methods of irrigation. In surface irrigation due to variation in soil moisture content between cycles of irrigation coupled with air temperature lead to production of more male flowers. Whereas in drip fertigation the required water (3 day interval) and nutrients (10 day interval through fertigation) were supplied at frequent intervals which maintained a uniform wet regime and supply of nutrients throughout the crop growth cycle resulting in production of fewer male flowers and higher seed yield. (Discussion added in page 5 of revised manuscript)) 2) The recommended source of K fertilizer in in surface irrigation was Muriate of Potash (MOP) which contains (62% K only). Whereas in drip irrigation/fertigation the recommended K fertilizer was Sulphate of Potash (K ₂ SO ₄) which contained about (53% K and 17% S) and was more water soluble and used in fertigation. Sulphur is an important secondary nutrient that has critical role in improving the oil content in oilseed crops. Additional supply of S through drip irrigation/fertigation might have improved the oil content of castor marginally in the present experiment (Discussion added in page 8 of revised manuscript)) 3) Conclusion added in page 9 From the results of the present study, it could be concluded that on shallow Alfisols of Hyderabad, drip fertigation at 0.8Epan +100% N & K through fertigation at 10 days interval resulted in higher seed yield (3302 kg ha ⁻¹) and oil yield (1479 kg ha ⁻¹) of rabi castor leading to higher profitability (B:C ratio 3.65).
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		

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PART 2:

	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)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	NO