



SDI Review Form 1.6

Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	Ms_ CJUST_ 52394
Title of the Manuscript:	Analysis of Physio-Chemical Properties and Plant Growth Characteristics using Different Growing Media
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:

(<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	<p>The work is consistent, and studied an important question, concerning plant growing with no soil. This issue will probably be very important for the humanity. in a not so far future. Relevant results were obtained in this work.</p> <p>Some comments were made in order to improve the clarity of the text, solve some doubts and to detail some issues.</p> <p>01) Page 3, Objective 1. "Physio-chemical properties of different growing media" – is this an objective of the work? Or, it was something like to study the influence of physio-chemical properties of different growing media on the plants? Please, think about this!</p> <p>02) Page 3, Objective 2. " To conduct germination studies to find the best media" – to conduct germination studies was an objective? Or, it was to find the best media for plant growth (or something like this) ?</p> <p>03) Page 3, Results and discussion. - What are the characteristics of the vermicompost, sawdust and coir pith ? And of the clam loam soil? - I think that a table with the characteristics of each substrate (vermicompost, sawdust, coir pith) is important. Although some characteristics of each substrate were commented along the discussion, a table summarizing this information is important for better understanding and to compare with other works!!! This will support some discussion made in the text (e.g.: pg.6, lines 146-148!)</p> <p>04) Page 5: Figures 1 to 4: please, include error bars, or any indication of the LSD. It will provide some important information. E.g: to visualize if two treatments have different results, or the variation between replicates -</p> <p>05) Page 6: Cost analysis of growing media - Since in the title of this section appears "costs", it is important to show values (euros, dollar, or any other financial currency). Once the costs are quantified, it is possible to compare alternatives. I understand that here the authors determined an optimal mixture, considering plant growth parameters. Or, the best technical return considering substrates mixtures vs plant growth. And this information is a very important one. But, no costs were presented. I suggest two possibilities: 1) change the title of the item (do not forget to change it in the objectives and in the methodology sections; and/or 2) Add information about costs in some monetary currency. -</p>	
Minor REVISION comments	<p>01) Page 1, Line 15: please, provide the scientific name for tomato !</p> <p>02) Page 1, Lines 31-33. "Under such circumstances, in the near future it becomes intricate to feed entire population using the production from soil field system". It is an important and strong affirmation. Any reference to support it?</p> <p>03) Page 1, Lines 33-34. "Naturally, soilless culture is gaining its relevance in the present scenario, to cope-up with these challenges". Another important information. Any reference to support it?</p> <p>04) Page 2, Lines 38-39: "Several studies suggested soilless culture is an alternative to traditional field production for high-value vegetable crops." - any reference for this several studies.</p>	



	<p>05) Methodology: Methodology. This substrates (including soil) were previously sieved? If so, what was the sieve diameter?</p> <p>06) Page 3, line 61: "...prosperities"? Or "properties"?</p> <p>07) Line 62 "Standard procedures" - it is important to reference it. E.g. Standard Methods For the Examination of Water and Wastewater, year. (or any other used). Do not forget to add to references list.</p> <p>08) Page 3, line 66 – again, scientific name for tomato</p> <p>09) Page 3, statistical analysis: "AGRES" or "AGRIS"? Was it the software used? Or it as another software? (AGRES.exe is an application of the AGRIS – the other is AGDATA). Please, verify it.</p> <p>10) Page 3, cost analysis – it is not clear how this analysis were made. Is it possible to provide a formula, an equation for it? Besides this, in major comments, I questioned if it is really a cost analysis, since any monetary value (e.g.: dollar, euro...) were given!</p> <p>11) Page 3, Lines 87-90 – I think the first paragraph of this section should not be here. It is objectives of the work. Note that the last sentence "... to find out suitable growing media for plants." clarify an important objective. It could be used in the objectives section. See major comments about the objectives. I suggest to exclude this paragraph form discussion section.</p> <p>12) Page 3, Lines 91-93. The title "Selection of suitable growing media based on physio-chemical properties, temperature relative humidity, shoot length, root length, germination percent, and vigour index bulk density and particle density" could be replaced by "Selection of suitable growing media". - since each property was specified as a new subsection, I think this title may be more concise – Then, each property will be a subitem of this one.</p> <p>An alternative is simply delete this title. Then, maintain a title for each new property discussed (Bulk density, Porosity characteristics, pH variation during crop growth period...)</p> <p>13) Page 3, Line 94. Remember to add a title for the first property: Bulk density".</p> <p>14) Page 4, Line 107: "(Raviv and Lieth 2008)" or "Raviv and Lieth (2008)?"</p> <p>15) Page 4, Line 123: "(Bunt 1988)" or "(Bunt, 1988)" ?</p> <p>16) Page 5, figures 1-4, Indicate in plate 1 and 2 what are better and poor treatments (E.g., vermicompost:sawdust (x:y), Tretment T_n). The figures 1 to 4 and the plates 1 and 2 should be placed in the next item of this work. Suggestion: after the first paragraph of the item "Effect of different growing media on plant growth parameters", page 6.</p> <p>17) Figure 1 - The X axes of Fig. 1 is not clear (at least in my version of the archive) . In my archive, figure 1 presents little problems. Figure 2, last vertical bar is not clear the text. Please, verify if it happens!</p> <p>18) Page 6, Lines 146-148 - "... may be because of the good physical properties of vermicompost and due to high organic matter, macro and micronutrient content present in it." - Where is this information concerning characteristics of the substrates ? The composition of the substrates should be presented previously in a table, as commented in major comments 03). -</p>	
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	<p>19) Page 6, Lines 148-149 - "...were shown in plate 1 and 2" - add ", respectively." Also: what are the better and the poor treatment? And better and poor considering what? All plant growth parameters? Root growth? Please, clarify to the reader -</p> <p>20) Page 6, Line 149 ~ "(Umamaheswari, 2005)" or "Umamaheswari (2005)" ?</p> <p>21) Page 6 - References: Waters et al., 1970 (cited in the text, page 4, line 118) is missing!</p>	
Optional/General comments		

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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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