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|  | **PROPAGATION OF ORNAMENTAL PLANTS**  Editorial Office, University of Forestry, 10 Kliment Ohridski blvd.,  Sofia 1756, Bulgaria, Fax: (++ 359 2) 862 28 30, e-mail: [ivilievltu@yahoo.com](mailto:ivilievltu@yahoo.com),  [www.journal-pop.org](http://www.journal-pop.org/) |

##### **CHECKLIST FOR REVIEWERS**

**Title of the manuscript:** …… ***IN VITRO* GROWTH OF *ALOE BARBADENSIS* MILL.: THE EFFECT OF ACTIVATED CHARCOAL ON MEDIUM PH, NITROGEN UPTAKE AND ELEMENTS CONTENT OF SHOOTS**

…………………………………..

**Author(s):**Daniela Borgognone1, Andrea Marcucci2, Marco Renzaglia2, Cardarelli Mariateresa2…………………………………………………….

# No of the manuscript: …736……………………………..

Deadline for the receiving of your review: 30 days after the receiving of the manuscript

**Please consider main points A and B. Please DO NOT CONTINUE TO REVIEW the manuscript if:**

**- the answer to point A.1 is NO**

**- the answer to point A.2 is YES**

**- the answer to point B is LOW.**

**A. Relevance of the paper.**

***1. Is the subject of the manuscript within scope of the journal?***

**□** Yes

**□** No *Aloe barbadensis* Mill. is an important medicinal plant belonging to the Liliaceae family. It has been used for centuries in traditional and folk medicine to treat several health disorders. Nowadays its leaves are processed by industry as source of pharmaceutical, cosmetics and healthy food products. Aloe is commonly propagated through lateral buds but this technique doesn’t satisfy the industry’s biomass demand. *In vitro* culture is an alternative propagation method which allows to obtain a standard large scale production of plants in limited time and space.

***As written, the subject of the manuscript is not within the scope of the journal. To bring it within the scope, the ornamental characteristics and use of the plant should be better described as distinct from its nutraceutical value. See the introductory sentences above. This should have been developed***

***2. Previous publication of the material***

**X□** No

**□** Yes. What and where………………………………………………………………...

…………………………………………………………………………………………..

### B. Scientific and practical importance of the data

**□** High

**□** Adequate

**X□** Low – See comments

### C. Scientific quality

***1. Are the data in this manuscript new?***

**X□** Yes

**□** No. Comments: New in so far as it relates to Aloe…………………………………………………………………………

***2. Is the manuscript clearly written and well-organized?***

**□** Yes

**□X** No. Comments:…Its in draft form. See the level of changes required in both the introduction and the materials and methods. The results and discussion are equally deficient and require major work. I have not corrected these sections because of the serious difficulty I have in reading and assessing the results section………………………………………………………………………

***3. Are the Abstract and the Key words adequate?***

**□** Yes

**□** No. Suggestions:…………………………………………………………………………

***4. Does the Introduction state the aim of the research and present knowledge?***

**X□** Yes

**□** No. Comments:…Unfortunately the authors appear to be overly ambitious in referring to as many authors and research published. In doing so, they have lost sight of the issue. Furthermore, the authors appear to have taken extreme liberty with this as references used relate to a diversity of Aloe multiplication from callus to somatic embryogenesis and its attendant proliferation. It should be more concise in some respects and better developed in others.…………………………………………………

***5. Materials, methods and study design***

**□** Adequate

**□** Improvement needed. Suggestions:………………………………………………

**□X** Inadequate. Comments:…Too much basic information is omitted for the reader to understand what the authors are trying to undertake.. For example, no mention as to what the control treatment is, yet the word appears in the discussion; what the size of the explants/propagules are when setting up the experiment, so therefore, the reader does not know how much growth the plants made after 20 or 40 days. Both the elongation and rooting media appear to be to be the same; viz. that rooting and development occurred in the absence of growth regulators etc. The growth index is as the final weight minus the initial weight divided by the initial weight, but the initial weight is not specified. Daily shoot growth was specified as the final shoot length minus the initial shoot length divided by the number of days of culture, but again this is impossible to check. Furthermore, this is not mentioned in the results; rather the root shoot ratio, but how the root shoot ratio is calculated is not presented in the materials and methods.………………………………………………………

***6. Results and Discussion***

**□** Properly drawn with regard to methods and data

**□** Should be adjusted – Suggestions: ………………………………………………….

…………………………………………………………………………………………..

**X□** Insufficiently supported – Comments: …Impossible to comprehend. A total and complete rewrite is required in an easily understandable fashion. There are many apparent contradictions, which are exacerbated by the lack of reference to the data in the tables table…………………………………………..

………………………………………………………………………………………….

***7. Are the tables and figures titles and legends presented well and necessary?***

**□** Yes

**□** Improvement needed. Suggestions:……………………………………………………

**X□** No. Comments:…Cannot understand them. There is no connection between the data and the text, so one cannot relate the data (where presented) to data provided in Tables, 1,2,3. Consider Table 1,where did the data for 0AC come from? Does it refer to day 0, day 20 or day 40 or other? Similarly the data for AC1, what does it refer to?

The data for 20 days of culture, did it contain AC or not and similarly with 40 days of culture.

In Figures 1 and 3 there is the use of the same superscript on the bar charts for both 20 days and 40 days; thus in Fig 1, the reader is invited to interpret that the growth index in zero charcoal is not significantly different from that after 40 days in the presence of charcoal (0.5 vs. 3.6) while simultaneously the index in charcoal after 20 days is 1.5 and at 40 days is 1.3 in the absence of charcoal and they are significantly different.. Figure 2 shows data for the root shoot ratio, yet this measurement has not been specified in the materials and methods whereas in the materials the reference is for daily shoot growth. In the results reference is made to the nitrate to ammonium ratio and referenced to Figure 3. Figure 3 refers to the effect of charcoal on iron accumulation. There is no reference in the results to Fig 4, which is a correlation. Furthermore, there is no reference in the materials and methods section that a correlation has been undertaken. ………………………………………………………………………

***8. Data and statistical treatment***

**□** Adequate

**□** Improvement needed. Comments:……………………………………………………

**□** Inadequate. Comments:………………………………………………………………

***9. Have all relevant literature been cited***

**□** Yes

**□** No. Suggestions:…Too many references included. Meyer and van Staden, 1991, incorrectly cited in bibliography; hemphill et al. 1998 not in text; Hemphill 1998 in text and not in Bibliography; Hashem and Kaviani incorrectly cited in text………………………………………………………………….

**E. Recommendations (after corrections)**

□ The paper should be published as it is now, or with minor editorial changes

□ The paper could be published after minor revision, and need not be re-reviewed

X□ The paper could be accepted after major revision according to the comments. After a total and complete re write including cognisance taken as to the relevance of several publications referenced for this specific paper. However, its a judgement for the Editor in Chief.

□ Rejected

#### If adjustments or revision is recommended

□ The writer is allowed to contact me (sign both copies of this checklist)

□ I want to be anonymous (sign only one copy of this checklist)

□ I am not willing to review this paper again (revision)

Please add further comments.

This manuscript in its current form is not at the draft stage let along fit for submission to a journal. This is all the more incomprehendible given its multi authorship. Many other comments and required changes are presented on the manuscript.