Review Form 1.7

Journal Name:	**International Journal of Plant & Soil Science**
Manuscript Number:	**Ms_IJPSS_98304**
Title of the Manuscript:	**Effect of foliar potassic application and irrigation levels growth, yield and nutrient content of mungbean**
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.journalijpss.com/index.php/IJPSS/editorial-policy)

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PART 1: **Review Comments**

<table>
<tr><td></td><td>Reviewer's comment</td><td>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)</td></tr>
<tr><td><u>Compulsory </u>REVISION comments

1. Is the manuscript important for scientific community?
(Please write few sentences on this manuscript)

2. Is the title of the article suitable?
(If not please suggest an alternative title)

3. Is the abstract of the article comprehensive?

4. Are subsections and structure of the manuscript appropriate?

5. Do you think the manuscript is scientifically correct?

6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.

<u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></td><td>1. Yes, the manuscript is important for the scientific community because it presents the results of a bifactorial experiment (2 irrigation recipes x 6 treatments with potassium and other substances), trying to select a variant by using some performance parameters (quality) of the plant (mungbean).
2 I think there is a better option: "Effect of foliar potassium application and irrigation levels on the growth, yield, and nutrient content of mungbean "
3. In essence, the abstract correctly expresses the experiment that was done. I understand it is a bifactorial experiment: 2 options for irrigation x 6 options for foliar treatment with potassium, so a total of 12 variants, as explained in the Material and methods chapter, page
4. The performance criteria on the basis of which the selection is made are clearly expressed in the title: growth parameters, yield, and nutrient content.
It is necessary to review the scientific language and make some clarifications and grammatical control of the English language. Also, explanations are needed for some abbreviations: LAI, CPE, and DAS.
5.In general, the article is scientifically correct, but it has a big flaw due to the fact that the experiment is not discussed as a bifactorial experiment.
5.1 This article is based on a field experiment, precisely defined on 12 plots about which the authors write. But we don't even have an idea about the experimental field. The city and coordinates are given. A map is needed to locate the experimental field on the territory of India. The scheme of the 12 plots is not given, no information is given regarding their dimensions and area. We don't even have a picture of the experimental field or of irrigation or foliar administration of potassium. There are no images of the state of the crop at harvest. As long as such images are missing, and the concrete data of the harvests on each of the 12 plots are not given, it is easy for some readers to wonder if the experiments were carried out or fully carried out. As a reviewer, without such experimental evidence I cannot approve the publication.
5.2 Regarding the processing of experimental data, there are some uncertainties. The experiment is bifactorial, that is, each of the performance functions of the harvest (yield, plant height, nutrient content, number of leaves on the plant, amount of dry matter, etc.) depends on two variables: the type of irrigation and the chemical treatment. Each of the performance parameters is measured on one plot out of the 12, on which you applied a combined irrigation and chemical treatment. It is not bad to present separately performance parameters (maximum values) according to irrigation and according to chemical treatment. However, when you make a recommendation, you must recommend one of the 12 combinations, because you have no plots on which only irrigation without chemical treatment (with the exception of the control plot) or only chemical treatment without irrigation was tried. In mathematics, functions of two variables f(x,y) can have maximum or minimum values for values of the independent variables x, y, which are not at the ends of the intervals, usually those are the most important. For this reason, I propose the authors to complete the work with tables of the following form:
<table><tr><td></td><td>T_1</td><td>T_2</td><td>T_3</td><td>T_4</td><td>T_5</td><td>T_6</td></tr><tr><td>I_1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>I_2</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>
for each of the performance parameters: plant height, plant spread, number of leaves and leaf area index as influenced, etc. for the plant height, in each cell the average height of the plants harvested in the treatment plots (I_1, T_1), (I_1, T_2),..., (I_1, T_6), (I_2, T_1), ... , (I_2, T_6). Then the graphic representation becomes a 3D one and global minimum and maximum values are obtained, not partial (although they may coincide).
6. The list of references is long enough and the works in the list are recent enough.</td><td></td></tr>
</table>

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Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	1. There is an appreciable number of grammatical and expression errors in the text. We propose a grammar check with the text editor and possibly with another program (for example Grammarly free or higher version) or QuillBot free or higher version.	
Optional/General comments	I propose that the authors do a major revision after which a new review will be necessary.	

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)*	

Reviewer Details:

Name:	**Cardei Petru**
Department, University & Country	**The National Institute of Research, Development for Machines and Installations Designed for Agriculture and Food Industry, Romania**