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| Journal Name: | [**Journal of Scientific Research and Reports**](https://journaljsrr.com/index.php/JSRR) |
| Manuscript Number: | **Ms\_JSRR\_139974** |
| Title of the Manuscript: | **ADVANCED SUSTAINABILITY THROUGH THE PLANT AND MICROBIAL REPROGRAMMING IN BIOREMEDIATION OF AGRICULTURAL SOIL** |
| Type of the Article | **Review Article** |

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| **PART 1: Comments** | | |
|  | **Reviewer’s comment**  **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** |  | In the current scenario, focusing on agricultural productivity, biological remediation known as bioremediation may be more suitable for maintaing soil health and cost-effective for large-scale in situ cleanup compared to physicochemical approaches (Ali et al. 2022). Bioremediation leverages the natural metabolic abilities of various soil microorganisms, including bacteria, fungi, archaea, and algae, to degrade, detoxify, or immobilize soil contaminants (Rahman et al. 2025). This process promotes sustainable soil ecosystems without producing secondary pollutants (Nie et al. 2020). Therefore, understanding microbial metabolism is essential for applying potential microbes in remediation processes. (Content added in introduction section) |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **The suggested alternative title is (Bioremediation strategy for soil sustainability)** | “Microbial and Phytoremediation Strategies for Agricultural Soil Bioremediation: Mechanisms and Future Perspectives” |
| **Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.** | **Please delete the figure from the abstract and move to introduction.** | Thank you for the suggestion. The figure is a graphical abstract. This represents whole manuscript like an abstract. It was not discussed in the introduction section. |
| **Is the manuscript scientifically, correct? Please write here.** | It is scientifically correct but not detailed to be published as a review. | Some sections has been reframed in details |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | They are recent but not sufficient, many paragraphs need additional references. | Recent references are added |
| **Is the language/English quality of the article suitable for scholarly communications?** | Yes, the language is suitable. | Yes |
| **Optional/General** comments | 1. **Add detailed information to the paragraphs of pollutants like, heavy metals, hydrocarbons, pesticides…. Etc.** 2. **You need to mention the effects of the environmental chemical physical parameters on bioremediation.** 3. **There are many paragraphs without references, please add.** | Some sections are added in details and references are added in some paraghraph. |

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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)* | There are no ethical issues in this manuscript |