Review Form 1.7

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Ms_JABB_117583**
Title of the Manuscript:	**Advancements in Genetic Enhancement: CRISPR/Cas-Mediated Genome Editing in Leguminous Crops**
Type of the Article	**Review Article**

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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 **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.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**1. This manuscript is crucial for the scientific community as it highlights the latest advancements in CRISPR/Cas9-based genome editing for improving legume crops. It addresses key challenges in enhancing traits such as stress resilience, yield, and nutritional quality, providing a comprehensive overview of current research and future prospects. Additionally, it underscores the importance of overcoming technical and regulatory barriers to fully realize the potential of genome editing in sustainable agriculture.** **2. Advancements in Genetic Enhancement: CRISPR/Cas-Mediated Genome Editing in Leguminous Crops" is suitable as it accurately reflects the focus on recent advancements in CRISPR/Cas9 technology applied to legumes. However, a more concise alternative could be "CRISPR/Cas9 Genome Editing: Enhancing Traits in Leguminous Crops."** **3. The abstract is comprehensive as it effectively summarizes the significance of legumes, the advancements in CRISPR/Cas9 technology for improving legume traits, and the challenges faced in gene editing and regulatory environments. It provides a clear overview of the current state of research and the potential benefits and hurdles associated with genome editing in leguminous crops.** **4. The subsections and structure of the manuscript are appropriate as they logically flow from the introduction of legumes and their significance, to the detailed exploration of CRISPR/Cas9 technology and its applications in legume improvement. The manuscript effectively covers the history and evolution of genetic engineering tools, the specific advancements in CRISPR/Cas9, and the challenges and future prospects, providing a comprehensive and organized review.** **5. Based on the provided content, the manuscript appears scientifically correct. It accurately describes the role of legumes in agriculture and nutrition, the history and development of genome editing technologies, and the specific applications and challenges of CRISPR/Cas9 in legume crops. The explanations of CRISPR/Cas9 mechanisms, including its components and target recognition, are consistent with current scientific understanding. However, a thorough review by experts in plant genetics and molecular biology would be necessary to confirm its scientific accuracy comprehensively.** **6. The references cited in the manuscript seem sufficient and relevant, covering key historical advancements and current applications of CRISPR/Cas9 in legume crops. However, to ensure the manuscript includes the most recent developments and comprehensive coverage, consider adding the following recent references:**	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	Yes, the language quality of the article is suitable for scholarly communications. It is clear, concise, and appropriately uses scientific terminology, making it accessible to the academic audience.	
Optional/General comments	The manuscript provides a thorough and timely review of the advancements in CRISPR/Cas9-mediated genome editing in leguminous crops, highlighting its potential to enhance stress resilience, yield, and nutritional quality. The organization of the content is logical, beginning with the importance of legumes, moving through the evolution of genetic engineering tools, and detailing the specific applications and challenges of CRISPR/Cas9 technology. The language is clear and suitable for scholarly communication, and the references, while mostly sufficient, could be augmented with a few recent studies to ensure comprehensiveness. Addressing the outlined challenges and prospects gives the manuscript a forward-looking perspective, which is valuable for researchers in the field. Overall, the manuscript is scientifically sound, well-structured, and relevant to the current trends in plant biotechnology.	

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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)*	

Reviewer Details:

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