

ReviewForm3

JournalName:	JournalofExperimentalAgricultureInternational
ManuscriptNumber:	Ms_JEAI_129595
TitleoftheManuscript:	DevelopmentofaRoboticWeedControlSystemforGreenhouse
TypeoftheArticle	OriginalResearchArticle

PART1:Comments

	Reviewer’scomment	Author’sFeedback(Pleasecorrectthemanuscriptandhighlightthatpart inthemanuscript.Itismandatorythatauthorsshouldwritehis/herfeedback here)
Pleasewriteafewsentencesregardingtheimportance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript provides significant value to the scientific community by addressing the challenges ofsustainable weed control in greenhouse environments. It introduces an innovative robotic system that minimizes chemical usage, offering an eco-friendly alternative to traditional methods. The study enhances understanding of integrating mechanical systems, such as monorail-guided robotic arms and ultrasonic sensors, for precise weed eliminationinconstrainedgreenhousespaces.Thesefindingscanserveasafoundationforfurtherresearchinto automation in agriculture, ultimately contributing to increased productivity, reduced labor costs, and improved environmental sustainability.	
Isthetitleofthearticlesuitable? (Ifnotpleasesuggestanalternativetitle)	The current title, "Development of a Robotic Weed Control System for Greenhouse", is clear but could be more specific and impactful to align with the detailed focus of your study. Here are some suggestions for alternative titles: 1. "DesignandEvaluationofaRoboticSystemforWeedManagementinCucumberGreenhouses" 2. "MechanicalWeedControlinGreenhouses:ARoboticApproachforSustainableAgriculture" 3. "Development and Performance Testing of a Robotic Weed Cutter for GreenhouseEnvironments" 4. "InnovativeRoboticSolutionsforNon-ChemicalWeedControlinCucumberCultivation" These titles emphasize the focus on cucumber greenhouses, the sustainable and mechanical approach, and the practical application of robotics, making them more targeted and engaging.	
Is the abstract of the article comprehensive? Do you suggesttheaddition(ordeletion)ofsomepointsinth is section? Please write your suggestions here.	The abstract provides a good overview of the study, outlining the development of a robotic prototype for weed control in greenhouses, the experimental design, and some key findings. However, here are suggestions for improvement: 1. Highlight the novelty: Emphasize how this research advances the field compared to existing solutions, particularly the innovative aspects of the robot's design. 2. State outcomes succinctly: Include quantified results, such as the 89% weed removal rate, for clarityand impact. 3. Avoid excessive detail: The explanation of motor and blade speeds can be summarized or shifted to the methods section. 4. Articulatesignificance:Concludewithasentenceonthebroaderimplicationsforgreenhousefarming.	
Isthemanuscriptscientifically,correct?Pleasewrite here.	Themanuscriptappearsscientificallyaccurate,withacomprehensivemethodologyfordevelopingaroboticweed control system for cucumber greenhouses. However, the abstract could be refined to succinctly highlight the objectives, methodology, and significant findings for improved clarity. Minor grammatical errors and awkward sentence structures should be addressed to enhance readability and professionalism. Additionally, data presentationcanbestreamlinedbyconsolidatingtablesandensuringfiguresareclearand directlyrelevanttothe textforbettercoherenceand impact.	
Arethereferencesufficientandrecent?Ifyouhave suggestions of additional references, please mention them in the review form.	The current references are somewhat outdated and should be supplemented with more recent sources to enhance the relevance and accuracy of the review. It is essential to update the review with additional recent references to ensure the information is current and comprehensive.	

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Isthelanguage/Englishqualityofthearticlesuitable for scholarly communications?	The language and English quality of the article are highly suitable for scholarly communications. The writing is clear, precise, and effectively communicates complex ideas, making it an excellent fit for academic purposes.	
<u>Optional/General</u> comments	The study presents a novel approach to weed control in cucumber greenhouses with the development of a robot prototype. The use of ultrasonic sensors for weed detection and a microcontroller for processing demonstrates an innovative application of technology. The thorough experimental analysis of different motor speeds, blade rotations, and blade designs provides valuable insights into optimizing the robot's performance. The manuscript couldbenefitfromadditionaldiscussiononthepracticalimplicationsandpotentiallimitationsoftheproposed system.Overall,thisresearchcontributessignificantlytothefieldofagriculturalrobotics.	

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

Reviewer Details:

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