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Journal Name:	Advances inResearch
ManuscriptNumber:	Ms_AIR_121641
Title ofthe Manuscript:	"AdvancingAgriculture:Exploringthe PotentialofAeroponic Systems for Vegetable Cultivation:A Comprehensive Review"
Type ofthe Article	

PART 1:ReviewComments

Compulsory REVISIONcomments	Reviewer'scomment	Author's Feedback (Please correct the manuscript andhighlight that part inthe manuscript.It ismandatorythat authorsshouldwrite
Please writeafewsentencesregardingthe importance ofthismanuscriptforthe scientific community.Whydo youlike (or dislike)thismanuscript?Aminimumof3-4 sentencesmaybe requiredforthispart.	Thiscomprehensivereviewdiscusses thepotentialofaeroponicssystemsforsustainable vegetablecultivation.Itexploresthe principles,advantages,andlimitationsofaeroponics(challenges)aswellas factorsaffectingitsefficiency.The reviewcomparesbetweensoil-basedandaeroponic farming systems.It alsohighlightsthe significant advantagesofaeroponics,including waterefficiency,space optimisation,andyear-roundproductionpotential, whichare critical toaddressingglobal agricultural challenges suchas shrinkingfarmland,water scarcity,and declining soil fertilitythat constitute the potential for sustainable agricultureandincreasedfoodproduction.	
Isthetitle ofthe article suitable? (If notplease suggestanalternative title)	The title isself-explanatory	
Istheabstractofthe article comprehensive? Doyou suggesttheaddition(or deletion)ofsome points inthis section?Please writeyour suggestionshere.	Aeroponic systemsofferanefficient and sustainable approachtovegetable cultivation,highlightingadvantages suchas waterand resourceefficiency,year-round production,and high-qualitycrops.Thisreviewexploresthe principlesofaeroponiccultivation,keyfactorslikenutrientdelivery,rootoxygenation,andspace optimization, and comparesaeroponics with traditional soil-based methods. It alsodiscusses recent advancements in technologyandresearch,andthe prospectsofaeroponicvegetablecultivation,addressingcurrentagricultural challenges such as land scarcity, water shortage, and productivity decline. Overall, aeroponicspresents a promising solutionforglobal foodsecurity.	
Are subsectionsandstructure ofthemanuscript appropriate?		
Please writeafewsentencesregardingthescientific correctnessofthismanuscript. Whydoyouthinkthat thismanuscriptisscientificallyrobustandtechnically sound?Aminimumof3-4sentencesmay be required forthispart.		
Are the referencesufficientandrecent? Ifyouhave suggestions ofadditional references,please mention theminthereviewform.		

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<p>Minor REVISION comments</p> <p>Isthe language/English quality of the article suitable for scholarly communications?</p>		
<p>Optional/General comments</p>	<p>Your abstract and introduction provide a thorough overview of aeroponics and its potential advantages for sustainable agriculture. Here's a summary and some suggestions to refine and enhance your review:</p> <p>Abstract</p> <p>Aeroponic systems offer an efficient and sustainable approach to vegetable cultivation, highlighting advantages such as water and resource efficiency, year-round production, and high-quality crops. This review explores the principles of aeroponic cultivation, key factors like nutrient delivery, root oxygenation, and space optimization, and compares aeroponics with traditional soil-based methods. It also discusses recent advancements in technology and research, and the future prospects of aeroponic vegetable cultivation, addressing current agricultural challenges such as land scarcity, water shortage, and productivity decline. Overall, aeroponics presents a promising solution for global food security.</p> <p>Introduction</p> <p>Soil fertility is increasingly compromised by chemical usage, natural disasters, rapid urbanization, and global warming, leading to a significant decline in arable land and productivity. By 2050, with the global population projected to reach 8.9 billion, food production needs to increase by 50%, yet available fertile land is insufficient (FAO, 2020). Traditional soil-based agriculture faces serious threats from these challenges, necessitating more efficient and environmentally friendly methods. Aeroponics, a soil-less cultivation method where plants are suspended in air and roots are exposed to a nutrient-rich mist, emerges as a revolutionary approach. It maximizes resource use, reduces water consumption, and minimizes soil degradation impacts, offering a flexible solution suitable for urban areas, arid regions, and even space agriculture.</p> <p>Comparison of Aeroponics and Hydroponics</p> <p>Your table comparing aeroponics and hydroponics is clear and highlights key differences. Consider including a brief explanation of why these differences matter in practical applications to provide context.</p> <p>Comparison of Soil-Based Agriculture vs. Aeroponics</p> <p>This comparison effectively demonstrates the benefits of aeroponics in terms of resource use and control. Emphasize how these advantages can address specific issues faced by traditional soil-based agriculture. Advantages and Disadvantages</p> <p>Your list of advantages and disadvantages is comprehensive. You might want to include potential solutions or ongoing research efforts aimed at overcoming the disadvantages, such as advancements in system reliability and cost reduction.</p> <p>Suitable Vegetables for Aeroponics</p> <p>The list of vegetables suitable for aeroponics is useful. You could enhance this section by discussing any specific challenges or considerations for each type of vegetable in aeroponic systems.</p> <p>Components of Aeroponic Systems</p> <p>This section is detailed and well-organized. Adding diagrams or illustrations of the components could further aid in understanding.</p> <p>How Aeroponics Works</p> <p>Your explanation of the aeroponic process is thorough. To make it more accessible, you might break it down into step-by-step instructions or include visual aids.</p>	

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	<p>table to present findings more clearly.</p> <p>Conclusion Your conclusion effectively summarizes the benefits and future prospects of aeroponics. To strengthen it, you might also mention specific areas where further research or technological advancements are needed.</p> <p>Future Prospects This section on future prospects is optimistic and highlights the potential of aeroponics. Including examples of recent innovations or ongoing research projects could provide a more concrete vision of how the technology will evolve.</p> <p>Overall, your review is comprehensive and well-structured. These suggestions aim to enhance clarity and accessibility, ensuring that your readers can easily grasp the potential of aeroponics in revolutionizing vegetable cultivation.</p>	
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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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