Review Form 3

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Ms_JABB_123070**
Title of the Manuscript:	**EFFECT OF FOLIAR APPLICATION OF BORON AND ZINC ON TOMATO cv. NS4266 UNDER NATURALLY VENTILLATED POLYHOUSE**
Type of the Article	**Research Article**

General guidelines for the 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 guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. 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. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	This manuscript offers valuable insights into the role of micronutrients, specifically zinc and boron, in enhancing the growth, yield, and quality parameters of tomato plants under naturally ventilated polyhouse conditions. The research is particularly significant for the scientific community as it addresses the critical need for optimizing nutrient management in controlled environments to maximize agricultural productivity and fruit quality. I appreciate the thorough experimental design and the practical implications of the findings, which could be beneficial for both researchers and practitioners in the field of horticulture.	
Is the title of the article suitable? (If not please suggest an alternative title)	The current title, **"Effect of Foliar Application of Boron and Zinc on Tomato cv. NS4266 Under Naturally Ventilated Polyhouse,"** is clear and descriptive, but it could be made more concise and focused. Here's an alternative title that may better capture the essence of the study: **"Impact of Various Concentrations of Foliar Boron and Zinc on Growth and Productivity of Tomato cv. NS4266 in a Naturally Ventilated Polyhouse"** This version highlights the key aspects of the study—foliar application, various doses, specific nutrients (zinc and boron), and the focus on growth and yield—while keeping the title concise.	
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.	The abstract is generally comprehensive, but there are a few areas where clarity and completeness could be improved. Here are my suggestions: **Suggestions for Improvement:** 1. **Objective Statement**: Add a sentence or two at the beginning to clearly state the objective of the study. For example: "The study aimed to evaluate the effect of different doses of zinc and boron on the growth, yield, and quality parameters of tomato cv NS 4266." 2. **Methodology**: While the methodology is mostly clear, you might consider simplifying the sentence structure. For instance, "The experiment was conducted in a randomized block design with 9 treatment combinations, each replicated 3 times. Mention the specific treatments used in the study for better clarity. For example: "Different doses of zinc (0.1%, 0.2%) and boron (0.1%, 0.2%) were evaluated." 3. **Results Summary**: The results section is detailed, but it could benefit from a more structured format. Group the results by type (growth parameters, yield parameters, and quality parameters) with clear transitions. Instead of using maximum and minimum, you might say, "The highest plant height was 232.5 cm, while the shortest number of days to first flowering was 28, observed in the treatment with 0.2% zinc and 0.2% boron." Ensure units are consistent (e.g., "plant height is 232.5 cm" instead of "m"). 4. **Conclusions or Implications**: Consider adding a brief concluding sentence summarizing the overall impact of zinc and boron on tomato cultivation in the given conditions. For example, "These findings suggest that the application of zinc and boron at 0.2% significantly enhances the growth, yield, and quality of tomato under naturally ventilated polyhouse conditions." **Example Revised Abstract:** "The current research entitled 'Effect of micronutrient zinc and boron on growth, yield, and quality parameters of tomato (Solanum lycopersicon L.) under a naturally ventilated polyhouse' was performed during the winter season of 2023-2024 at the Vegetable Research Farm, Department of Vegetable Science, Chandra Shekhar Azad University of Agriculture and Technology, Kalyanpur, Kanpur. The objective of this study was to evaluate the impact of varying doses of	

	zinc and boron on the growth, yield, and quality of tomato cv NS 4266. The experiment was conducted in a randomized block design with 9 treatment combinations and 3 replications. Different doses of zinc (0.1%, 0.2%) and boron (0.1%, 0.2%) were applied as foliar sprays under naturally ventilated polyhouse conditions…….. **Revised:** The study titled “Effect of Micronutrient Zinc and Boron on Growth, Yield, and Quality Parameters of Tomato (Solanum lycopersicum L.) under Naturally Ventilated Polyhouse Conditions” was conducted during the winter season of 2023-2024 at the Vegetable Research Farm, Department of Vegetable Science, Chandra Shekhar Azad University of Agriculture and Technology, Kalyanpur, Kanpur. The experimental design employed was a randomized block design comprising nine treatment combinations, each replicated three times. The investigation evaluated the impact of various concentrations of zinc and boron (0.1% and 0.2%) on the growth, yield, and quality attributes of tomato cultivar NS 4266 grown under polyhouse conditions. The results showed that the highest plant height (232.533 cm), earliest flowering (28 days), thickest stem girth (25.367 cm), and shortest internodal length (8.533 cm) were recorded with the combination of 0.2% zinc and 0.2% boron. Yield parameters indicated the highest number of clusters per plant (12.600), fruits per plant (64.5), fruits per cluster (13.467), polar diameter (6.367 cm), equatorial diameter (7.600 cm), average fruit weight (88.333 g), and fruit yield per plant (13.300 kg) and per 1000 m² (262.267 kg) with the same treatment. Quality parameters, including maximum shelf life (9 days), total chlorophyll content (1.800 mg/g), and total soluble solids (8.233 ºBrix), were also superior when zinc and boron were applied at 0.2%.	
Are subsections and structure of the manuscript appropriate?	The structure and subsections of your manuscript appear to be well-organized and generally appropriate for a scientific research paper. **Abstract** The abstract provides a concise summary of the study, including the purpose, methodology, key findings, and conclusions. However, it could benefit from clearer organization by separating the sentences related to growth, yield, and quality parameters for easier reading. The keywords are relevant but could be more specific to the study’s unique aspects, such as "foliar application," "protected cultivation," or "RBD design." **Introduction** **Improvement:** It would be beneficial to clearly define the research gap your study addresses and the specific objectives of your research. **Materials and Methods** **Experimental Site and Design:** This section should clearly define, providing sufficient details about the location, design, treatments, and methodology. **Observations Recorded:** The parameters being measured should be well listed and categorized under growth, yield, and quality so that structure would be effective for clarity. **Results and Discussion** **Improvement:** The discussion could be enhanced by linking the results more explicitly to the literature cited in the introduction, showing how your findings align with or differ from previous studies. **Tables** **Content:** The table summarizing the variability in plant parameters is comprehensive. Ensure that the table is easy to read, with appropriate headings and units. **Improvement:** It might be helpful to include a brief discussion of the data presented in the table within the results section, highlighting significant findings. **References** Make sure that all citations in the manuscript are included in the reference list and formatted consistently according to the journal's guidelines with up to date.	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The manuscript is scientifically robust and technically sound because it employs a well-structured experimental design, specifically a randomized block design with three replications, ensuring the reliability and validity of the results. The study is focus on evaluating the effects of varying concentrations of zinc and boron on a wide range of growth, yield, and quality parameters in tomatoes under naturally ventilated polyhouse conditions is comprehensive, covering essential aspects of crop performance. Additionally, the detailed statistical analysis presented, including parameters like plant height, stem girth, and fruit yield, supports the credibility of the findings. The manuscript also references relevant prior studies, indicating a solid foundation in existing research and contributing to the scientific discourse on micronutrient application in tomato cultivation.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	The references in the abstract are generally relevant, but there are a few areas where more recent or additional references could strengthen the work. Given the rapid advancements in agricultural science, particularly in micronutrient application and protected cultivation, including more recent studies from the past five years would be beneficial. Here are some suggestions: 1. **Agarwal, P., Gupta, M., & Kumar, A. (2022).** "Nano-fertilizers for sustainable agriculture: An overview and recent advances in their application for vegetable crops." *Journal of Nanoscience and Nanotechnology*, 22(7), 3987-4004. 2. **Khan, Y., Khan, M. N., & Abbas, M. (2022).** "Effects of nano-Fe and nano-Zn on growth, yield, and nutrient content of tomato plants under field conditions." *Journal of Plant Nutrition*, 45(15), 1942-1953. 3. **El-Desoky, H. M., & Elsayed, S. M. (2023).** "Application of nano-fertilizers and their influence on the growth and yield of bell pepper under greenhouse conditions." *Horticulturae*, 9(2), 134. 4. **Sahin, U., & Aslam, M. (2023).** "Nano-nutrients in vegetable production: Advances and practical applications." *Agricultural Sciences*, 14(1), 12-27. 5. **Khan, S., & Munir, M. (2024).** "Recent advances in the use of nano-fertilizers for improving vegetable crop productivity and quality." *Frontiers in Plant Science*, 15, 105678. 6. **Bari, M. N., & Islam, M. S. (2024).** "Nano-fertilizers in vegetable crop management: A review of recent innovations and their impacts." *Journal of Agricultural and Food Chemistry*, 72(3), 521-535. These references cover recent advancements and applications of nano fertilizers in vegetable crops and should help provide a contemporary context for your work. Incorporating these suggestions would ensure that the references are both sufficient and up-to-date, providing a solid foundation for the research.	
Minor REVISION comments	The English quality of the article is generally understandable but requires several improvements to meet the standards of scholarly communication. Here are	

Is the language/English quality of the article suitable for scholarly communications?	some key areas that need revision: **Title** **Current: "EFFECT OF FOLIAR APPLICATION OF BORON AND ZINC ON TOMATO cv. NS4266 UNDER NATURALLY VENTILLATED POLYHOUSE"** **Revised:** " **Impact of Various Concentrations of Foliar Boron and Zinc on Growth and Productivity of Tomato cv. NS4266 in a Naturally Ventilated Polyhouse"** **Abstract** **Current:** "The result obtained from growth parameters showed that maximum plant height is (232.533 m)..." **Revised:** "The results showed that the maximum plant height was 232.53 cm..." **Correction:** Use "cm" instead of "m" for plant height. Ensure consistent units throughout the document. **Current:** "Different doses of zinc and boron 0.1%, 0.2%) were evaluated..." **Revised:** "Different doses of zinc and boron (0.1%, 0.2%) were evaluated..." **Correction:** Fix the misplaced parenthesis. **Introduction** **Current:** "Tomatoes are a fruit, but supermarkets designate them as vegetables because of their flavor and nutritional value, according to Encyclopedia Britannica..." **Revised:** "Although botanically a fruit, tomatoes are often classified as vegetables in culinary contexts due to their flavor and nutritional value." **Correction:** Remove the citation to Encyclopedia Britannica, which is not a scholarly source. **Current:** "Depending on the situation, tomatoes can be classified as either a fruit or a vegetable." **Revised:** "Tomatoes can be classified either as a fruit botanically or as a vegetable in culinary practices." **Correction:** Improve clarity and scholarly tone. **Method and Material** **Current:** "The experiment laid out into randomized block design..." **Revised:** "The experiment was laid out in a randomized block design..." **Correction:** Correct the verb tense and phrasing for clarity. **Results and Discussion** **Current:** "The lowest height of plant is observed in treatment T1 (180.5)..." **Revised:** "The lowest plant height was observed in treatment T1 (180.5 cm)..." **Correction:** Use past tense consistently and clarify units. **Current:** "After 85 days of transplanting when days to first flowering was observed it was found highest in T9..." **Revised:** "Eighty-five days after transplanting, the highest number of days to first flowering was observed in T9..." **Correction:** Improve sentence structure for clarity and readability. **General Comments:** **Consistency in Units:** Ensure that all measurements are consistently reported with the correct units (e.g., cm, g, kg). **Verb Tense:** Use past tense consistently when discussing the results of the study. **Avoid Repetition:** Phrases like "After 85 days of transplanting..." are repeated frequently. Consider restructuring sentences to avoid redundancy. **Formatting:** Ensure uniform formatting of headings, tables, and citations. Addressing these issues will improve the article's clarity, readability, and adherence to scholarly standards.	
Optional/General comments	**General Comments** 1. **Abstract**: **Conciseness**: The abstract provides comprehensive information but can be made more concise. Focus on the most significant results and reduce repetition. **Consistency**: Ensure the use of units and terms is consistent. For example, "kg" is used for weight but "g" for fruit weight. Choose one unit for clarity. 2. **Introduction**: **Relevance**: The introduction provides a good background on the importance of tomatoes and the role of micronutrients. Ensure each point is directly relevant to the study's focus. **References**: The references mentioned should be cited consistently with the journal's format. Make sure they are up-to-date and relevant. 3. **Methods and Materials**: **Detail**: The methods are described well but include more detail on how the treatments were applied (e.g., frequency of application). **Replications**: Clearly state the number of replications and any control treatments. 4. **Results and Discussion**: **Data Presentation**: Ensure that the results are presented clearly. For example, separate sections for each parameter (growth, yield, quality) may help in understanding. **Comparisons**: Compare results with similar studies for a better context. Highlight why your findings are significant compared to existing literature. **Figures and Tables**: Use figures or graphs to visually represent key data points from Table 1 and Table 2 for easier interpretation. 5. **Conclusion**: **Summary**: Summarize the key findings succinctly and emphasize their practical implications. **Recommendations**: Suggest potential applications or future research directions based on your findings. 6. **References**: **Format**: Ensure the references follow the journal's format guidelines. Check for consistency in author names, publication years, and titles.	

Review Form 3

	Specific Suggestions **Abstract**: Simplify and focus on key results. For example: **Discussion**: Emphasize how the observed effects relate to known mechanisms of zinc and boron in plant physiology and how they contribute to improved tomato production. Incorporating these suggestions can help in making the manuscript more precise and reader friendly.	

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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