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Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_128081
Title of the Manuscript:	EVALUATION OF LIQUID NANO UREA FERTILIZER FOR ENHANCING YIELD, YIELD ATTRIBUTES AND ECONOMIC PERFORMANCE IN SUGARCANE PLANT-RATOON CYCLE
Type of the Article	Original Research Article

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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: 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. A minimum of 3-4 sentences may be required for this part.	This manuscript provides valuable insights into the use of liquid nano urea fertilizer in sugarcane cultivation, offering a potential solution to optimize nitrogen utilization and enhance crop productivity. The study's comprehensive approach, examining both plant and ratoon crops over two consecutive seasons, adds robustness to its findings and increases their applicability in real-world agricultural settings. The research demonstrates that a combination of 75% recommended dose of nitrogen (RDN) with foliar application of liquid nano urea can effectively replace 25% of conventional nitrogen fertilizer while maintaining or improving yield and economic returns. This finding has significant implications for sustainable agriculture, potentially reducing environmental impacts associated with excessive fertilizer use while maintaining crop productivity and farmer profitability.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title of the article "EVALUATION OF LIQUID NANO UREA FERTILIZER FOR ENHANCING YIELD, YIELD ATTRIBUTES AND ECONOMIC PERFORMANCE IN SUGARCANE PLANT-RATOON CYCLE" is suitable and accurately reflects the content of the research. It effectively captures the main focus of the study, which is evaluating the effects of liquid nano urea fertilizer on sugarcane yield, yield attributes, and economic performance in both plant and ratoon crops. The title is comprehensive, informative, and concise, highlighting the key aspects of the research: The subject of study: Liquid nano urea fertilizer The crop: Sugarcane The parameters evaluated: Yield, yield attributes, and economic performance The crop cycle: Plant-ratoon cycle Given that the title effectively communicates the essence of the research, there is no need to suggest an alternative. It provides readers with a clear understanding of what to expect from the article and aligns well with the content presented in the abstract and result	

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<p>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.</p>	<p>The abstract of the article is generally comprehensive, covering the key aspects of the study. However, there are a few suggestions for improvement:</p> <p>Strengths of the Abstract</p> <ul style="list-style-type: none"> • It clearly states the purpose of the study. • It provides information on the experimental design and location. • It presents the main findings regarding yield attributes, yield, and economic performance. • It includes a conclusion with practical recommendations. <p>Suggestions for Improvement</p> <ol style="list-style-type: none"> 1. Methodology Details: Add brief information about the randomized block design, including the number of treatments or replications. 2. Statistical Analysis: Mention the statistical methods used for data analysis, such as ANOVA or any specific software. 3. Specific Results: Include more specific numerical results, such as the percentage increase in yield or economic returns compared to the control. 4. Environmental Impact: Briefly mention any findings related to the environmental benefits of using nano urea, if applicable. 5. Limitations: Add a sentence acknowledging any limitations of the study or areas for future research. 6. Keywords: Consider adding more specific keywords related to the study, such as "nano fertilizers" or "nutrient use efficiency". 7. Conciseness: The abstract could be slightly condensed by removing some repetitive information about the treatments. <p>By incorporating these suggestions, the abstract would provide a more comprehensive and balanced overview of the research, making it more informative for readers</p>	
<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The language and English quality of the article are generally suitable for scholarly communications, but there are some areas that could be improved:</p> <p>Strengths</p> <ul style="list-style-type: none"> • The article uses appropriate scientific terminology and academic language throughout. • The structure follows a standard research paper format with clear sections (Abstract, Introduction, Materials and Methods, Results and Discussion, Conclusion). • Technical details and data are presented accurately. <p>Areas for Improvement</p> <ul style="list-style-type: none"> • Grammar and Syntax: There are occasional grammatical errors and awkward phrasings. For example, "Data clearly showed that significantly higher millable cane yield" could be rephrased as "The data clearly showed that significantly higher millable cane yield was recorded..." • Consistency: Some inconsistencies in formatting and style are present, such as varying capitalization in section headings. • Clarity: Some sentences are overly long and complex, which can hinder readability. Breaking these into shorter, more focused sentences would improve clarity. • Proofreading: There are minor typographical errors and formatting issues that should be addressed through careful proofreading. <p>Recommendations</p> <p>To enhance the article's suitability for scholarly communications:</p> <ol style="list-style-type: none"> 1. Conduct a thorough proofreading to eliminate grammatical and typographical errors. 2. Improve sentence structure for better clarity and readability. 3. Ensure consistency in formatting, especially for headings and citations. 4. Consider having the manuscript reviewed by a native English speaker or professional editor specializing in scientific writing. <p>Overall, while the content and structure are appropriate for scholarly communication, addressing these language and style issues would significantly improve the article's quality and professional presentation</p>	
<p>Optional/General comments</p>	<p>This research paper presents a comprehensive study on the evaluation of liquid nano urea fertilizer for enhancing yield, yield attributes, and economic performance in sugarcane plant-ratoon cycles. The study was conducted over two consecutive years (2021-22 and 2022-23) in Navsari, Gujarat, India. Key findings from the study include:</p>	

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	<p>1. Yield Attributes and Yield:</p> <ul style="list-style-type: none"> Treatment T3 (75% RDN + 2 sprays of liquid nano urea) consistently outperformed other treatments in terms of yield attributes and yield. T3 resulted in significantly higher numbers of millable canes, internodes per cane, cane girth, and single cane weight. Millable cane yield and green top yield were also highest with T3, closely followed by T2 (100% RDN) and T4 (75% RDN + 2 sprays of 2% urea). <p>2. Economic Performance:</p> <ul style="list-style-type: none"> T3 recorded the highest net returns and benefit-cost ratio in both plant and ratoon crops. In the plant-ratoon cycle, T3 achieved net returns of 565,072 ₹/ha and a benefit-cost ratio of 2.95. <p>3. Efficiency of Nano Urea:</p> <ul style="list-style-type: none"> The study demonstrates that nano urea can effectively replace 25% of the recommended dose of nitrogen while matching or exceeding the performance of 100% RDN treatments. <p>4. Environmental Implications:</p> <ul style="list-style-type: none"> The use of nano urea could potentially reduce nitrogen runoff and environmental impact associated with conventional fertilizers. <p>5. Future Prospects:</p> <ul style="list-style-type: none"> The research highlights the potential of nanotechnology in agriculture, particularly in improving nutrient use efficiency and crop productivity. <p>This study provides valuable insights into the effectiveness of nano urea in sugarcane cultivation, offering a promising approach to enhance crop yields while potentially reducing environmental impacts associated with conventional fertilizer use.</p> <p>1. Strengths:</p> <ul style="list-style-type: none"> The research topic is relevant and addresses an important issue in agricultural sustainability. The experimental design is well-structured with clear treatments and replications. The methodology is comprehensive and well-explained. The results are presented clearly with appropriate statistical analysis. The discussion effectively interprets the findings and relates them to existing literature. The conclusion is concise and provides practical recommendations. <p>2. Areas for minor revision:</p> <ul style="list-style-type: none"> Some sections of the introduction could be more concise. A few minor grammatical and formatting issues need to be addressed. Some tables could be simplified for better readability. The economic analysis could benefit from a more detailed explanation. <p>Overall, this manuscript presents a valuable contribution to the field of agricultural research, particularly in the area of nano-fertilizer application in sugarcane cultivation. With revisions, it would be suitable for publication in a reputable journal.</p>	
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PART 2:

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

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