

Review Form 3

Journal Name:	Journal of Experimental Agriculture International
Manuscript Number:	Ms_JEAI_129731
Title of the Manuscript:	A COMPARATIVE STUDY OF NEURAL NETWORK AND WAVELET DECOMPOSITION MODELS FOR PRICE FORECASTING OF TOMATO
Type of the 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: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>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.</p>	<p>This manuscript holds significant value for the scientific community, particularly in the fields of agricultural economics, machine learning, and forecasting models. By comparing traditional and advanced models such as ARIMA, Time Delay Neural Networks (TDNN), and Wavelet-TDNN for forecasting tomato prices in Bihar markets, the study offers new insights into the effectiveness of these techniques for agricultural price prediction. The integration of wavelet decomposition with neural networks presents an innovative approach to handling the complex, non-linear dynamics inherent in agricultural price series, thus providing more accurate forecasting tools. This research not only contributes to improving price prediction accuracy but also aids policymakers, farmers, and market analysts in better decision-making, ultimately fostering a more resilient agricultural sector.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>No need of any change in topic</p>	
<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>It would be beneficial to explicitly mention the significance of the study's findings in practical terms for stakeholders like farmers, policymakers, and market analysts. For example:</p> <p>"This research provides practical insights for farmers and policymakers by improving the accuracy of price predictions, helping to reduce market volatility and guide more informed decisions on planting, harvesting, and pricing strategies."</p>	
<p>Is the manuscript scientifically, correct? Please write here.</p>	<p>Appropriate Model Comparison: The manuscript correctly compares a variety of models, including ARIMA, TDNN, and Wavelet-TDNN, for forecasting tomato prices, which is a scientifically sound approach. The inclusion of both traditional and modern methods allows for a robust evaluation of forecasting accuracy, making the comparison relevant and comprehensive.</p> <p>Use of Performance Metrics: The use of established performance metrics such as RMSE, MAE, and MAPE to evaluate the forecasting models is scientifically appropriate. These metrics are widely used in time series forecasting to assess the accuracy and reliability of model predictions, ensuring the study is grounded in standard practices.</p> <p>Wavelet Decomposition Integration: The manuscript's use of wavelet decomposition (via the Haar filter) in conjunction with TDNN is a scientifically valid approach. Wavelet transforms are effective in capturing non-stationary and non-linear patterns in time series data, which is crucial for agricultural price forecasting where volatility and irregular trends are common.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>The references provided in the manuscript appear to be sufficient in terms of covering the relevant models (e.g., ARIMA, TDNN, Wavelet Transform) and methodologies used in the study. The cited works also seem to provide a strong foundation for the methods applied, especially in the context of forecasting agricultural prices using machine learning and time series analysis.</p> <p>However, to ensure the manuscript is up-to-date and reflective of the latest advancements, I would suggest including a few more recent references, particularly those that focus on hybrid models and deep learning techniques for forecasting, which could provide additional context for the wavelet and neural network integration.</p> <p>For example, the following references could be considered for inclusion:</p> <p>Deep learning for time series forecasting:</p> <p>"Recent advances in deep learning for time series forecasting" – This could provide more insight into cutting-edge techniques and recent developments in the use of deep learning for forecasting time series data, specifically for agricultural commodities.</p> <p>Wavelet analysis and its applications in forecasting:</p>	

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	"Wavelet transform in machine learning for time series forecasting applications: A review" – This type of reference would offer an updated perspective on how wavelet transforms are currently being applied in time series analysis and forecasting tasks. These references could strengthen the manuscript by showcasing the growing role of machine learning and hybrid models in agricultural forecasting.	
Is the language/English quality of the article suitable for scholarly communications?	Consider revising certain informal phrases or expressions to a more academic style. For instance, replacing casual phrasing like "this is where" with more formal alternatives such as "in this context" or "to address this challenge" would help improve the manuscript's scholarly tone.	
Optional/General comments	NIL	

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

Reviewer Details:

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