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## REVIEWER'S REPORT

Manuscript No.: IJAR-58017

**Title: EFFECTS OF AN ORGANIC BIOSTIMULANT ON THE AGRONOMIC AND ECONOMIC PERFORMANCE OF GROUNDNUT CULTIVATION IN REAL-WORLD CONDITIONS IN THE NAKAMBE REGION OF BURKINA FASO.**

### Recommendation:

Accept as it is .....

**Accept after minor revision.....**

Accept after major revision .....

Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality	✓			
Techn. Quality	✓			
Clarity		✓		
Significance	✓			

Reviewer's ID: JPR-130

### *Detailed Reviewer's Report*

#### Overall Evaluation

This manuscript studies the effect of an organic biostimulant on groundnut production in Burkina Faso. The topic is important because farmers need sustainable methods to improve crop yield and reduce dependence on chemical fertilizers. The study is well planned and provides useful results. However, some improvements are needed before publication.

#### Strengths of the Study

- 1. Relevant Topic** - The study addresses soil degradation, climate change, and low crop productivity. It focuses on sustainable agriculture and eco-friendly farming practices.
- 2. Good Experimental Design** - Four treatments and four replications were used. Different doses of biostimulant were tested. The experiment was conducted under real field conditions.
- 3. Comprehensive Analysis** - The study includes: Physiological parameters, Agronomic parameters, Yield analysis, Economic profitability analysis
- 4. Useful Findings** - The 1 L/ha biostimulant treatment produced the highest grain yield. The 3 L/ha treatment produced the highest haulm yield. The 1 L/ha treatment provided the highest profit.
- 5. Economic Importance** - The inclusion of gross margin analysis helps farmers understand the financial benefits of using the biostimulant.

## REVIEWER'S REPORT

### Areas for Improvement

- 1. More Information About the Biostimulant** - The product description is limited. More details about its mode of action and previous use should be provided.
- 2. Soil Analysis Needs Improvement** - Soil results are presented before and after the experiment, but no statistical analysis is shown. It is unclear whether soil improvements are due to the biostimulant or other factors.
- 3. Statistical Analysis Should Be Clearer** - The manuscript mentions ANOVA and Newman-Keuls tests, but detailed comparison results are missing. Significant differences between treatments should be clearly indicated in tables and figures.
- 4. Yield Figures Need Statistical Indicators** - Error bars and significance levels should be added to the yield graphs.
- 5. Discussion Needs More Depth** - The authors should explain why 1 L/ha gave better grain yield than higher doses. More comparison with previous studies is needed.
- 6. Economic Analysis Requires More Details** - Costs and revenues used to calculate gross margins should be clearly presented. A detailed economic table would improve transparency.
- 7. Study Limitations Should Be Mentioned** - The experiment was conducted at only one location and during one season. Results should not be generalized without further studies.