



REVIEWER'S REPORT

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Title: Impacts des paramètres physico chimiques sur la production de la spiruline endémique au Tchad (*Spirulina platensis* (Gomont) Geitler, Oscillatoriaceae) dans le wadi d' Artomossi (Province du Lac)

Recommendation:

- Accept as it is.....**YES**.....
- 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 Name: Dr Aamina

Reviewer's Decision about Paper: **Recommended for Publication.**

Comments (*Use additional pages, if required*)

Reviewer's Comment / Report

Summary of the Study: This study examines the influence of physico-chemical parameters on the production of endemic spirulina (*Spirulina platensis*) in Chad, particularly in the Artomossi wadi, a brackish water pond. The research highlights the traditional exploitation of spirulina by the Kanembou community, especially women, and identifies key environmental factors affecting its productivity. The study finds that spirulina production is optimal in alkaline conditions (pH > 9.5) and at daytime temperatures above 18°C. The research also provides production estimates across different seasons, demonstrating the resilience of this resource under varying climatic conditions.

Strengths of the Study:

1. **Relevance and Originality:** The study focuses on an ecologically and economically significant resource in Chad, emphasizing its traditional use and its potential for sustainable development.
2. **Comprehensive Data Collection:** The inclusion of surveys from 23 producers across six groups provides valuable insights into local production patterns.
3. **Scientific and Socioeconomic Perspective:** The research effectively integrates both scientific and socioeconomic aspects, linking environmental conditions to economic activities and livelihoods.

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4. **Clarity in Presentation:** The study is well-structured, presenting clear distinctions between small and large harvest periods and identifying key physico-chemical thresholds for optimal spirulina production.
5. **Contribution to Sustainable Development:** By documenting production levels and environmental constraints, the study lays the groundwork for future interventions aimed at enhancing spirulina production in Chad.

Findings:

- The production of *Spirulina platensis* in Artomossi is highly dependent on water pH and temperature.
- Harvesting is most effective early in the morning before sunrise.
- Seasonal variations significantly influence spirulina yield, with higher production recorded from October to March.
- The estimated annual dry spirulina production per producer is 10.35 kg, with higher yields during the major harvest period.
- Traditional knowledge and community-based practices play a crucial role in sustaining spirulina production.

Conclusion: This study presents valuable insights into the environmental conditions necessary for optimizing spirulina production in Chad. The findings are relevant for policymakers, researchers, and development agencies interested in supporting sustainable livelihoods and enhancing local food security. The research also underscores the importance of traditional knowledge and local expertise in maintaining and developing this important natural resource.