

Review of: "Acacia Pycnantha Gum Exudates Recognised As a Traditional Food in Two Countries May Have Economic Potential"

Insaf Nori¹

¹ Université Sultan Moulay Slimane

Potential competing interests: No potential competing interests to declare.

My review of the article "Acacia Pycnantha Gum Exudates Recognised As a Traditional Food in Two Countries May Have Economic Potential" by Thomas Hurr is as follows:

1. The scientific name of "*Acacia pycnantha*" in the title should be written in italic format.
2. **Relevance and Originality:** The article addresses a relatively unexplored area of research, focusing on the potential economic uses of *Acacia pycnantha* gum. The comparison with the established industry of gum Arabic is insightful, providing a context for potential commercial exploitation.
3. The introduction could be more concise, focusing more directly on the main topic. Additional elements to consider:
 - a. **Background Information on *Acacia Pycnantha*:** Begin with a brief introduction to *Acacia pycnantha*, including its botanical characteristics, geographical distribution, and historical use. This will provide readers with a foundational understanding of the subject.
 - b. **Contextualizing Economic Potential:** Elaborate on why the study of *Acacia pycnantha* gum is important. This could include its potential role in the food industry, its comparison to other commercially valuable gums like gum Arabic, and its historical and cultural significance in Australia and New Zealand.
 - c. **Research Gap Identification:** Clearly identify the gap in current knowledge or research regarding *Acacia pycnantha* gum. For example, highlight the lack of comprehensive studies on its economic viability, potential uses, and commercialization challenges.
 - d. **Purpose of the Study:** Clearly state the main objectives of the study. For instance, the paper aims to explore the economic potential of *Acacia pycnantha* gum as a food additive and other possible uses, and to investigate methods to increase its yield.
 - e. **Hypothesis or Research Questions:** Outline the hypothesis or key research questions guiding the study. For example, "Does *Acacia pycnantha* gum have the potential to become a commercially viable product similar to gum Arabic?"

f. Significance of the Study: Explain the potential implications of the research. This could include how the findings might contribute to the food industry, economic development in Australia and New Zealand, and the sustainable use of natural resources.

e. Overview of the Paper: Provide a brief overview of what each section of the paper will cover. This roadmap will help readers understand the structure and flow of the paper.

4. Methodological Rigor: The methods section is descriptive but lacks depth in scientific methodology. For example, providing additional information on the calculation of gum yield per tree and the use of statistical methods would strengthen the credibility of the findings.

5. Data and Analysis: The data presented, particularly the yield of *Acacia pycnantha* gum and its comparison to gum Arabic, is informative. However, the paper would benefit from a more detailed analysis of this data. The discussion could explore the variables affecting gum production more thoroughly.

6. Literature Review: The references cited are relevant and contribute to the background information. Nevertheless, the paper would benefit from a more comprehensive literature review, especially concerning the economic aspects and market potential of *Acacia pycnantha* gum.

7. Health and Safety Considerations: While the paper mentions the gum's safety for consumption, it should provide more details on the conducted health and safety assessments, particularly regarding its potential as a food additive.

8. Commercial Potential: The discussion on the economic potential is intriguing but somewhat speculative. More concrete data or case studies on market demand, consumer preferences, and potential commercialization strategies would strengthen this section.

9. Environmental Impact: The paper briefly touches upon the invasive nature of Australian Acacias in South Africa. A more detailed discussion on the environmental impact of cultivating or harvesting *Acacia pycnantha*, especially in non-native regions, would be valuable.

10. Future Research Suggestions: The conclusion rightly suggests the need for further research. It would be beneficial to outline specific areas for future research, such as agronomic practices to increase yield, potential industrial applications, and market analysis.