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REVIEWER'S REPORT

Manuscript No.: IJAR-59717

Title: Non-timber forest products: Diversity and forms of use in the department of Magaria (Niger)

Recommendation:
Accept as it is .....
Accept after minor revision.....
Accept after major revision .....x.....
Do not accept (*Reasons below*) .....

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

Reviewer's ID: JPR-142

Detailed Reviewer's Report

General evaluation

The manuscript addresses a relevant subject: the diversity and local uses of plant-derived non-timber forest products (NTFPs) in the Magaria Department of Niger. The survey of 209 respondents across 11 villages and the attempt to document food, medicinal, fodder and other uses provide potentially useful baseline information for ethnobotanical research and local resource planning. The topic is relevant to biodiversity, rural livelihoods and sustainable resource use. However, the current version contains important inconsistencies in the reported species inventory, sampling description and use categories. Some percentages and classifications are not adequately traceable to the underlying counts, and the manuscript does not sufficiently describe the statistical procedures or the ethical safeguards for interviewing human participants. The discussion also makes ecological and sustainability interpretations that are not directly demonstrated by the survey design. These matters should be addressed before the findings can be considered reliable and reproducible.

3. Detailed reviewer comments

1. Consistency of the floristic inventory (Results, page 5; Discussion, page 15; Conclusion, page 17)

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The manuscript reports 161 plant species, 125 genera and 61 families. However, the same Results section states that 85 woody species represent 75.89% and 27 herbaceous species represent 24.10%. These two counts total 112, not 161, and the stated percentages appear to be based on 112. The Discussion and Conclusion again refer to 161 species, with the Discussion describing them as woody species. Please verify the original species dataset and correct the total number, growth-form counts and percentages consistently throughout the abstract, Results, Discussion and Conclusion. This is a substantive data-consistency issue.

2. Sampling design and sample-size calculation

The manuscript states that respondents were selected by purposive sampling based on their knowledge and use of NTFPs, but also presents a sample-size formula attributed to Fisher. Please provide the formula exactly as applied, define all parameters, report the total household population (N), show the calculation yielding 209 respondents, and explain how respondents were allocated among the 11 villages. The displayed expression appears potentially ambiguous or incorrectly transcribed. In addition, explain how purposive selection was reconciled with the sample-size calculation; the latter alone does not establish representativeness when non-probability sampling is used.

3. Study-site selection and generalisability

Only the urban commune of Magaria and rural commune of Bandé were included, with 11 villages selected according to NTFP availability/exploitation and population density. Please state clearly that the findings represent these selected communities and avoid implying that the results are necessarily representative of the entire Magaria Department. A brief justification for selecting these two communes and the study period should also be provided.

4. Definition and classification of NTFPs

The manuscript uses the term NTFPs for a wide range of plant parts and uses, including food, medicine, fodder, construction, crop-pest control, cultural use and dye. Please provide a clear operational definition and explain the classification criteria used to decide which plant products and uses were included. In particular, clarify the treatment of construction materials and whole plants within the NTFP classification adopted in this study.

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5. Number of use categories

The text states that six types of NTFP use were identified, whereas Figure 3 appears to display seven categories: human food, traditional medicine, fodder, construction, crop-pest control, dye and cultural use. Please reconcile the number of categories in the text, figure and discussion. The percentages for all categories should be provided or made readable, and the denominator used to calculate each percentage should be explicitly stated.

6. Denominators and percentage calculations

Several percentages are reported without sufficiently identifying whether the denominator is the number of respondents, citations/mentions, species, plant parts or use-reports. For example, the percentages for plant organs in food, traditional medicine and fodder should be linked to their respective counts and denominators. Please provide the underlying frequency (n) alongside percentages in the relevant tables or text and check that the values in the figures agree with the narrative. Do not combine percentages based on different denominators as if they were directly comparable.

7. Statistical analysis

The Methods section only states that data were entered in Excel and analysed using SPSS, and that statistical tests and graphs were produced. It does not identify the tests, variables, assumptions, significance threshold or purpose of inferential analysis. Please specify the descriptive and inferential procedures actually used. If no inferential tests were performed, remove the general statement about statistical tests and describe the analysis as descriptive. Avoid adding tests retrospectively unless the underlying data support them.

8. Ethnobotanical data collection and reproducibility

Please provide additional information on the questionnaire and field procedure: survey dates/season, language(s) used, respondent eligibility, how plant names were elicited and verified, whether local names were recorded, and how duplicate species or synonyms were handled. Explain whether botanical identifications were confirmed by a botanist/herbarium and provide herbarium voucher numbers or the

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reason these are unavailable. These details are important for reproducibility of an ethnobotanical inventory.

9. Research ethics and informed consent

The study involved interviews with 209 individuals, but the manuscript does not report ethics committee approval or exemption, informed consent, confidentiality procedures or permission from relevant local authorities. Please state the applicable ethical approval details (committee, approval number and date), or explain the formal exemption if approval was not required. Also describe how informed consent was obtained. These statements should reflect the actual approvals and procedures; they should not be added unless they occurred.

10. Taxonomic accuracy and consistency

The scientific names contain multiple apparent spelling, formatting and consistency problems (for example, inconsistent spellings of *Balanites aegyptiaca, Borassus aethiopum, Hyphaene thebaica, Ficus platiphylla/platiphylla*-type entries, and other names). Some author citations and capitalisation are inconsistent, and certain names appear differently across tables and captions. Please verify every taxon against an authoritative botanical taxonomic source, use accepted names consistently, italicise genus and species names, and standardise author citations. Also check whether family names such as Mimosaceae and Caesalpiniaceae follow the taxonomic system being used; explain or update the nomenclature consistently rather than mixing systems.

11. Internal consistency between tables and narrative

Please cross-check the species totals reported for food (51 species), traditional medicine (101 species) and fodder (19 species) against the corresponding tables. Ensure that each table contains the stated number of distinct taxa, that plant-part symbols match the legend, and that blank cells and marks are unambiguous. The manuscript should distinguish the number of species from the number of plant-part/use citations, since these are not interchangeable.

12. Figures and photographic documentation

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Figures 2, 3, 4, 5 and 6 are difficult to read at the supplied resolution. Several axis labels and category labels are small or crowded, and the figures do not consistently show the numerical values needed to verify the text. Please provide publication-quality figures with legible labels, consistent units and clear denominators. Figure 1 should have readable geographical labels and a scale bar. For photographs 1–3, ensure that panels A–D are clearly identified and that captions give accurate, consistently spelled taxon names. The images should be sufficiently clear to support identification of the products shown.

13. Discussion and strength of interpretation

The Discussion mainly compares species counts and use frequencies with earlier studies. It would be stronger if it explained the implications of the findings while distinguishing observed results from possible explanations. Statements attributing patterns to climatic/edaphic conditions, biochemical properties of bark and leaves, or community lifestyle are plausible hypotheses but are not tested in this survey. Please qualify these statements and avoid presenting them as demonstrated causal explanations. The claim that the study area has more favourable climatic and edaphic conditions should be supported by appropriate evidence or rephrased cautiously.

14. Sustainability and conservation claims

The manuscript recommends regulating harvesting to ensure sustainable conservation. This is a relevant implication, but the study as described does not appear to measure harvesting intensity, population structure, regeneration, abundance trends or resource depletion. Please distinguish the recommendation from a measured finding and acknowledge that ecological sustainability was not directly assessed. A short limitations paragraph should identify the restricted geographic coverage, purposive sampling and absence of direct ecological monitoring.

15. Abstract and keywords

The abstract should clearly state the study design, study location, sample size, main verified numerical findings and principal conclusion. Please correct the species-count inconsistency before revising it. Add an appropriate set of keywords if required by the journal. Ensure that the abstract accurately reflects the final Results and does not overstate representativeness or sustainability outcomes.

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16. Language and manuscript presentation

The title and abstract are in English, whereas most of the main text is in French. Please confirm the journal's required publication language and prepare the complete manuscript consistently in that language. The current text also contains numerous spacing, grammar, punctuation and typographical problems. A careful language edit is required after the scientific and numerical corrections, rather than before them.

17. References and citation matching

Please check every in-text citation against the reference list and vice versa. Several entries have incomplete or inconsistent bibliographic details, author formatting, journal titles, page ranges or publication information. Some references are relatively old; retain foundational sources where appropriate but include relevant recent literature on NTFP assessment, ethnobotanical methods and sustainable harvesting. Verify all bibliographic details from the original publications and apply one consistent reference style.

18. Study limitations and conclusion

Add a concise limitations statement. The conclusion should summarise only findings supported by the corrected dataset and should not imply that the survey establishes department-wide prevalence or ecological sustainability. Recommendations for agricultural services and development organisations may be retained as implications, but should be framed proportionately to the study's descriptive design. The topic is within the scope of ethnobotany and natural-resource use and may be of local scientific and practical interest. However, the inconsistency between the reported total of 161 species and the stated woody/herbaceous counts (85 + 27 = 112), together with the mismatch between six stated use categories and seven categories shown in Figure 3, prevents confidence in the current presentation of the dataset. The sampling calculation and ethics reporting also require clarification. I recommend major revision rather than rejection because these issues may be resolvable by checking the original field dataset and providing transparent methodological information. If the authors cannot reconcile the species inventory and frequency calculations from the primary data, the manuscript should not be accepted in its present form.