



**SDI Review Form 1.6**

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| Journal Name:            | <a href="#">Asian Journal of Agricultural Extension, Economics &amp; Sociology</a>                          |
| Manuscript Number:       | Ms_AJAEES_29188                                                                                             |
| Title of the Manuscript: | Influence of farmers' socio-economic characteristics on adoption of Bambara nut production in Western Kenya |
| Type of the Article      | Original Research Article                                                                                   |

**General guideline for 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.

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**PART 1: Review Comments**

|                                        | 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) |
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| <b>Compulsory</b><br>REVISION comments | <p><b>I made some insertions (see yellow coloured and bolded parts)</b></p> <p><b>Abstract:</b> "seven variables (63.6%) were statistically significant...". Do the variables significantly determine the likelihood of adoption or cultivation of Bambara nut? If so, clearly state. Otherwise, more precision is needed to avoid any ambiguous interpretation.</p> <p><b>Conclusion:</b></p> <p>"...benefit from this immense potential...", Which immense potential are you referring to?</p> <p>"...of this crop among smallholder farmers". Do you mean "...of this crop among..."?</p> <p>Last sentence of abstract: "...growing of bambara nut and <b>thus contribute to ensure</b> food insecurity at household level among <del>resource</del> <b>resource</b> poor farmers in Kakamega Count, Kenya.</p> <p><b>Introduction</b></p> <p>Lines 13-15. First sentence. "Bambara nut <i>Vigna subterranea</i> (L.) is regarded as minor crop <del>is</del> <b>and</b> characterized by a small commercial value of production and trade compared to the major crops despite its potential for contributing to improved incomes, food security and nutrition, and for combating micronutrient deficiencies.". The small commercial value mentioned by the authors does not hold in all Bambara nut production areas. You need to be more specific and support the statement by appropriate references.</p> <p><b>Lines 15-17:</b> Bambara has a number of agronomic advantages and when cooked it contains sufficient quantities of protein, carbohydrate and fat [1], [2] [3]" <b>Cite some of the</b> agronomic advantages in question.</p> <p>On which basis did you quality the protein, carbohydrate and fat content of sufficient?</p> |                                                                                                                                                                               |



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|  | <p><b>Lines 17-20:</b> Indeed- <del>When</del> adopted, the crop has the potential to act as an alternative sources of food and thus reduce risk the of food insecurity by mitigating <del>against</del> effects of hunger through sustainable food production, alleviating food security and poverty and increasing small scale farmers' incomes particularly in areas with little rainfall [4] [3]. This sentence is long and ambiguous. How can the adoption of the crop mitigate the effect of hunger? Or ensure sustainable food production?</p> <p><b>Lines 20-21:</b> "Currently, the level of cultivation of Bambara nut outside African continent, let alone Kenya is negligible.". What did you really mean?</p> <p><b>Page 2:</b></p> <p><b>Line 28:</b> "Bambara nut production in Kenya, like other food crops has been declining for the last three" decades. Is this statement a personal observation? If so, you need to mention it. Otherwise, support the statement with figures and references. Also, what are some of these crops showing a declining production trend in Kenya?</p> <p><b>Lines 29-31:</b> <b>Conservation efforts</b> and more scientific research on adoption of improved agricultural production practices for these staple food crops and other nutritious and drought- tolerant crops like Bambara nut <del>and their conservation effort is</del> are needed.</p> <p><b>Lines 31-33:</b> "Therefore, in the present study, factors influencing farmers adoption of new innovation have been utilized to investigate their association of socio-economic and adoption of Bambara nut production as a food security crop in Kakamega county". This sentence needs to be rephrased. Are factors influencing farmers' adoption of new innovation <b>a tool or technique</b>?</p> <p>Lines 33-35: This can help achieve sustainable agricultural development and reduce problems of food insecurity, malnutrition, hunger and poverty as aligned with the millennium development goal number one [7].". What about the alignment with the sustainable development goals<br/>(<a href="http://www.un.org/sustainabledevelopment/sustainable-development-goals/">http://www.un.org/sustainabledevelopment/sustainable-development-goals/</a> )</p> <p><b>Lines 35-48:</b> remove.</p> <p><b>Lines 52:</b> "Similar efforts have been expanded [10].". This sentence</p> |  |
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|  | <p>cannot stand alone.</p> <p><b>Lines 58-59:</b> you need references to support this statement " Most adoption studies in Kenya have considered fertilizer and hybrid seed in maize and with little done on crops such as; coffee, tea, sugar and horticulture, which, are key drivers of the Kenyan economy."</p> <p>Sugar or sugarcane? Elsewhere you wrote sugar cane, adopt the same standard throughout he paper</p> <p><b>Line 59-62:</b> last sentence of the third paragraph. This sentence is not clear. Which processes are you referring to?</p> <p>Do you intend to replicate adoption studies on other crops to promote indigenous underutilized crop species?</p> <p><b>Lines 70-71:</b> What do you really mean by this sentence?</p> <p><b>Lines 72-73:</b> only, very little few work on breeding and adaption...", Is it adoption or adaptation?</p> <p>You need to read much more on Bambara nut. Researches have been conducted on production practices, food and nutritional aspects, processing ability, etc.</p> <p><b>Lines 76-78:</b> However, there is little adoption studies on under-utilized crop species such as Bambara nut, that address institutional factors as relates their adoption in ensuring disaster risk reduction food security to vulnerable communities." You need to rephrase this sentence to make it clear to the reader.</p> <p><b>Page 3</b></p> <p>Line83: "... orphan crops to solve..."</p> <p>Line 85: What do the two "their "refer to in this sentence?</p> <p>Lines 86-88: there is either a punctuation or a word missing in this sentence "Similarly, orphan crops require low inputs are affordable and sustainable to produce by the rural poor farmers are an important source of income and empowerment, particularly for the women who are the main growers of these crops"</p> <p>Lines 88-90: "...the focus was on adoption of "underutilized" crop species which have great prospective for food production and development, but whose potential is not adequately appreciated and fully exploited with Bambara nut as the case.</p> <p>Line 91: "...second objective of this study was to evaluate...". I can see where the first objective was stated</p> |  |
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|  | <p>Line 92-96: Rephrase this sentence: "Second objective of this study was to evaluate the impact of socio-economic and institutional that determine of smallholder farmers' adoption of Bambara nut production as a food security crop and establish if there were any associations between the environment in the farmers operates and their adoption of Bambara nut production as a food security crop in Kakamega County, Kenya".</p> <p><b>Methodology</b></p> <p><b>Line 103:</b> "...comprised of small-scale smallholder..." delete either small-scale or smallholder farmers as target population?<br/>Why did you choose smallholder sugarcane</p> <p>Line 121: How did you measure the adoption? Why not use a linear probability model or other models which fit well with binary dependent variables instead of the multiple linear regression?</p> <p><b>Results and discussion</b></p> <p>Lines 127-130: "The number of respondents in Kakamega North Sub- county was the highest 131 (34.0%). Buteresub county had 127 (33.0%) respondents. But Matungu and Mumias Sub-countiess had the least proportion of respondents at 25.0% and 8.0%. This means Kakamega North has the highest proportion of Bambara cultivating sugarcane farmers". This was already presented in the methodology. Also, the interpretation that means Kakamega North has the highest proportion of Bambara cultivating sugarcane farmers" is weak. In fact, you sampled accessible farmers, meaning that you might a lot of farmers in other areas might not be able to be sampled and interviewed because they were not accessible.</p> <p>Line 136: "There <del>as there</del> were great variations in ages..."</p> <p><b>Page 4</b></p> <p>Line 138: space between revealed and that</p> <p>Line 139: "...finding simply that age...", separate finding and simply. A word is missing between simply and that.</p> <p>Lines 139-140: " Given that the crop is a neglected food crop." this sentence cannot stand alone.</p> <p><b>Lines 140-141:</b> These findings were similar to [18] [19] who indicated that the expected effects of age was an empirical question and that there was no agreement in the previous studies on adoption. <b>What</b></p> |  |
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|  | <p><b>do you really mean?</b><br/> <b>Line 149-150</b> "...above average."<br/> This explanation is very weak. In addition, how did you define average schooling level?<br/> Chi-square test is not appropriate when number of respondent in a contingency table cell is less than 5. Such is the case for farm income and farm size. For these two variables, you'd better use Fisher Exact Test<br/> <b>Lines 162-163:</b> is it because Bambara nut production is not capital intensive that it is a minor crop?<br/> "...who more often than <b>do not</b> have not little or no capital to invest in crop production enterprises.<br/> <b>Line 168:</b> delete against a table value of 9.4848.<br/> Lines 181-182: Rephrase this sentence to make it clear. "Thus credit takes cognizance of farmers' access to alternative sources of credit to finance the expenses relating to adoption of new technological innovations [26]"<br/> <b>Lines 183-184:</b> "Access <b>to credit</b> boosts farmers' readiness to adopt technological innovations. Thus, the farmers who had applied for credit facilities, none of them had used these credit facilities to improve Bambara nut production." These two sentences are contradictory.<br/> <b>Line 185:</b> relationship of Bambara nut <b>adoption</b> and credit facilities among the respondents in the study area</p> <p><b>Page 5:</b><br/> <b>Line 193:</b> The title of the Table 1 is not correct. What about the other characteristics?<br/> Line 196: 80% and 19.8% is not up to 100%. You have to round 19.8% to 20%.<br/> Line 197: "Chi Square test conducted association..." What do you mean?<br/> Line 204: "<del>However,</del> Agriculture extension officers..."</p> <p><b>Page 6</b><br/> <b>Lines 233-234:</b> "This implies that any change in county study district resulted in 13.8% decreases in level of adoption of Bambara nut</p> |  |
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|                                  | production as a food security crop.". the figure mentioned is not accurate $0.0138 \times 100 = 1.38\%$ and not 13.8%.<br><b>Line 243-244:</b> "... attributed to the underutilized and neglected nature of the crop." How?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| <b>Minor</b> REVISION comments   | <b>Line 54:</b> replace " it's" by <b>its</b><br><b>Methodology</b><br><b>Lines 107:</b> "...in some cases." In which cases did you use focus group discussion?<br>"Lists of accessible smallholder..." accessible in terms of what? Availability at the period of the survey, closeness of villages to road, etc...<br>What criteria did you use to identify smallholder sugars farmers? Provide the number of smallholder sugar cane farmers in each of the four surveyed areas along with the samples size<br><b>Line 219:</b> Replace "that" by "the"<br><b>Lines 219-220:</b> I propose the following formulation: and "... land sizes within and between the surveyed sub-counties".<br><b>Line 272:</b> Replace "Similar" by "Similarly"<br>Line 274: Bambara nut 10.6%. there is something missing in this portion of the sentence.<br>"...credit had a positively..."<br>Line 277: On the contrary to replace Contrary |  |
| <b>Optional/General</b> comments | The introduction needs to be restructured. At its current state, there is a lack of flow in the ideas. Consequently, it is not easily understandable.<br>Statements need to be properly supported by appropriate sources. The writing style needs to be improved. You are used to formulating long sentences what make sentences ambiguous.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |

**Reviewer Details:**

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| Name:                            | <b>Mathieu A.T Ayenan</b>                       |
| Department, University & Country | <b>Crop Science ,University of Ghana, Ghana</b> |