



SDI Review Form 1.6

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2013_AJEA_8596
Title of the Manuscript:	Identified Flow Problems in Adding Value to Cassava Tuber
Type of the 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)
<u>Compulsory</u> REVISION comments	1. The article did not follow the SDI paper template. This template is available for download at www.sciencedomain.org/documents/1349769084-SDI Paper template 2003 doc 2. The write up was poorly done some paragraphs were lifted from other articles this should be adjusted to avoid plagiarism. Some of these are; a. Line 78: According to Freeman (2000), flowability is a consequence of the combined effects of various physical, chemical and environmental variables. Improper equipment geometry, particle size, shape, surface texture, size distribution, moisture content, compaction condition, storage time, etc. Physical properties are found to have more impact on flowability as compared to chemical properties. Available at www.collectionscanada.gc.ca/obj/s4/f2/dsk3/SSU/TC-SSU-07032006115722.pdf page 4 b. Line 97: Cain (2002) observed a decrease in the value of the flowability rating with an increase in mean particle size, indicating an increase in flowability. His flowability rating was based on a correlation equation involving the Hausner ratio, the mean particle size and the angle of repose.	



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	Available at www.collectionscanada.gc.ca/obj/s4/f2/dsk3/SSU/TC-SSU-07032006115722.pdf page 14 3. The values quoted in the results were not specific. e.g. greater than 1.4; 72-75%, 62-65% etc. 4. Carr index and Hausner ratio are used to indicate flowability of granular materials but your result stated that it was used on freshly grated cassava mash. 5. For scientific/research purpose, moisture content (M.C.) is better quoted in dry basis and not wet basis so as to avoid error. 6. According to the methodology, the angle of repose for the wet and dry mesh was done 10 times each. The data was not presented in the result. The data could be presented with tables, charts or graphs while statistical analysis should be performed (such as ANOVA). This will not only make the result clearer, it will as well add quality to it. 7. The methodology did not state that different m.c of the mash will be checked for angle of repose 8. The result for compressibility and shear strength was not presented. 9. What is the basis for the following; a. The choice of TMS 4(2)1425 variety of cassava. (A common cassava variety	
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	should be used. I suggest that it should be done and the results compared. It will had more quality to the work) b. The choice of the following moisture contents 72-75%; 62 -65 %; 58%; 50%; 46% 10. Reference is needed for this recommendation in line 217 i.e. “Stainless steel or containers made of plastics may be better than mild steel as it can change the colour of the product. Cassava mash particles at the level of processing must be handle wet. Smooth surfaces will prevent cohesion and a little push of the material may be required.” 11. The results for Carr index and Hausner ratio were not properly discussed. The readers need to know the implication of the values quoted.	
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<u>Minor</u> REVISION comments	1. Referencing was not properly done 2. Some references listed in the reference section where not cited in the write up this include; Nwankwojike, B. Nduka (2012) ; Riley, G. S., Mann, S. and Jesse, R. O., (1978) and Carr, R. L. (1965) 3. Freeman (2000) was cited in the write up but was not listed in the reference section. 4. Master plan (2006) has two different links, which one is the right one? 5. Check the spelling of the following names because they were spelt differently at separate occasions Babalaye or Babaleye and Sangiga or Sanginga 6. This statement in line 42 “Traditional tools were the options available.” is out of place (it is odd in the paragraph) 7. Rephrase the paragraph in line 49 and add a reference i.e. “Some basic engineering parameters needed for the processing machines design became critical. Various types of conveyors, hoppers, bins or silos are commonly used for the transportation and storage of cassava products. Various flow problems are commonly encountered in the handling when flowing out of a storage bin or hopper.” 8. Reconstruct the paragraph in line 62 and add a	
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	reference i.e. “Arching as typical problems at the storage of bulk solids, it occurs when a stable arch is formed above the outlet. The flow of the bulk solid will stop. Ratholing occurs in case of funnel flow if only the bulk solid above the outlet is flowing out and the remaining bulk solid keeps on its place and forms the rat hole. Irregular flow occurs if arches and ratholes are formed and collapse alternately. Thereby fine grained bulk solids can become fluidized when falling downwards to the outlet opening, so that they flow out of the silo like a fluid. Flooding can cause a lot of dust, a continuous discharge becomes impossible.” 9. In line 80, add comma between “variable” and “improper” 10. These equations were not numbered i.e. Pour (or Bulk) Density = Mass of material ÷ untapped volume Tapped density = Mass of material ÷ Tapped volume Hausner ratio = Tapped Density ÷ Pour density Carr’s Index = (Tapped density – Bulk density) x (100 ÷ Tapped density) 11. Most of the equations used had no reference 12. Equations were not properly written (use Microsoft equation editor or equation 3.0 depending on the Microsoft word version you are	
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	using) 13. Contradiction: Which is the right formula for Hausner ratio is it $\frac{\text{Bulk..Density}}{\text{Trapped..Density}}$ or $\frac{\text{Trapped..Density}}{\text{Pour.(i.e..Bulk)..Density}}$ 14. Inconsistent notation for bulk density ρ_B and Bb were used 15. In line 15, it should be “where” not “were” 16. Rephrase line 149 i.e. Porosity derived from the values of true and bulk densities when fitted into the equation (Achor, et al., 2010) $e = 1 - Bb/Dt \times 10$ 17. Figure 2 was wrongly called figure 1 in the text 18. Why does figure 4 has a reference i.e. Clover 1998 19. Look into this statement between line 211 and 212; i.e. “This form the bases for discharge chute design.”	
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<u>Optional/General</u> comments	1. Title: The title of this article "Identified Flow Problems in Adding Value to Cassava Tuber" was not fully covered in the write up. This article can be renamed as "Some flow properties of cassava mash in handling" 2. Abstract: The result and conclusion was not well highlighted in the abstract 3. Generally, the methodology is not deep enough while the result presentation is very shallow and more peer reviewed articles should be cited	
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Note: Anonymous Reviewer