



SDI Review Form 1.6

PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2013_AJEA_3664
Title of the Manuscript:	The Economic Feasibility of Implementing Irrigation in Small, Limited Resource Farming Systems

General guideline for Peer Review process is available in this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	Reviewer's comment	Author's comment <i>(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)</i>
<u>Compulsory</u> REVISION comments	1. What is the main criteria for small limited resource ? This should be identified or explained more. 2. In the text, there are detailed information about potatoes production and practices. I think that inputs data and expenses for the production area are enough. 3. Table 1, is this need? All these data in Table 1 could be associated with other tables or they could be considered for calculating operation costs. 4. In Part 3.1, the effects of the rainfall on potatoes production yield in order to compare irrigation for 2004 and 2009; 2005 and 2010 could be criticized using Figure 1 in detail. It means that, incomes or benefits for the farmers considering growth years such as 2004 and 2009 and other years. Thus it could be explained or criticized the effects of both rainfall and irrigation.	We use the term “small limited resource” as defined by the USDA-NRCS. An expanded explanation has been given in the manuscript for clarity. Thank you for this suggestion. We have reworked the manuscript to focus the presentation and remove extraneous items. Thank you for the suggestion. We have reworked the tables to combine the information from Tables 1 and 2 into a more comprehensive presentation (see new Table 1). One of the challenges of sweet potato production is that they are susceptible to late season rain due to root rot. Therefore, a direct comparison of total rainfall during the growing season with yield is not conclusive. Since sweet potatoes are planted in MS from April to July, we do not have conclusive information on the specific growing season for each year.



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	5. In Line 324, an average replacement requirement of 15 cm of water was used. However, this is a contradiction considering actual water use or irrigation requirement. 6. There is no need Figure 4. All these data as percentage could be associated or shown in the another Table given in the manuscript. 7. In Table 4, the figures in the last column should be for the cost per year. Secondly, how or where were used for these figures, it doesn't seem in any Table. ? In conclusion, there should not be any literatures. It should be only some remarks, comments or findings from this study.	Yes, for purposes of this analysis, we assume a lower amount of water than is actually needed. This is to allow a realistic irrigation amount of 5 cm of water for three applications. This is also within the range that Brodie (2012) found for supplemental irrigation requirements of sweet potatoes (12.7 – 22.9 cm). If irrigation amounts would increase, within season expenses of irrigation would increase. This point has been expanded in the presentation. Thank you for the suggestion. We have rewritten the text to present this information in another format, combined with Table 3. Yes, you are correct. The heading in the last column has been corrected. Thank you for the correction. These figures are used in Table 5 to calculate total irrigation expenses and in Table 3 to calculate expenses of production using irrigation. The conclusions have been modified per your suggestion. The information referenced has been moved to the introduction. Thank you.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		