



SDI Review Form 1.6

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2015_AJEA_16572
Title of the Manuscript:	GIS-Based Assessment of Land Suitability for Industrial crops (cotton, sesame and groundnut) in the Abyan Delta, Yemen
Type of the Article	Original Research Article

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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. ANNEX 1 lists a total of 36 sampling sites. But, the main text mentioned 103 total samples. Why? How representative is these samples for a total area of over 50,000 ha? How big is the area represented by one pixel grid? 2. Methodology section mentioned fieldwork survey. But, this information is not presented in the results section. What is the current land use situation in the study area? How this is compared with the study predictions? This is very important for future recommendation pf proper land use planning. 3. Many symbols used in the crop requirements tables (Tables 1-3) are not clearly defined. 4. "Weighted overlay" is used in the land suitability evaluation and all the factors are not equal. What are the different weights placed on all the evaluation factors? 5. What is difference between "currently" and "permanently" unsuitable land suitability class? 6. What is the land area percentage under poor soil physical properties as well as poor soil chemical properties for each crop? If the spatial distribution of this physical/chemical limitation is mapped, this information is very useful for future land management strategies. 7. The study area is irrigated. How about fertilization? 8. The conclusions section fails to include significant implications of this study.	1. Ok revision and correction were made, so a total of 64 samples is given in ANNEX (Figure 3). 2. I think fieldwork survey should state in the methodology section, so no need to repeat it again in the results. In fact, the current land use situation in the study area could be added, but it will need to state text explanation, tables, map etc. so that it take more space (by means it is another paper to be published). Anyhow this section has been revised and improved. 3. Ok, all symbols clearly defined. 4. The different weights is given clearly to each subclass within each variable\thematic map between 1 to 5 in this study, where value of 1 indicates the influence of the given subclass is very low while value 5 is very high. Next, weights for each variables maps are established, where the value between 0 and 1 is assigned to each variable\thematic layer. 5. According to the In FAO's Framework for Land Evaluation, Two classes of 'not suitable' can usefully distinguish land that is unsuitable for a particular use at present but which might be useable in future (N1), from land that offers no prospect of being so used (N2). However this text is revised and rewritten clear. 6. The evaluation was done using several



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		parameters, wherein every soil mapping unit was rated as per limitation technique using the criteria. The final soil suitability was based on the number and degree of limitations. So this limitations is identified in the text. 7. Actually, The study area located in arid zone and beside that there is lack of fertilizers application. The results of this research indicated that soil organic matter in the study area very low, the majority <1% and its values decreased with depth in all soil profile pits. 8. Ok, the conclusion is modified and improved.
<u>Minor</u> REVISION comments	1. Your land suitability percentages only add up to 99.9%. 2. Acronym names such as FAO, GIS should be explained in full when they first appear, not the second time. 3. Many typing errors and English syntax errors. 4. Lots of missing quantity units such as mm for evaporation and Figures 5-12. 5. Reference citation format should be unified: Page 1 Line 45, (Sathish and Niranjana, 2010); Page 1 Line 35, (Mongkolsawat et al., 1999).	1. Land suitability percentages have been corrected=100%. 2. Ok, Corrected based on your suggestion. 3. Reviewed and corrected. 4. Reviewed and corrected. 5. Ok format is corrected based on the guideline of the journal.
<u>Optional/General</u> comments	1. The term "industrial crops" is not commonly used. A better term is "commercial crops" or "cash crops". 2. More results and discussions are needed for sections in land suitability for cotton, sesame, and groundnut.	1. I think the term industrial crops is more precise than commercial crops or cash crops and still used. 2. Results and discussions have been revised and improved.