



SDI Review Form 1.6

PART 1:

Journal Name:	<u>American Journal of Experimental Agriculture</u>
Manuscript Number:	2013_AJEA_4900
Title of the Manuscript:	Predicting the Longevity of Sesame Seeds under Short-Term Containerized Storage with Charcoal Desiccant
Type of the Article	Research paper

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 (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	The idea of the paper to test the effect of low budget desiccant (charcoal) on the longevity of agricultural crop is convincing and directly applicable. However this works needs to be rewritten in many parts and probably also redone. The description of the method is poor, and the discussion not very exact and very short. There should be more scientific figures (e.g. SIV vs time and different charcoal treatments), the photos could go in the annex. Some important data concerning moisture / humidity, which is the focus of the work, is missing (moisture content charcoal, moisture content of seeds after desiccation, humidity in storage container). Major concern about methodology: Each dessiccation treatment was done in one container. In a strict sense, seeds from one container are not independent and could count as pseudoreplicates. Each container could be a little bit different (does not close so tight etc), and effect the storage conditions. To test the treatment "charcoal", the authors should repeat the experiment, using several containers for each charcoal amount.	1. Okay. 1. Some parts of the report have been edited (rewritten) in every way necessary. The issue of may be redoing may apply only to further research of this kind, where technical corrections in this present work can be applied. 2. The presentation of the material and methods has also been adjusted where necessary; but other parts left as it is, because the author still adjudges it as presentable. 3. The plates (photo) have been expunged from the report as it is really not needed. 4. Summary of information on seed moisture before storage and the storage (container and cabinet) environment of the seed has been provided at the beginning of section 3.4. Information on the moisture trends of seeds under various charcoal treatments over the seed storage periods has however been featured in figure 1.



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		This, I think, will be sufficient to satisfy the moisture/environment aspect of the work. 5. The technical observations made under ‘Major concern about methodology’ have been noted; for the work does not need to be repeated to take care of this. The fact that all the different charcoal treatment containers were still stored under the same ambient (wooden cabinet) condition, which was strictly monitored, has brought them under same general environmental influence and has removed doubts. Other things that happen will now be dependent on the effect of different quantities of charcoal in the separate containers.
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Minor REVISION comments	Methods: The germination trails should be described more carefully. For each treatment and at each time point 3x50 seeds were tested? Apparently they were counted three times. What is that in days after sowing? Please mention in the methods the time points when seeds were tested (after 3,6,8,10,12 weeks), not only in the results. Describe the probit analysis more detailed. The charcoal was oven dried (line 158). Until constant weight? What was the moisture content of the charcoal when it was used for the experiment? Humidity within each container was monitored (line 131). Show this data for each treatment. What was the moisture content of the seeds at each treatment at the onset of the germination trail? For a paper about storage, longevity and desiccation this is a basic, neutral and crucial information, for anybody who wants to use this technique in research or applied fields. Discussion: Write more clearly and exact what other authors found. I have the impression that just few papers are cited in the discussion, but always several times. The literature on desiccation and storage should be checked again.	1. The methods have been presented in the most moderate way; as giving the details you mentioned here is unnecessary. The probit features evaluated were also given clear presentation already. 2. Done 3. Summary data is given in section 3.4. The full data could not be presented because a part of it that could make it complete was missing. 4. I agree to this. I have presented it in the form of a chart capturing the moisture trend in the charcoal treatments over the storage periods (figure 1). 5. Scanty works have been done so far on testing low-technology desiccants like charcoal on crop seeds; especially oil seeds like sesame. But I have tried so far to use the very limited information available. This current work may be part of the new work on sesame seed storage with charcoal.
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<u>Optional/General</u> comments		
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