



SDI Review Form 1.6

PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	MS: 2012 AJEA 2791
Title of the Manuscript:	Evaluation of the relative weed competitiveness of some lowland rice varieties in Sierra Leone.

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 9 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	1. It is already proven facts that plants under weed free situation will grow well and will show better performance for yield, growth and yield components parameters as compared to plants in competition with weeds. The authors evaluate six rice cultivars for their competitiveness by observing growth and yield parameters under weed and weed free conditions. In my point of view the plant parameters alone could be insufficient to declare about weed competitiveness of rice cultivars. The real reason of competitiveness by rice cultivars need to be studied in depth. To show some novelty in the manuscript I would like to suggest to do some <i>In Situ</i> lab experiments on weed bioassays (application of water extract of all rice cultivars) as well as some analytical work to identify involvement of allelochemicals or other plant hormones (strigolactones) from different rice cultivars to give some sound reasons of weed suppression by rice cultivars. Protocol on these aspects is available in recent literature and from my point of view authors should expand their studies to provide true evidence of weed suppression by rice cultivars. 2. This study is especially designed on weeds, but very few information on this aspect i.e. only weed biomass (Dry or fresh?) have been provided in the manuscript. I am curious about No. of weeds per meter square in the plots and also types of weeds (parasitic weeds or non parasitic weeds). So the information regarding weeds are insufficient. 3. Rice transplanting is more efficient against weeds than direct seeded rice. Moreover low land rice planting proved more effective against rice weeds than upland rice planting. These factors have been ignored in the study. My overall impression is that the manuscript is lacking novelty. Breeding to increase LAI and tillers numbers to enhance weed competitiveness might be wrong conclusion but breeding rice cultivars with high allelopathic properties or other plant hormones affecting weeds could lead to a better conclusion. There is need for in depth study of rice cultivars on this aspect.	1: Yes it has been proven. However, as long as Breeders continue to develop new varieties such research will continue to be carried out. NERICA means New Rice for Africa. These are new rice varieties developed from crossing glaberrimas and sativa with contrasting morphology and plant traits. Therefore this old proven theory needs to be evaluated first before in depth studies as highlighted. Thank you for your comment as it is vital for future research. Similar work was done recently in Latin America on some rice varieties by Fischer et al., Gibson et al., and Caton in 2003. 2: The biomass is on dry matter basis. The objectives were to identify plant traits conferring competitiveness and to assess the competitiveness of these new rice varieties. Taking into account the effect of weeds on yield. Therefore weed biomass per meter square was more preferred to no. and types of weeds per meter square. The weeds were non parasitic. 3: The study is not comparing weeds in transplanted and direct seeded rice. It is about evaluating the relative weed competitiveness of some LOWLAND RICE



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		VARIETIES in Sierra Leone. This is another area of research on newly * developed rice varieties though this is an established fact. Breeding to increase LAI and tillers numbers to enhance weed competitiveness is correct. Please Refer to Fischer et al. (1997), Caton et al.(2003) and Gibson et al. (2001). Who worked on rice competitiveness and obtained similar results. Breeding rice cultivars with high allelopathic properties or other plant hormones in rice competitiveness will be looked into in due course. Thanks for this new area of intervention, it is very important.
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Minor REVISION comments	Please rewrite introduction. Start from line 49...In Sierra Leone, total arable land....then line 48 from Weed management in Then write some information of common rice weeds, their losses, practice to control (their merits and demerits) Define competitiveness Provide some more information in line 73 in addition to key plant parameters Materials and Methods Rewrite line No. 98-99 Give actual units g or mg of active ingredient oxadizon Line 106: Weed biomass need more detail. Is it dry biomass. If yes then how you dried? Line 117: ANOVA is ok then ANOVAR Line 120: ANOVA in place of ANOVAR I noted some conflict in conclusion. You recommended to encourage varieties with high LAI and tillering but at the same time you suggest to avoid excessive vegetative growth of plants Please rewrite conclusion and results of growth parameters, showing conflict. Line 200-201: vigorous and leafy varieties more competitors Line 237-238: plants with vigorous vegetative ...avoided Reference and citation style: Not according to Journal Format. (1) etc	Corrections on minor have been made accordingly as advised. Thanks for your valuable contributions. Corrected Corrected Corrected. Corrected
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<u>Optional/General</u> comments	Try to improve English of the paper and avoid any conflict statement between results and conclusion	corrected