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Journal Name:	Journal of Agriculture and Ecology Research International
Manuscript Number:	2014_JAERI_14178
Title of the Manuscript:	Economic valuation of rice crop damage by Red-billed Quelea and other pest birds on a rural irrigation scheme in western Kenya
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.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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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)
Compulsory REVISION comments	The paper is good, provides relevant information on the economic losses caused by birds on rice farms. In general, the introduction and objectives are clear. However, I think that some points of methodology should be better explained to the results and the discussion they are lighter. I believe that discussion deserves a good review, as well as very long and tiring, lose focus sometimes and does not discuss the results obtained in the actual study. Expect more of the conclusions. I think I missed a closing idea. After his first goal was to estimate the loss in the crop caused by granivorous birds, but you did not show this response in the conclusions. Also think I could have explored more results, showing whether there were differences between species in the two planting seasons, or comparing the losses caused by birds with the loss by other pests such as arthropods, or weeds, fungi, etc. . I think this relationship was also missing in the discussion. I advise you to try to incorporate that in drafting the discussion. Because this was looking more, a literature review on the subject and not a discussion of a scientific study with results. Therefore, I ask that the article	• The discussion has been reviewed and shortened to make it more concise • The conclusion has been expanded to be more encompassing of all key results obtained • Points in the methodology that are better suited for results and discussion have been either moved there or deleted • Specifically, crop loss to Quelea and other granivorous birds has been captured • Comparison of rice loss to birds with losses due to other agents like weeds and arthropods is not possible because 1) that would require fresh quantitative studies and sampling of insects and weeds and deriving a loss rate model. That would be a completely different study; 2) no studies of that kind have been conducted in the study area so no comparison is feasible even from literature references



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	be revised again and some suggestions are below.	
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Minor REVISION comments	Abstract: Change “Granivoirous” for Granivorous. Keywords: I think that other words can be used. 1. Introduction: - Revise the second paragraph of page four. I believe that information about the population consumes the production is not relevant for this type of publication. - I believe that can be explored a little further studied the bird in the introduction, at least the most abundant bird in the case was the Red-billed Quelea. To then become more clear in the results if there is a greater predation of crops due to the incidence of pups, or not. I think it would be quite informative because it would give a more comprehensive idea regarding the bird that is causing damage to the region. Knowing a little more biology / ecology of the bird in question I am able to use their study as comparative to other granivorous birds from other regions of the	Introduction - The paragraph on rice consumption is now revised and shortened - In the last paragraph of pg4 we already highlighted that Quelea is the most significant cause of rice damage in sub-saharan Africa. Further down in results we also have data to show that quelea damage is higher than that of the other combined Methodology - Fig 1 revised and scale corrected - Figure legend completed - The paragraph after fig 1 is now clarified and made more concise - We corrected that sampling was between November 2011 and July 2012 - Time notation now changed to standard unit of 6.30 am to 9.30 am - The purpose of combining data from the tow sampling seasons (bird abundance as mean value of the two seasons) was to reduce temporal biase in estimates because the habitat is such that bird congregations can vary dramatically in a spatial sense. So sampling once, or separating the sample datasets can lead to either over-or under-estimation. Richness, on the other hand is cumulative over the two seasons hence just total final number of species for the whole study. Nevertheless, in the results, we have computed species richness and diversities between the various stages of rice growth, and have
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	planet supply. 2. Methods - Confirm the scale of Figure 1. - Complete the figure legend, saying where the study was conducted, time, etc. - I believe that paragraph after Figure 1 is shifted to another location. Also I found it incomplete, did not understand what I wanted to spend that information. Please leave this paragraph clearer. The phrase is very long, I recommend breaking it into more than one sentence. - In <u>2.2 Sampling</u> - Which was the time of the study? (November 2011-February 2012 and April-July 2012) or between November 2011 and February 2013. - In <u>2.2 Sampling</u>: ...Birds were surveyed from 0630-0930 hrs, capturing the peak...", see the indication of time monitoring of birds notation.	discussed the trends in these, under Discussion. Results and discussion a. The overall abundance was determined as a mean value over the two seasons, which reduces sampling bias for either season. Richness (you-reviewer refers to this as wealth, I think) was the cumulative total of all species observed in all blocks across both seasons. We outlined this in the second paragraph of analysis section. <u>For the same reason that one-off sampling is bound to be biased, we did not attempt to analyse bird variables as a comparison between the two separate seasons. We however compared them between different rice growth stages.</u> a. The last part of the paragraph has been revised and rephrased. b. Figure and table captions now self-explanatory c. Figure 2 shows value of rice lost in weight (quantity) while figure 3 shows rice loss in terms of economic value (monetary) d. There were no quotes as such. The sentence is now clarified and revised e. To shorten results and discussion, 2nd paragraph of discussion is now moved to introduction. Other paragraphs are also removed as shown on the marked pdf "UNDER PERER REVIEW" version f. Same as e g. Now provided reference for climate change connection to future quelea problem
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	f. <u>2.3 Date analyses and calculations:</u> For me, it was not clear how you used your data from bird richness and abundance in two growing seasons studied. I think we should not join these data since it is different times and harvests. If any test that showed no difference in wealth in the two seasons sampled was then performed can collect the data, and if this was done should be described in the text.. Otherwise incentive to perform the tests separately. 3. Results and discussion a. In the first paragraph of item 3.1 Results, you describe the wealth of birds observed. My question is: in the two samplings was the same wealth, or had a bird that was observed in a time and not the other. The abundance of them was also the same in the two seasons? Also, this paragraph ends strangely on the next page before the table 1. Review it.	
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	b. Complete the title of the table one, always remember that the titles of figures and tables should be self-explanatory, so without seeing the text should be able to know the location of where the information was generated, the time when this occurred, etc. This goes for all figures and table. c. I request that you review Figure 3, I did not understand what you want to show with it. d. Take a reviewed in the first paragraph of page 13 (It was estimated that in the absence of crop-guarding ... net income. This is because the cost of crop-guarding alone is at least Ksh. 28 million per year.) I believe you're missing the quotes in this paragraph. Also could not understand if you're talking about your data or reference data. e. <u>3.2.1 Economic valuation of rice damage</u> – I think this item was too long, believe it should better revise	
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	that part. And it can be pretty wiped. Also missed read you discussing your results. The way that is shown looks more like a general review on the topic. I believe some things here may even go to the introduction of the paper. f. <u>3.2.2 Control of pest birds-</u> See previous comment g. <u>3.2.2 Control of pest birds-</u> did not understand why at the end of the first paragraph (pgs 18-19) you did the relationship of increased incidences of bird pest climate change, please ask references to base this information.	
<u>Optional/General</u> comments		