

**Review Form 3**

Journal Name:	<b>Journal of Experimental Agriculture International</b>
Manuscript Number:	<b>Ms_JEAI_122964</b>
Title of the Manuscript:	<b>Effect of elevated levels of CO2 on bionomics of <i>Callosobruchus chinensis</i> (L.) (Bruchidae: Coleoptera) in stored green gram</b>
Type of the Article	

**Review Form 3**

**PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	<b>Reviewer's comment</b>	<b>Author's Feedback</b> (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</b></p>	<p>Pests in grain and seed storage are a challenge to control, since the products used cannot harm other living beings that are exposed to them. This type of research is important because it offers a new control approach that is different from the conventional one. New strategies should be studied to assess the viability of applying these methods, demonstrating their potential.</p>	
<p><b>Is the title of the article suitable? (If not please suggest an alternative title)</b></p>	<p>I believe the title would be better as follows: "Effect of elevated levels of CO<sub>2</sub> on biological parameters of <i>Callosobruchus chinensis</i> (L.)(Bruchidae:Coleoptera) in stored green gram". Because it better reflects what was worked on in the study.</p>	
<p><b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b></p>	<p>I believe the abstract is concise and clear. However, I believe that exchanging bionomy for biology would be more appropriate. I also believe that contextualizing the plague to introduce the topic in the summary would be appropriate.</p>	
<p><b>Are subsections and structure of the manuscript appropriate?</b></p>	<p>The structure of the manuscript is appropriate.</p>	
<p><b>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</b></p>	<p><b>Introduction –</b>                      - You could provide examples of the risks posed by chemicals products.                      - You could give examples of the effects caused by exposure to CO<sub>2</sub> and give examples with one or two insects.                      - Since the aim of the work is to observe the effect on biology, you could talk about sublethal effects of CO<sub>2</sub>.  <b>Material and methods –</b>                      - In 2.2 what would be an experimental unit? Make it clear.                      - 2.4 make clear the stage and age of the insect used (larval or adult)(0-24 h);                      - After how long of exposure were the samples removed and placed in the tubes? Make this clear in the text;                      - It is not clear whether this grain was present in the samples or whether it comes from the stock breeding. How many eggs were there? Was it standardized?                      - Describe the analyses performed (which test was used?), specify the experimental design (9 treatments and 30 repetitions per treatment?) and which statistical program was used.  <b>Results and discussion –</b>                      - In 3.1 Are these averages statistically different? Did you perform an average test? It would be nice to put the result of the average test.                      - In 3.2 What were [15]'s observations? Illustrate in the text.                      - In 3.3, what are the differences presented by the test of means? It would be interesting to comment.                      - In Figure 1 correct CO<sub>2</sub> concentrations.   <b>This work is important because it offers a new alternative for controlling this important pest, contributing to the development of more sustainable control methods.</b></p>	
<p><b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b>                      =</p>	<p><b>Most references have been published for more than 10 years. I suggested this references.</b>                      Bourne-Murrieta, L. R., Iturralde-García, R. D., Wong-Corral, F. J., Castañé, C., &amp; Riudavets, J. (2021). Effect of packaging chickpeas with CO<sub>2</sub> modified atmospheres on mortality of <i>Callosobruchus chinensis</i> (Coleoptera: Chrysomelidae). <i>Journal of Stored Products Research</i>, 94, 101894.                      Krishnaveni, M., Vijayalakshmi, K., Mandali, R., &amp; Radhika, P. (2020). Efficacy of modified atmosphere with elevated CO<sub>2</sub> on pulse beetle, <i>Callosobruchus chinensis</i> in Redgram. <i>Journal of Entomology and Zoology Studies</i>, 8(4), 610-614.</p>	

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Minor REVISION comments <b>Is the language/English quality of the article suitable for scholarly communications?</b>	The quality of English is adequate.	
<b>Optional/General</b> comments	<ul style="list-style-type: none"><li>- Observe zoological nomenclature rules and standardize.</li><li>- Review the paragraphs in the introduction and break them into smaller sentences. The same in results and discussion.</li><li>- Make the objectives of the study clearer.</li><li>- In material and methods, it would be interesting to also include the dimensions of the containers used and the tubes.</li></ul>	

#### **PART 2:**

	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)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

#### **Reviewer Details:**

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