



**SDI Review Form 1.6**

Journal Name:	<a href="#">International Research Journal of Pure and Applied Chemistry</a>
Manuscript Number:	Ms_IRJPAC_65785
Title of the Manuscript:	Effect of nitrogen fertilizer on the incidence of insect pests in four rice cultures
Type of the Article	<i>Original Research Article</i>

**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)
<p><b>Compulsory</b> REVISION comments</p>	<p><b>TITLE</b></p> <ul style="list-style-type: none"> <li>- The term of "culture" should be replaced by "cultivars" or "varieties"</li> <li>- More than the effect of nitrogen fertilizer, this is the N-level that it is evaluated</li> <li>- The effect is evaluated not only on the pest incidence, but also on the rice yield. This should be added to the title</li> </ul> <p><b>ABSTRACT</b></p> <ul style="list-style-type: none"> <li>- In Aim Section, "Leaffolder" and "Gall midge" do not need a capital letter</li> <li>- In Place and duration section, please add the country</li> <li>- in Methodology section, the authors wrote "were attributed" twice in the same sentence. Please change it to clearer the description</li> <li>- In Results: the first sentence "The pest incidence of the treatments with high N rate as 160 and 200 kg/ha were higher .... than that of lower N rate" should be change for "The pest incidence <b>for</b> the treatments with high N rate as 160 and 200 kg/ha <b>was</b> higher .... than that for lower N rate"</li> <li>- In results "Different rice cultures significantly influenced": I think the correct term is "rice varieties" or "rice cultivars". ("Culture has a different meaning). It is a repeated error throughout the document</li> <li>- In Results: "Different rice cultures significantly influenced the leaf folder incidence but not stem borer and gall midge" should be change for "Different rice cultivars significantly influenced the leaf folder incidence but not <b>the</b> stem borer and gall midge <b>incidences</b>"</li> <li>- In Results "Highest leaffolder incidence" should be changed for "<b>The</b> highest ..."</li> <li>- In Results: "Among the rice cultures, NLR 33892 culture might be due to having higher physiological indices had produced significantly highest grain yield (5955 kg ha-1)." Is not very clear, would be better something like "Among the different cultivars, NLR 33892 had produced significantly highest grain yield (5955 kg ha-1), maybe for having higher physiological indices".</li> <li>- in Conclusion section: the last sentence beginning as "decrease medical as well as ..." appeared to be cut, and is about cirrhotic patients. Should this sentence be removed??? Furthermore, in the conclusion, the best N-level to be used, and maybe the best cultivar should be added.</li> </ul> <p><b>INTRODUCTION</b></p> <ul style="list-style-type: none"> <li>- Ref #1: from 1995. I think it is important that the authors are up-to-date in their citations. This one is 25 years old: the situation could have evolved since then. Please, update your data and citations.</li> <li>- L3: a citation is lacking for the data about Andhra Pradesh production.</li> <li>- Ref #2: from 1960: 60 years old!!!! This citation is used to report yield losses caused by yellow stem borer. Are you sure the situation is the same nowadays compared with 1960???? Worst? Better? Really, the authors need to update their data and citations.</li> <li>- In the second paragraph, more citations are needed to support information (for example 1<sup>st</sup> and 2<sup>nd</sup> sentences)</li> <li>- The authors do not explain in the introduction why they focus on these 3 pest species. I read in JBiopest7(supp):143-147(2014) that in India, 100 species feed on rice, and 20 are considered as major pests. So, why these species? The authors should add some sentences to introduce the rice pests in general and then the species they will study.</li> </ul> <p><b>MATERIAL AND METHODS</b></p> <ul style="list-style-type: none"> <li>- I am not sure to understand well the crop system. Maybe a figure representing the plot and subplot would be helpful.</li> </ul>	



- p2: please, explain the reasons for using these 4 rice varieties.

- p3: "Rice seedlings were transplanted at 30 days after sowing with inter and intra row spacing 15X10 cm at two seedlings per hill in to the sub-plots". So, how many hills and rice seedlings are present per subplot at the initial stage of the study?

- p3: the third formula is called in the same way as the first ("Per cent stem borer incidence"), instead of "% gall midge incidence"

- p3: In the formulae "% stem borer incidence", and "% gall midge incidence", the "total number of tillers" represent the initial number of planted tillers, or maybe some seedlings died in the in-between transplantation-damage observation? What about the plants that are attacked by other pest or diseases, do the authors counts them inside the 'total number of tillers'? Please, can you clarify these points.

- p3: in the second formula "% leaffolder damage", you count the total number of leaves. How many leaves has a rice seedling at this developmental stage? This formula should be complemented by another one "number of damaged seedling/total number of seedlings". Because with the actual formula, a result of 50% shows that 50% of the leaves are damaged, but the reader does not know if the pest is present on all the seedlings (with at least 1 damaged leaf), or only in 50% of the seedlings (having 100% of their leaves affected).

- in the results, you analyse the grain yield. Please, add a section in the methodology to explain how it was measured.

#### RESULTS

##### - Stem borer

- Table 1: "Per cent Incidence\*\* of stem...": as footnote "\*\*\*: Mean of two years". I don't understand why is it a mean of two years? In the methodology, the authors said that the observation is 30 days after transplantation. Can you explain?

- Table 1: if I understand well, that represents the % incidence. As you have 3 replications, you should have 3 stem borer incidences for each category rice type/nitrogen level. So, the results should be presented as a mean±standard deviation, or maybe median/quartiles.

- Table 1: which test did you use to compare the means? What is SEM? CD@1%? CV% ?? The statistics are not clearly explained.

- Figure 1: For 80kg/ha, the incidence should be equal to 20.04 (Table 1), but on the Figure, it seems that it is more like 25? Is there an error? I did the graph and obtained the equation  $Y=0.1516X+10.259$ , with a  $R^2=0.9133$ . In the other hand, I think this graph would be more accurate if you put all the replication's incidences (so 3 values for 40kg/ha, 3 values for 80, etc).

- Figure 1. You call it "correlation", but this is in fact a linear regression with its equation. Both terms and concepts are different. Please, correct the figure and the text p 4.

- p5: the terms of "V4N1, V1N5, etc" should be avoided, use instead "NLR 33892/40kg/ha", etc

- p5: "the interaction of V2N5 and V3N5 with 42.64 and 42.56 per cent leaffolder incidence": what does that mean the interaction between 2 'rices types/N levels'?

##### - Leaffolder

- Table 2: same remarks as for Table 1

- Figure 2: same remark about correlation

##### - Gall midge

- Table 3: same remarks as for Table 1

- Figure 3: same remark about correlation

##### - Grain yield

- the first sentence "The rice culture had found to be significant influence on grain yield of rice" is not clear (do you mean the rice variety that influence the grain yield?), please change it.

- Table 4: why is it mean of 2 years? Again, this point is not clear, reading the methodology.

- "rice culture" and "rice variety" is not the same, please use the correct/accurate term.

- Figure 4: the authors should add a legend for the equation (which is which?). To improve the graph, I suggest to use one color per rice variety (for the points, the lines, and maybe



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	<p>the equation). Symbols are a bit too big for the graph.</p> <ul style="list-style-type: none"> <li>- Please add the reference number exactly in the corresponding sentence. Example, p7: "The report of the Netanos and Kiotrogas, showed that the cultivars of rice which have higher physiological indices will have better growth and higher yield. Azarpour et al, also reported the same. Significant variations in the grain yield of rice varieties have also been reported by many workers (29, 30, 31, 32)." With Netanos &amp; Kiotrogas, you have to add (the year and) "27", with Azarpour et al.: the year and "28". The same p8.</li> <li>- p8: "Lowest grain yield of 5187 kg ha-1 was recorded in the plots that received 80kg N ha-1 which was on par with the plots that received 200 kg N ha-1": I think there is an error, it is not '80 kg N/ha" but "40 kg N/ha".</li> </ul> <p><b>CONCLUSION</b></p> <ul style="list-style-type: none"> <li>- p9: "Different rice cultures significantly influenced the leaffolder incidence but not stem borer and gall midge." Here, I think the authors want to speak about rice variety/cultivar instead of rice culture. Please check all the document because this is a repeated error.</li> </ul>	
<p><b>Minor</b> REVISION comments</p>	<p><b>ABSTRACT</b></p> <ul style="list-style-type: none"> <li>- the authors should homogenise the writing of leaffolder through all the document: choose one writing "leaf folder" or "leaffolder" (see e.g. Aim and Methodology in Abstract)</li> <li>- in Methodology section, "...leaf folder was recorded" should be change for "...leaf folder were recorded".</li> <li>- in Methodology, "per cent" should be written "percent"</li> <li>- in Results section, the sentence "Different rice cultures significantly influenced the leaf folder incidence but not stem borer and gall midge" should be changed for "Different rice cultures significantly influenced the leaf folder incidence but not the stem borer and gall midge ones"</li> </ul> <p><b>INTRODUCTION</b></p> <ul style="list-style-type: none"> <li>- L5: "20 – 30 per cent": please, change it for "20 – 30%". Furthermore, "per cent" is written "percent". Please check all the manuscript.</li> </ul> <p><b>MATERIAL AND METHODS</b></p> <ul style="list-style-type: none"> <li>- p6, in "Gall midge": first sentence: "Gall midge incidence was significantly differed" should be replaced by "Gall midge incidence differed significantly across"</li> </ul> <p><b>RESULTS</b></p> <ul style="list-style-type: none"> <li>- <b>Grain yield</b></li> <li>- p8: "The highest/optimum grain yield (5726 kg ha-1) produced by plots that received 120 kg N/ha. Which was on par with the plots that received 80 kg N/ha and 160 kg N ha-1 with 5619 and 5518 kg ha-1 yield, respectively": these sentences are not clear, should be rewritten, for example "The highest/optimum grain yield (5726 kg ha-1) <b>was</b> produced by plots receiving 120 kg N/ha. This yield was not statistically different from the yield obtained using 80 kg N/ha (5619 kg ha-1 yield) and 160 kg N ha-1 (5518 kg ha-1 yield).".</li> <li>- p8: "The present study indicate that with increase of nitrogen content grain yield considerably increased to a certain extent (Fig. 4) (33, 34, 35, 36).": 1) "indicate" should have a final "-s", 2) what are 33, 34, 35, 36? References? How can you have references for results of the present work?</li> <li>- p8: please add the number of the reference for Djaman et al and for Harell et al.</li> </ul>	
<p><b>Optional/General</b> comments</p>	<ul style="list-style-type: none"> <li>- the writing should be revised ("China" instead of "china", "percent" instead of "per cent", etc, "culture"/cultivar", "leaf folder"/leaffolder", etc), some sentences are not so clear.</li> <li>- Statistics methodology should be added</li> <li>- Methodology should be improved</li> <li>- Tables and Figures have to be revised</li> <li>- some small errors in the Results have to be corrected</li> </ul>	



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**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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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