**Response to Decision Letter: JIS-2019-0327.R1 entitled "Investigating behavior of the potato psyllid Bactericera cockerelli (Šulc) (Hemiptera: Triozidae) on three potato genotypes with putative resistance to “Candidatus Liberibacter solanacearum”"**

31 January 2020   
  
Dear Mr. Fife,   
  
Manuscript ID JIS-2019-0327.R1 entitled "Potato psyllid <i>Bactericera cockerelli</i> (Šulc) (Hemiptera: Triozidae) behavior on three potato genotypes with putative resistance to “<i>Candidatus</i> Liberibacter solanacearum”" which you submitted to the Journal of Insect Science, has been reviewed.   
  
I have a few comments which I feel need to be addressed before recommending the manuscript for publication. Please find my comments in the Word document attached. Therefore, I invite you to respond to my comments and submit a revised version of your manuscript.   
  
Your revised manuscript should be uploaded within 30 days. Please let us know if you will require an extension. The due date is 29-Feb-2020.   
  
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Once again, thank you for submitting your manuscript to the Journal of Insect Science and I look forward to receiving your revision.   
  
  
Sincerely,   
Dr. Jessica Vereijssen   
Editor, Journal of Insect Science   
Jessica.Dohmen-Vereijssen@plantandfood.co.nz   
  
ESA Editorial Office: 3 Park Place, Suite 307, Annapolis, MD 21401-3722, USA. Editorial Office Phone: 1-301-731-4535.

**Response to Decision Letter from the authors:**

**Thank you for your time and patience as we revise the article. This is my first manuscript, the research proceeds from work done during my master’s degree. I appreciate your feedback.**

**A major weakness of the paper was my misunderstanding of the differences between resistance and tolerance. I have made efforts to correct all language which previously referred to ‘resistance’. The genotypes we tested were *not* considered resistant but instead exhibited characteristics of tolerance to Lso infection.**

**I agree that the title needs to be revised to reflect the changes which were made throughout the manuscript. The abstract, Spanish abstract and main body of the paper have been updated to the correct terminology.**

**I corrected the instances of ‘settling behavior’ to ‘host acceptance’ behaviors. The psyllids were not left to ‘settle’ on plants for long periods of time.**

**I added Australia to the list of countries with *B. cockerelli* and added one of the citations you recommended.**

**I added the reference which explained the nature of the tolerance exhibited by the genotypes tested. (Rashidi et al 2017). I also added the reference which describes the scoring system Rashidi et al used to quantify the blackening of ZC-affected tubers.**

**I rewrote a sentence to clarify which behaviors we considered host selection and feeding behaviors. We consider walking, cleaning (presumably to remove chemical exudates from trichomes) and leaving the leaf more connected with host selection, while probing crosses over into the initiation of feeding behaviors.**

**I added the biotype reference to the first part of the materials and methods section. Our psyllids are of the ‘Central’ biotype.**

**I included the rate of infectivity for our psyllid colony to the ‘Psyllid Haplotype and Lso Detection’ section, which I then moved to follow the ‘Experimental Insects’ section in the Materials and Methods section,**

**Regarding the comment on the time needed to review videos: it may require more time depending on the length of the observation and the amount of activity of individual psyllids. Video monitoring software allows the user to fast forward and watch video at an accelerated rate, which can make longer recordings take only a few minutes per video.**

**I added a section in the discussion which addresses the concerns about allowing our psyllid colonies combined access to both ‘Russet Burbank’ potatoes and ‘Yellow Pear’ tomatoes. Our methodology was heavily influenced by experiments performed by Butler et al. and**

**Prager, S. M., I. Esquivel, and J. T. Trumble. 2014a. Factors influencing host plant choice and larval performance in Bactericera cockerelli. PLoS ONE. 9: e94047.**

**Prager et al 2014a demonstrated that potato psyllids raised on tomato will show the same behaviors when swapped to potato, but at a lower rate than when on their natal host. In their study, they reared psyllids on one plant (tomato) then placed those psyllids onto a different plant which was entirely novel to their experience (potato).**

**Our experiments are different in that our psyllids had experienced both plants from their birth and were allowed free access to either host.**

**In addition, the psyllids used in our experiments were selected in a random manner from our colony, and although it was not possible to discriminate the natal host plant of individual psyllids, we had many replicates for each different clone/variety which should help to evenly distribute errors which might occur from putting tomato-preferring psyllids on potatoes.**

**We also were comparing potatoes to potatoes, which would hopefully draw a consistent (although possible lower) response from psyllids which preferred tomatoes.**

**I think the preference for Russet Burbank could be explained by psyllid experience, but I would expect that the differences between Russet Burbank and the breeding closes is minor, so I wouldn’t expect to see a response as dramatic as Prager et al. 2014a was seeing when they put a psyllid on an entirely novel host.**

**Lastly, the reference to RPG near the end of the discussion was an error, it was supposed to say EPG.**

**I hope that these revisions helped to clarify the writing and addressed the errors and concerns mentioned in the revision. We are extremely grateful for your patience and thoughtful comments.**

**Thank you for your time and consideration,**

**--Austin Fife**