



**SDI Review Form 1.5**

**PART A:**

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| Journal Name:                   | <a href="#"><b>American Journal of Experimental Agriculture</b></a>                                    |
| Manuscript Number:              | <b>MS 2012/AJEA/1380</b>                                                                               |
| Title of the Manuscript:        | <i><b>Correlation between Resistance of Eggplant and Microorganisms, Enzyme Activities of Soil</b></i> |
| Manuscript received on (Date)   |                                                                                                        |
| Review comment submitted (Date) |                                                                                                        |



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**PART B: Review Comments**

|                           | <b>Reviewer's comment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part and write here 'Corrected'/ if not agreed, give suitable justifications) |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General comment:</b>   | The manuscript is full of grammatical errors; there are too many to point out in this review. These need to be fixed as it complicates reading of the manuscript. One example: Page 1, Lines 26-27: <i>"...while chemical fungicides is hard to effect directly to the infected part, all these cause the disease is hard to control in many areas of the world"</i> . Errors of this nature are on every page and makes reading and comprehending hard. There are numerous inconsistencies throughout the paper as well. For example, Latin names are sometimes italicised, and sometimes not (Page 2, line 41). |                                                                                                                                                                           |
| <b>Specific comments:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                           |
| Title and abstract        | <p>The title is confusing and doesn't make sense. Also, Activities is spelled "Aactivities" in the title and there is no space between the comma and enzyme activities. The title should certainly use the name of the disease used in this study, rather than simply "Resistance of Eggplant" – Resistance to what? Suggested title "Resistance of eggplant (insert latin name) to Verticillium wilt correlates to microbial abundance and soil enzyme activities."</p> <p>Abstract is fine, except for the aforementioned grammatical errors.</p>                                                               |                                                                                                                                                                           |
| Introduction              | <p>Page 1, line 31 – "...such as alter the quantity or quality of microorganism". This doesn't make sense. The quantity of microorganisms can change, but the quality? How do you determine quality of a microorganism? The quality of the substrate can be assessed, but not the organism itself.</p> <p>The introduction makes no mention of how enzymes themselves can have an impact on plant disease resistance. There needs to be some type of rationale for this.</p>                                                                                                                                      |                                                                                                                                                                           |



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|  | <p>The introduction makes no mention of what these enzymes do, how/what produces them, and why we should be interested in the measurement of them for this study. There is also no rationale as to what affect the quantity of microorganisms would have in the context of plant disease. A lot of information needs to be added to the introduction to better equip the reader with an understanding of the rationale behind the experiment.</p> |  |
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|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Review of literature (Heading may differ in the case of review paper) | There are no citations here from the early enzyme literature. The author needs to look into early papers by Skujins, Sinsabaugh, etc. For better references as well as citations to be included in the introduction where an explanation of why these enzymes are being tested is needed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Materials & methods (Heading may differ in the case of review paper)  | <p>Page 2, section 2.2 – Not enough information is given. How was the pathogen isolated? How was it identified?</p> <p>Section 2.3. – How were the plants injured?</p> <p>Section 2.5. – This is a poor method of microbial quantification. It is well known that cultivating microorganisms yields less than 1% of the true microbial community, yet the author makes no mention of this. This measurement should have been made via molecular methods, or substrate induced respiration. The method of cultivation calls into question any result of this paper.</p> <p>Section 2.6. – The description of enzymes assays is non-existent. No actual method as to how the assays were performed is given. Collection of soil samples for assays is not given, the time between collection and incubation is not given and needs to be as enzymes are sensitive to periods of storage. The entire section is poorly written and absent of most relevant information.</p> <p>2.7. – Only doing an ANOVA is questionable. Many other statistical tests could be performed in addition.</p> |  |
| Results & discussion (Heading may differ in the case of review paper) | <p>I see no mention of testing for correlation between quantity of microorganisms and enzyme activities. This is an obvious test that was not included. Results section is short and poorly defines results. Tables are quite confusing and table captions do not aid in interpretation. The data would benefit from a graph or two to help the reader visualize the relationships found.</p> <p>The author seems to suggest that these correlations found mean something more than they do. A correlation between enzyme activity and plant disease resistance does not mean that the</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |



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|            | <p>enzymes themselves are conferring the resistance onto the plant. The same can be said for microbial quantity. These correlations mean nothing for causation without additional tests an analysis. Page 10, lines 172-173 indicate that the increase in A/F and B/F and enzyme activities inhibited the spread of <i>V. dahliae</i>. This cannot be stated from this experiment and is incorrect. Even if the author was simply making a statement of possibility, there are no citations to back this claim, no explanation of possible mechanisms, and no rationale as to how this happens. Page 10, lines 170-171 states that some root exudates release increased the quantity of microorganisms and increased enzyme activities. The author never states that root exudates were measured. This statement could be made as a possibility of what's going on (with appropriate citations), but as of now the author makes a false statement not backed by their data. Both results and discussions sections are ripe with these types of errors and need to be completely overhauled.</p> |  |
| Conclusion | <p>The conclusions from this paper are flimsy, backed by questionable data, and extrapolated to back statements of causation that cannot be made from this experiment.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| References | <p>The oldest reference is from 1986. Enzyme work has been going on much longer, as well as microbial quantification work. The author's references need to be expanded with additional information added to the manuscript.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |

**Note: Anonymous Reviewer**