**Editor comments**

1. Greater detail for the methods with clearer organization is needed to better enable someone to use your procedure.

We hope that the reorganization of appendix 1 offers clearer organization and a protocol that is able to be accurately followed.

1. The relative importance of this general method (why would one want to obtain this information). Why is your method better than alternative approaches. You say this is faster but how does the quality of the results and speed compare to other methods. Being more specific would be useful.

Thank you for the helpful feedback. We hope that changes made in text referencing technical issues, specifically changes made in the introduction, help us make our point more clearly.

1. Avoid repeating parts of the text in different sections. Please phrase content differently in different sections of the manuscript.

Repeated sections of text have been removed and reworded throughout.

**Reviewer 1**

Major Points

The authors write several times that their results confirm other, already published results. Please provide examples for that statement. I guess a table where the new and published results are compared will support the meaning of this new method.

We thank the reviewer for the suggestion and agree that it is important to more clearly explain how our results compare to published literature/ methods. To achieve this, we have included the following explanation (in the Validation section) to say, “Implementation of published protocols (Orians et al. 2000; War et al. 2011) on *S. lycopersicum* provided us with a point of reference for comparison of our modified methods. By first establishing an expected response to a given treatment we are able to determine if the measured microplate response is sufficiently similar and reproducible.” We also feel that comparisons to literature values that were generated from experiments will not be useful because those experiments will have used things such as different plant species, different herbivores, no herbivores, different machines, different standards, and different data reporting methods. For instance, the Orians et al paper (2000) uses enzymatic treatments and compares PI induction at different leaf positions which would not be directly comparable to our results. The War et al 2011 paper uses groundnut, a different herbivore, and reports data as IU g/ FW which prevents us from making useful comparisons. These same issues and others, are apparent throughout the literature and we feel that any attempt to consolidate this data into a single table would fail to communicate how our results pair with the literature. Due to these constraints, we compare spectrophotometry data generated by us using published protocols on model species with data generated by us using our modified method. This builds off the assumptions that previous protocols are able to accurately and effectively measure a given response. This change can be found in paragraph 10 of the “Methods and Results” section.

For the Solanum experiments (p. 20), I understand that you combined leaves that were infested with the insect and leaves that were wounded/regurgitate-treated. Why putting both treatments together? For me that makes no sense.

Due to variable feeding patterns, use of regurgitate was required to simulate herbivory conditions for parts of the experiment. Mechanical wounding using regurgitant and/or saliva has been shown to induce herbivory responses in a similar fashion (e.g. Santiago et al 2017; Kant et al 2015; Lawrence et al 2008; Engelberth et al 2004; Erb et al 2000; Korth & Dixon, 1997; Mattiacci et al 1994). We have modified that sentence to include the explanation. This change can be found in paragraph 2 of the “Methods and Results” section.

The Medicago experiments have nothing to do with any type of herbivory or herbivory-like treatments. Using whole larvae homogenate-extract in combination with wounding cannot mimic insect feeding. Please rephrase this approach and write "wounding".

We have revised our manuscript to make this change. We have replaced references in these instances to say “mechanical wounding with regurgitant and/or homogenate to simulate herbivory treatment” and variations of this when appropriate. References throughout have been replaced.

On page 10 line 18ff the authors argue for individually assaying plants but refer to table 2, which compares spectrophotometer and microplates. I do not see any connection here.

The statement on page 10 line 31ff ("The dramatic difference in absorbance means between the microplate method…..") contradicts what is shown in Figure 1. Please explain.

Figure 1 is a representation of the standard curves of POD and PPO and comparing the absorbance values and r2 values using both the microplate method and the published spectrophotometer using known concentrations of enzymes. We have modified our figure legend to explicitly state that the figure is of our standard curves.

Minor points:

1. Write "trypsin-like protease inhibitors" not "protease inhibitors", which is too general.

This suggestion was implemented. Changes were made throughout, when appropriate.

2. Page 6 line 40 ff: During the 15 min of homogenizing of the plant tissue, is here no cooling at all?

We homogenized tissue using holders that are made of teflon and stored at -80C. All samples and holders were also dipped in liquid N before homogenizing. We have made in text changes (Paragraph 4 of the “Methods and Results” section)

3. Page 6 line 38: don't you mean table 3?

We have changed the reference to Table 2 in paragraph 3 of the “Methods and Results” section.

4. Page 10 line 22: write Appendix 3 not 2.

Line was fixed to say Appendix 3 instead of Appendix 2

6. Table 1: Mention the plant that was used and explain better what is shown here (in the Text and more info in the legend).

We now say (paragraph 13 of “Methods and Results”) that “Current practice for many of these assays is to pool tissue samples from multiple plants. Table 1 shows the results of an ANOVA where we compare Absorbance values based on plant sample pre- and post- herbivory and show that there is significant variation between plants of the same ecotype that were grown in the same environment. This variation highlights the strength of our assay, which does not require plant tissue to be pooled.

7. Table 2: Which plant?

Included “Values taken from *Solanum lycopersicum* samples.” in the legend.

8. Appendix 3: You wrote: "E is calculated by subtracting post-herbivory values from pre-herbivory values". Isn't it the other way around? How can you get positive results? Compare with Appendix 4E.

Inhibition is often shown in terms of proteolytic enzyme activity. We get positive values here because the activity of the enzymes we are assaying would be higher pre-herbivory due to the lower concentrations of PI (inhibitor) present in our samples. Post-herbivory, we expect there to be an increase in PI concentration, resulting in reduced enzyme activity. Showing the difference as pre-herbivory(high activity) - post-herbivory (low activity) results in a net positive amount of activity. We have modified the figure to read as “PI trypsin activity in IU” on the Y-axis to prevent further confusion. While in Tomato, wounding always resulted in increased activity (due to a, in Medicago (Appendix Fig 4E) the response to wounding was genotype dependent.

**Reviewer 2**

I was expecting to see a comparison between the developed method and the previous methods. We see that the develop is effective using small sample sizes, but when compared to the older methods that require more sample, are they still just as accurate?

We thank the reviewer for the suggestion and agree that it is important to more clearly explain how our results compare to published literature/ methods. To achieve this, we have included the following explanation (in the Validation section) to say, “Implementation of published protocols (Orians et al. 2000; War et al. 2011) on *S. lycopersicum* provided us with a point of reference for comparison of our modified methods. By first establishing an expected response to a given treatment we are able to determine if the measured microplate response is sufficiently similar and reproducible.” We also feel that comparisons to literature values that were generated from experiments will not be useful because those experiments will have used things such as different plant species, different herbivores, no herbivores, different machines, different standards, and different data reporting methods. For instance, the Orians et al paper (2000) uses enzymatic treatments and compares PI induction at different leaf positions which would not be directly comparable to our results. The War et al 2011 paper uses groundnut, a different herbivore, and reports data as IU g/ FW which prevents us from making useful comparisons. These same issues and others, are apparent throughout the literature and we feel that any attempt to consolidate this data into a single table would fail to communicate how our results pair with the literature. Due to these constraints, we compare spectrophotometry data generated by us using published protocols on model species with data generated by us using our modified method. This builds off the assumptions that previous protocols are able to accurately and effectively measure a given response. This change can be found in paragraph 10 of the “Methods and Results” section.

I also would have liked to see some comments about the trend that more studies use genomic data to examine the genetic variation underlying the differences in herbivory-response, so the readers are convinced that chemical assays are still an important aspect of this field.

We have now included the following text in the introduction (paragraph 6):

“Since the onset of the next generation sequencing revolution, many studies use genomic data as evidence of variation. Although this has proven to be a highly useful tool in many studies, it is important to assess functional variation as well. Studies have indicated that transcript abundance doesn’t necessarily match functional activity in a tissue samples (Greenbaum et al. 2013). This finding and others like it are important to consider when assessing functional diversity in physical populations of organisms.”

**Introduction**

**Paragraph 1, line 1:** The first sentence is almost identical to one in the abstract. Please rephrase it to avoid repetitions.

The first two lines of the introduction now read, “The ability to quantify plant molecular responses to herbivory over time and compare variation within populations is useful in many research areas from ecology and evolutionary biology to applied agricultural research. Unfortunately, current methods are expensive, time consuming, and typically require large tissue masses.”

**Paragraph 1, line 6:** “Previously developed assays” Could you provide some examples and citations?

We feel that this is addressed sufficiently throughout the remaining text of paragraph 1. We thank the reviewer for their suggestion.

**Paragraph 1, line 7:** “Unusable due to financial constraints” Is this due to the cost of assay reagents/kits or due to the large amounts of samples required for the assays?

The sentence has been changed to read (paragraph 1 of “Introduction”), “ Previously developed assays are thus effective but unusable by many researchers due to financial constraints (i.e. lack of access to spectrophotometers or large quantities of reagents) or the need to conduct a given assay on a large set of samples.”

**Paragraph 1, line 10:** Are there more recent reviews on this? Methods improve in such short time periods that a decade-old reviews may not be relevant for an up-to-date comparison of available methods.

Many of the current methods still rely on high volume spectrophotometer methods, which were not feasible for the number of experimental tissue samples we needed to process for our research, so we set out to modify those protocols and developed a system that we thought would be beneficial to the greater scientific community.

**Paragraph 2, line 5:** H2O or H2O2?

This line has been changed to H2O2 instead of H2O. We thank the reviewer for noticing this.

**Paragraph 2, line 17:** What is meant by “large sample masses”? Most of the methods are capable of detecting small amounts using microplate readers.

Large sample masses are required due to the 3ml reaction volume required for common spectrophotometric assays. To express this, the sentence has been changed to read, “Additionally, as with protein-based assays, the large sample masses required as a result of large reaction volumes for current spectrophotometric techniques limits the total number of technical replications and assays that can be performed on a given sample.” This is found in paragraph 5 of “introduction.”

**Paragraph 3, line 5:** Please cite some examples for these defense response assays.

One of the earliest biochemical responses to herbivory is the production of reactive oxygen species (ROS) such as superoxide (O-), hydrogen peroxide (H2O2), and hydroxyl radicals (HO-) after depolarization of the plasma membrane due to leaf damage (Maffei et al 2012; War et al 2012; Zebelo & Maffei 2015). Both chemical treatments and mechanical wounding can elicit ROS production (Maffei et al 2007). H2O2 production is both used as a local signal to induce the hypersensitive response when plants are subjected to mechanical damage as well as a systemic signal for the induction of additional defense responses (Orozco-Cárdenas & Ryan 1999). The presence and activity of ROS additionally results in the production of a group of enzymes, peroxidases (POD), that are upregulated to perform a diverse set of physiological processes such as metabolism of ROS, restructuring of cellular walls, cross-linking of complex polymers, and other critical functions (War et al 2012). Increases in POD activity also decrease the nutritional quality of leaf tissue, which significantly reduces the growth and development of insect larvae. Finally, the presence of plant PODs in insect guts may also be toxic to insects.

Two additional compounds that are produced in response to herbivory are polyphenol oxidase (PPO) and proteinase inhibitors (PI) (Mithöfer & Boland 2012; War et al 2012). PPO is upregulated directly by the presence of herbivore-associated signaling compounds such as methyl-jasmonate (Koussevitzky et al 2004). PPO breaks down diphenolic compounds to produce more reactive phenolic compounds that have anti-insect activity once consumed (War et al 2012). Protease inhibitors (PI) are small molecules that prevent proteolytic activity. In response to herbivores, plants will produce PIs to inhibit protein catabolism in insect guts which can halt the degradation of proteins that may serve as precursors used for various physiological processes (Mithöfer & Boland 2012).

**Paragraph 3, line 6:** Please clarify whether these selected responses are the ones listed in line 3 (protein content, peroxidase, polyphenol oxidase, H2O2, and protease inhibitors). It would also be beneficial to briefly explain how quantifying these responses are relevant to herbivory detection.

The paragraph above was added and we believe that it addresses both this comment and the previous comment.

**Methods and Results**

**Paragraph 1, line 3:** Does *Medicago* *polymorpha* have defense response mechanisms similar to *Solanum lycopersicum*? The reason for choosing *Solanum lycopersicum* is clearly stated, but the reason for selecting *Medicago polymorpha* is not justified.

We use MP as an example of a plant that has not been well characterized and tends to have small leaves, making it more difficult to assay using spectrophotometric methods. Many species would have worked here but because of the specific expertise of our lab we selected *M. polymorpha.*

**Paragraph 2, line 6:** Are 0 and 24 hrs sufficient time points for detecting herbivory defense response?

Yes. The literature we reference indicates that this is common practice in the plant-herbivore interactions field.

**Paragraph 3, line 18:** How does Table 1 validate that the replicated assays provide predictable results?

Please see our response to the first major comment.

**Paragraph 4:** There are several sentences identical to the ones in the Appendix 1. Please revise this section.

Appendix 1 has been modified to read more as a protocol as per reviewer suggestions.

**Paragraph 5, line 12:** 2/5 should be 2.5.

This has been changed.

**Paragraph 6, line 6:** Appendix 2 should be Appendix 3.

This has been changed.

**Paragraph 6, line 7:** I am not sure I follow the reason for referring to Table 2 here. The text says assaying individual samples reduce experimental error, but the table shows the difference between spectrophotometer and microplate assays. Does this mean spectrophotometer assays use pooled samples whereas microplate assays use individual samples? If so, please clarify. Can you also perform a statistical test to state whether these differences are significant?

We have modified this area to read as follows: “Pooling tissue samples, such as what is required to get adequate tissue masses for spectrophotometric assays, increases variability due to the sample pool containing multiple individual plant responses and makes a strong argument for assaying individual plants.” This is to indicate that the spectrophotometer assays are pooled. This change was made in paragraph 13 of “Methods and Results.”

**Paragraph 6, line 10-12:** Please explain the observed “dramatic differences” between the spectrophotometric and microplate methods. It is previously explained in the manuscript that both readings were performed on the same machine (SpectraMax M2), so the differences cannot be explained as “a consequence of using different machines”.

This sentence has now been changed to “different detection methods.” Although the machine is the same, the functions for reading cuvette samples and microplate samples are different and also output the data separately. This change was made in paragraph 13 of “Methods and Results.”

**Paragraph 6, line 16:** “we were able to detect expression in as little as 3.8 mg of issue” Figure 2 and Appendix 3 is cited here, but the detection threshold of 3.8 mg is not clearly shown anywhere.

We have modified our reference to Figure 2 to include more explanation. Specifically, “We serially diluted tomato tissue to measure the lower limits of detection for our POD and PPO microplate assays and found that we were able to detect expression in as little as 3.8mg of tissue. This was determined by doing a series of dilutions on a tissue sample to determine the linear range of the microplate assay (Fig. 2).”

**Appendix 1**

· Table 1 in the Appendix should be given a different name. Table 1 already exists in the manuscript.

Table 1 is now named Table A1.

**Appendix 3**

· The legend for time (pre vs post) should be present for A, B, C, and D. Alternatively, place the legend next to the 4-plot panel.

The figure has been changed to reflect this.

· Please indicate that five samples of the same ecotype were used for the plots.

The figure has been changed to reflect this.

· A statistical test should be performed to state that the variation was “significant”.

We have added a line that now says, “(see Main Document Table 1)” to reference the results of statistical tests in main document table 1.

· The plots are too small. Can they be enlarged to match the ones in Appendix 4?

The plots have been made larger

**Appendix 4**

· The first two comments for Appendix 3 also apply to Appendix 4.

The figure has been changed to reflect this.

· The Y axis for plots C and D are written in different format between Appendix 3 and Appendix 4 ( g/FW vs g FW-1). Please keep the format consistent to avoid confusion.

The figure has been changed to reflect this.

· There are vast differences between the tomato and *Medicago* plots for each assay (Appendix 3 versus Appendix 4). Any comments?

These are different species and are expected to have different responses to wounding. Additionally, the tomato plants are the same ecotype, while we tested 5 genetically distinct *Medicago polymorpha* ecotypes*.*

**Figure 1:**

· State the wavelength at which the absorbance was measured for each assay. This information should be given in both the figure legend and the Y-axis on the plots.

We have changed the figure legend to include the wavelengths for each assay and they have been added to the figure y axis.

· Please change “dot” to “data point” or something similar. Data points are represented by “dots” and “triangles” on the plots.

We have switched from dot to data point.

· Please rephrase this sentence: “The line All concentrations were done in triplicate.”

“The line” has been removed.

**Figure 2:**

· The first comment for Figure 1 also applies to Figure 2.

We have changed the figure legend to include the wavelengths for each assay and they have been added to the figure y axis.

· What does FW stand for? Fresh weight? It is not explained anywhere in the text.

FW stands for fresh weight and we have now defined it in the last line of the assays section in the methods.

· Again, the lower threshold for accurate detection is not clear here. The X axis does not seem to match with the mentioned starting point of 0.38 g/ml.

We have clarified this in the text.

**Reviewer 3**

Major points

1) Compare the techniques to other techniques in the literature or tested against samples with known concentrations for all studies. The authors do this with POD and PPO, but not with H2O2, PI, or Protein Quantification. Known concentrations of H2O2 were used to compute a calibration curve, but nothing was confirmed on other samples. If these protocols have been well tested in the literature already, then please incorporate that into a discussion. This is especially important because of the variation that was observed across ecotypes (which is really interesting and a great addition that sells the importance of not combining samples from multiple individuals).

On page 4, line 49, tomato was used to be able to compare to other published studies, but this comparison was not done.

We thank the reviewer for the suggestion and agree that it is important to more clearly explain how our results compare to published literature/ methods. To achieve this, we have included the following explanation (in the Validation section) to say, “Implementation of published protocols (Orians et al. 2000; War et al. 2011) on *S. lycopersicum* provided us with a point of reference for comparison of our modified methods. By first establishing an expected response to a given treatment we are able to determine if the measured microplate response is sufficiently similar and reproducible.” We also feel that comparisons to literature values that were generated from experiments will not be useful because those experiments will have used things such as different plant species, different herbivores, no herbivores, different machines, different standards, and different data reporting methods. For instance, the Orians et al paper (2000) uses enzymatic treatments and compares PI induction at different leaf positions which would not be directly comparable to our results. The War et al 2011 paper uses groundnut, a different herbivore, and reports data as IU g/ FW which prevents us from making useful comparisons. These same issues and others, are apparent throughout the literature and we feel that any attempt to consolidate this data into a single table would fail to communicate how our results pair with the literature. Due to these constraints, we compare spectrophotometry data generated by us using published protocols on model species with data generated by us using our modified method. This builds off the assumptions that previous protocols are able to accurately and effectively measure a given response. This change can be found in paragraph 10 of the “Methods and Results” section.

2) Consolidate and Clean up the Methods and Appendix 1. I view Appendix 1 as recipe that I need to print out and follow, so the Reagents should be closer to the respective protocol (as opposed to separated by the plant growth and plant damage methods). I think the plant growth and damage protocol can be moved to their own Appendix or removed completely. The plant growth and damage protocol (page 19 line 20 to page 20 line 58) occur in the Methods (page 5 lines 13-52). Moreover, some of these descriptions in the Appendix do not line up with the Methods. For example, the Methods on page 5, line 47 mentions regurgitant, yet page 20 line 34 mentions homogenate and page 20 lines 11-16 mention that both live organisms and scissors were used.

In the Methods, please split up the two paragraphs under Assays (page 5 line 56 to page 9 line 23). I recommend deleting page 6 lines 38 and 40 ("All protein extractions were diluted...") because it appears at at the bottom of page 6 and top of page 7. The new paragraph would then start with "Frozen leaf tissue...". Page 7 and page 8 can be broken up into the various tests: page 7 line 29 "POD activity..."; page 7 line 45 "PPO activity"; page 7 line 58 "Proteinase inhibition activity..."; and page 8 line 34 "The hydrogen peroxide...". At the end of each paragraph, I would like to see what was measured (in many cases absorbance was measured, but amount could be computed as g / g FW). PI and H2O2 does this.

We have taken your suggestion and reorganized this section.

Minor suggestions:

page 2 line 22: define ROS instead of acronym

This line now reads “reactive oxygen species”

page 3 line 45: should H2O be H2O2?

Yes, this has been corrected to reflect this suggestion. We thank the reviewer for finding this typo.

page 3 line 59: transition between sentences. Disconnect between complex responses and requiring a large sample.

This has been changed to read as follows: “Additionally, reducing the total amount of tissue required for an expanded array of assays enables researchers to perform both small molecule and enzymatic assays during a given investigation by allowing two separate extraction buffers to be used resulting in smaller amounts of tissue being assayed in more ways. This allows complex responses across large numbers of individuals to be analyzed within a single experiment.” This change can be found in paragraph 5 of “Introduction.”

page 4 line 7: transition between sentences. Disconnect between protein sampling and buffers for small molecules

This portion has been changed to read, “Currently, assaying for the production of small molecules requires severe buffering conditions that both inhibit and degrade proteins present in suspended tissue samples due to the presence of compounds such as trichloroacetic acid, which causes protein precipitation [5] preventing the use of a single buffer. Additionally, as with protein-based assays, the large sample masses required as a result of large reaction volumes for current spectrophotometric techniques limits the total number of technical replications and assays that can be performed on a given sample.”

page 4 line 36: Introduce acronyms here or remove acronyms from paper.

H2O2 has now been introduced as hydrogen peroxide in the second paragraph of the introduction.

page 4 line 37: Include genus in scientific name of tomato

We first introduce *Solanum lycopersicum* in the line preceding this and feel that *S. lycopersicum* is sufficient throughout the remaining discussions in the paper. This is common practice in studies using plants.

page 5 lines 31-36: Why were plants inoculated?

Since *M. polymorpha* is a legume, inoculum was used to mimic natural conditions. Fertilizer could have also been used here to prevent nitrogen deficiency. We have modified the line to read, “Plants were inoculated a week after planting with a rhizobium strain mixture of 107 cells of equal parts *Ensifer medicae* strain WSM419 and *E*. *meliloti* strain 1021 to prevent nitrogen starvation and to mimic natural conditions.” This change can be found in paragraph 1 of “Methods and Results.”

page 6 line 41: how much tissue was used? Relates to merging appendix and methods

We hope that the reorganization of the manuscript addresses this concern.

pages 7-9 and Appendix 1: missing a prefix (I assume micro), everything in Liters

We have corrected the prefixes.

page 7 line 59: change (Orians et al. 2000) to Orians et al. (2000)

This citation has been fixed.

page 8 line 38: what is [6]?

This was citation that was left in from a previous draft. The citation has been added in the appropriate form.

page 8 line 49: More information about what wavelengths were tested. t suggests two wavelengths.

We have added that we compared absorbance at 350 nm and 390 nm. Paragraph 9 of “Methods and Results.”

page 8 line 52: "special plates for to avoid issues" remove for.

We have made this change.

page 8 line 56: Is there an article to be compared to? Do these results appear in a table?

The spectrophotometer method we use serves as our data for comparison. There is no table to compare to literature values due the variability in sample preparation, analysis, and reporting.

page 9 line 52: 2/5 is 2.5?

This has been fixed

page 10 line 23: reference to appendix 2, but that shows M. polymorpha information when the sentence discusses tomato. Should this be appendix 3?

This has been changed to appendix 3.

page 10 line 23: Table 1 and the figure in appendix 3 show the same idea. I prefer the figure in appendix 3.

We are recommended to have only 2 figures for this journal and had a hard time picking the appropriate ones. Because of this, we opted for figures that had information that was difficult to also communicate in table form. Since we are capable of communicating this as a table we have decided to leave it as such. We thank the reviewer for their input.

page 10 lines 31-36: Mentions difference in values between microplate method and spectrophotometric method, but measures absorbance. Compute concentration and compare.

This sentence has now been changed to “different detection methods.” Although the machine is the same, the functions for reading cuvette samples and microplate samples are different and also output the data separately. We have modified this paragraph to say “that assaying plants individually for both POD and PPO, we are able to reduce experimental error. This is important because it indicates that our readings are more reproducible than alternative methods (Table 2)” and we have modified the Table 1 heading to reflect the important comparison is between standard errors.

Table 1: Define acronyms (or use acronyms more in paper). Think about replacing with Figure from appendix 3.

We hope we have made this more clear with our reorganization of the paper.

page 20 line 20: Where the 4 replicate leaves combined into one sample?

We included the word “separately” to indicate that the replicate leaves were not combined.

page 20 line 38: Where were the leaves cut? Along the blade?

We added “blade” for clarity.

Appendix 1: in two places N2 needs subscripted 2

This change has been made in the manuscript.

page 23 line 14: H2O2 needs subscripts

This change has been made in the manuscript.

Appendix 2: Is this referenced in the article? I was confused as to why this was included.

This is referenced in the Methods & Results section. The journal requires location information for all collected germplasm.

Appendix 3: Figure: POD and PPO units should be Abs / g Fw (from table 2 in main article)

We have changed this.

Appendix 3: Please define what 1-5 on the x axis mean. Maybe as simple as "Results of our microplate-based protocols for five tomato plants of ecotype M82..."

We have modified our figure legend to say, “Results of our microplate-based protocols using *S. lycopersicum,* ecotype M82 for A) H2O2, B) Protein Quantification, C) POD, D) PPO, and E) PI. The numbers 1-5 on the x-axis reflect individual plants used for sampling.”

page 24 line 54: Are error bars standard error bars?

We have now included “standard error” in the legend for clarity.

page 25 line 56: Are error bars standard error bars?

We have now included “standard error” in the legend for clarity.

page 26 line 14: what is the line "All concentrations"

We have removed the words “the line.”