Dear Editor in chief and dear reviewers,

thank you for the reviewing our manuscript and thank you for the useful suggestions.

There are Reviewers' Comments to Author and our answers.

**Reviewer C:**

Does the manuscript contain enough significant original material?

yes

Is the manuscript clearly and concisely written?

yes

Are the conclusions adequately supported by the data?:

yes

Does the manuscript give appropriate credit to related recent publications?

yes

Are the references appropriate and free of important omissions?

yes
Is the length of the manuscript appropriate?

yes

Does the manuscript need condensation or extension?

no

Is the quality of the figures (including legends and axes labelling) satisfactory?

yes

Are the nomenclature and units in accordance with SI?

yes

Are the English grammar and syntax satisfactory?

Yes

ADDITIONAL COMMENTS

Please indicate the page numbers for suggested corrections. Please, be as specific as possible if major correction by the author(s) is recommended!

NA

REPORT

Paper is general well written. Title can be modified to some extent with findings based title. Like I suggest it to be " Antioxidative defence response plays a key role in late blight resistance in tomato other parts of manuscript are fine. In my opinion, this manuscript should be published after minor revision without additional review

Dear reviewer thank you for proposing the title, but according to the obtained results we cannot conclude that antioxidative defence response plays a key role in resistance.

If manuscript is suitable for publishing, referees recommendation:

Short communication

**Reviewer O:**

**ADDITIONAL COMMENTS**

Please indicate the page numbers for suggested corrections.

Please, be as specific as possible if major correction by the author(s) is recommended!

I found the paper "Antioxidative response of tomato genotypes to late blight infection" very interesting. There are few studies that truly look at the chemical interactions that happen upon *P. infestans* infection. Thus a study to describe the best methods to measure important components like antioxidants is useful. In the study the authors tested 5 genotypes, of which 3 wild species and conclude that for some of the measured compounds there is a correlation with resistance. They conclude with saying that therefore measuring these compounds could be used to predict resistance properties. I think that generally this is a good paper, however the final conclusion is not justified in its current form, because the work is not predictive. The measured compounds correlated with resistance later in the growing season, after long lasting natural infection. For breeding purposes and selection tests, one would test the compounds in non-infected plants or directly after artificial infection. Since there are no data presented on this, we will not be able to tell whether that would also work. Rephrasing the sentence should be possible.

**In text it is written:**

Based on the analysis performed, the most important traits for the selection of less susceptible wild tomato species were TAA (Total Antioxidant Activity), FRAP (Ferric-reducing Antioxidant Power) and ABTS (Radical Cation Scavenging Activity) and these tests could be used in the preliminary screening of tomato resistance to the late blight.

**According to the above mentioned reviewer’s suggestions we rephrase the sentence**

According to this study, the antioxidative tests which indicate a response of wild species to late blight infection are TAA (Total Antioxidant Activity), FRAP (Ferric-reducing Antioxidant Power) and ABTS (Radical Cation Scavenging Activity).

**Overall, writing is OK. The abstract contains a few spelling mistakes and so does the rest of the text. Having it proofread by a professional or native English speaker after revision can therefore improve the paper.**

Spelling mistakes were corrected. The manuscript was under proofread.

Below I paste some specific comments:

**l29, please state that Phytophthora is an oomycete.**

We put an oomycete instead the oomycete-

**l30, Phytophthora drought survival completely depends on the species and context. P infestans is very bad at surviving drought during early stages of infection of solenaceous hosts (which is what this paper is about), so I think that this paper should not be cited here in such a way. Oospores can (sometimes) survive longer in soil or the pathogen remains latent in tubers or stems.**

The sentence in line 30 was changed

Fungi-like organisms from the genus *Phytophthora* can survive unfavourable conditions, such as drought, low and high temperatures, for a long period4

1. I. Milenković, J. A. Nowakowska, T. Oszako, K. Mladenović, A. Lučić, L. Rakonjac, D. Karadžić, *Genetika* **46** (2014) 353 (<http://doi:10.2298/GENSR1402353M>)

Instead of the previous sentence it is written

Additionally, in locations where sexual reproduction occurs, oospores of the genus *Phytophthora* can survive for months or years in the absence of living hosts4

A. [Drenth, M. Janssen, F. Govers 1995. *Plant Path.*, **44** (1995):86](https://www.cabi.org/isc/abstract/19952309501) (<https://doi.org/10.1111/j.1365-3059.1995.tb02719.x>)

table 1, change to time to maturity

it is changed

**l128 How is it possible that the intensity of late blight in bull's heart drops from the first to the second assessment?**

The drop of infection from the first to the second assessment could be explained with the fact that leaves were taken from the top of the plants. Five out of six genotypes has indeterminate growth as well as Bull's heart (heirloom tomato variety). In that period the plants formed new leaves which were still free of late blight symptoms. Further in the vegetation period the pressure of the pathogen was so severe and the results of the assessment show higher level of leaf infection.

**l153, should > could. There could also be non biochemical responses or differences leading to the resistance differences.**

Differences between the intensity of late blight in tomato genotypes indicate that there should be differences in the biochemical response of these genotypes to the late blight infection.

Now it is

Differences between the intensity of late blight in tomato genotypes indicate that there could be variability in the biochemical response of these genotypes to the late blight infection.

**l207, the fact that something does not correlate does not make it more specific for something else. I understand what the authors mean, but the what is written is not logical.**

ABTS and FRAP tests are more specific for flavonoids than for some other phenolic components (flavonoids are one of the subclasses of phenols) and therefore correlate with the content of flavonoids in the sample. On the other hand, these tests are not in the correlation with total phenols (Table 3). Therefore ABTS and FRAP are specific for flavonoids.

Now it is

ABTS and FRAP tests are in the correlation with the content of flavonoids in the samples. Although the flavonoids are one of the subclasses of phenols, these tests are not in the correlation with total phenols (Table III).

**l217, link back to the results to help the reader understand why.**

Results in of the antioxidative tests applied in this research, showed that the total antioxidant capacity of the analysed essay depends not only on phenolics but also on other extracted compounds.

It is corrected

According to the obtained results of the correlation coefficients (Table III and IV), antioxidative capacity of the samples depends not only on total phenolics content, but also on other bioactive components in the essay.

**l239 This can be explanation why this can be THE explanation why. This kind of mistakes happen throughout the manuscript. Please double check.**

It is changed and we checked through the manuscript.

**l223, I dont understand this sentence. Phenolic compounds are involved in a primary line of induced defence in potato and tomato plants against *P. infestans*, inhibiting pathogen hyphal penetration7,35. The syntax is weird.**

This sentence is rephrased

Phenolic compounds play an important role in defence of potato and tomato plants against *P. infestans* by inhibition of pathogen hyphal penetration 7,35.

**I don't understand how the PCA was made. Input data were not explained.**

The Principal Component Analysis (PCA) was used to identify the most significant traits. All data per genotype, sampling date and replication were used for PCA with non-linear iterative partial least squares (NIPALS) algorithm and components over e 1 were interpreted.

**I dont understand how the authors calculate the correlation with any of the properties, like resistance, thus it is not possible to judge the validity of the results described in**

The correlation coefficients were calculated according to Spearman. We correlate disease intensity with total phenols, flavonoids and antioxidative tests, and also total phenols and flavonoids with antioxidative tests. These correlation coefficients indicate the relationship between these values.

**l244 and onwards. The paper heavily relies on these results, so I think they should be much better described, so that everybody is able to interpret them.**

We completely change that part of the text.

**l265 had the significantly lower > had a significantly lower**

It is corrected.

**General comment. Periods (.) are often missing at the end of sentences.**

It is corrected.

All correction suggested by the technical editor were made.

Best regards,

Authors