

Reviewer – Manuscript ID 2022.09.06.506731v1.full

Congratulations to the authors for a beautiful study. The present version of the preprint could be improved for publication acceptance.

General comments

The abstract is too long and could be easily reduced without losing its message. Please revise it.

The references did not follow a chronological order, so I do not understand the logical citations in the main text of the manuscript and the introduction could be improved (see my minor comments).

A better organization of the *Results* and *Discussion* sections should be realized by the authors avoiding repetitions and reducing text but maintaining a narrative of the experimental design of this study (see my minor comments).

However, the preprint needs to be improved by the authors. The present version of the preprint needs to be improved for publication acceptance.

Minor comments

Abstract

As previously mentioned, the abstract is too long, please reduce it.

Introduction

The relevance of the *Pseudomonas syringae* (Psy) and the Soft Rot *Pectobacteriaceae* (SRP) species as plant pathogens should be explained to non-familiar Readers in the *Introduction* section. Although the authors explained the main virulence mechanisms present in both pathogens, it is not clear what kind of damage they realize in environmental plants or agriculture production, at least for this reviewer.

Results

Page 5- Figure 1- Please add the scale bar in the illustrative map shown in the figure.

Page 5- Also, from what I understand the authors quantify both microorganisms through colony-forming units on the culture media plate, so the authors should state CFU instead of bacteria/L.

Line 94- The 12 samples (7%) below the detection threshold belonged to the same location or time collection? Please detail information about these data.

Lines 117-118- Please justify the reason why PO_4^{3-} , NH_4^+ , NO_2^- , and NO_3^- were only measured in 2017.

Figure 2 –Figure 2 illustrated the average values of each chemical parameter and showed its correlation with total bacteria and each plant pathogen. However, nothing is told about the different sample locations. Please clarify to the Readers what was observed.

Lines 91, 120, and 123-There is no need to abbreviate Tables 1, 2, and 3. However, the Table 3 abbreviation is missing the final dot.

Table 2 does not deliver any useful information to the Readers, nor a correlation with any of the plant pathogens, and it is well-known that several chemical parameters are related to each other. I recommend explaining the purpose of the data in Table 2 or to delete it.

Page 9- The comparison with the published data of reference 3 (Moussa et al., 2022) should be realized in the Discussion section. Please amend it.

Lines 199-200- Please rectify the term “Unlike *SRP* species...”.

Line 204- Please specify the location of the detection of 128 haplotypes.

Line 212-Please avoid discussing previous studies in the *Results* section.

In general, Page 10 is already a discussion and comparison with previous reports. I recommend the authors revise in detail the *Results* section or merely merge the *Results* and *Discussion* sections.

Discussion

The *Discussion* section has more than six pages, being too long, and also adding that the last page of the *Results* section is a discussion. Due to the extension of the present study, I recommended the authors merge both *Results* and *Discussion* sections and reduce repetitions.

Lines 262-263- Please rectify the sentence, in particular “... as well as human pathogenic potential...”.

Lines 297-302- Please add references to support your assumptions.

Line 310- Please when citing for the first time a species name in the *Discussion* section, it should be written with full names. Please check it in the remaining section.

In general, the Discussion section is well-written and the narrative is very informative. However, I still consider that the authors should merge the *Results* and *Discussion* sections to avoid some repetitions and reduce the narrative in a useful manner for the Readers.

The shortcomings of the present study must also be added at the end of the *Discussion* section.

Methods

Line 396- Please replace “Experimental Procedure” with “Methods”. It is more common terminology.

Line 397- Please put the subsection titles in a different line from the text, as done in the “Statistical analyses.” subsection, maintaining the same structure during the text.

Line 400- The abbreviation “FR” should be followed first by the full names, I guess it is France. Please add it.

Lines 419-420- Please briefly explained the total culturable bacteria quantification procedure, it is based on the Murray et al. (2010) study, right?

Line 442-Please clarify if the *cts* gene (citrate synthase) is specific to *P. syringae* after the growth of putative colonies in the selective KBC medium. If you are not sure, it should be considered a limitation and written in the shortcomings of the study.

Line 511- Please replace “Statistical analyses.” with “Statistical analysis” eliminating the final remark/dot.

Line 514- Please properly cite R software.

Congratulations on the present study. However, the preprint needs to be improved by the authors.