

2022 Report

Title:

Creation of a Web-based Pierce's Disease Index to Improve Cultivar Recommendations

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Abstract:

Pierce's disease (*Xylella fastidiosa*) is a devastating disease of grapevines in the Deep South; however, the range appears to be increasing as the disease has been found in other states well outside of this region. With the climate continuing to warm and winters becoming shorter, it is likely the disease will establish itself farther north in regions that previous had no concern of it. While considerable research has been done in California on *Vitis vinifera* grapes, relatively little consideration has been giving to interspecific hybrid grapes in the Deep South. The initial objective of this project is to create an index or scale of potential PD susceptibility, tolerance, and resistance for southern bunch grapes.

Objectives:

The overall objective of the project is to create a web-based Pierce's disease index (PDI) for cultivars grown in the South. It will help provide quantitative recommendations for growers. We will also create a web-based app prototype to contain and disseminate the information with further linkages to the "Guides to Variety Performance" database being compiled by the University of California-Davis in conjunction with the National Grape Research Alliance.

Activities:

Step 1: Create list of grape cultivars

A list of southern, PD-tolerant grape cultivars has been created with 22 known cultivars. More will be added as they are released from breeding programs or discovered to be PD-tolerant via testing.

Step 2: Write descriptions of grape cultivars

Descriptions of some of the grape cultivars has been completed and more are in-progress. Some of the results have been published here at: <https://grapevarieties.info/>, specifically:

Black Spanish: https://grapevarieties.info/?fwp_grape_variety_name=black-spanish

Lomanto: https://grapevarieties.info/?fwp_grape_variety_name=lomanto

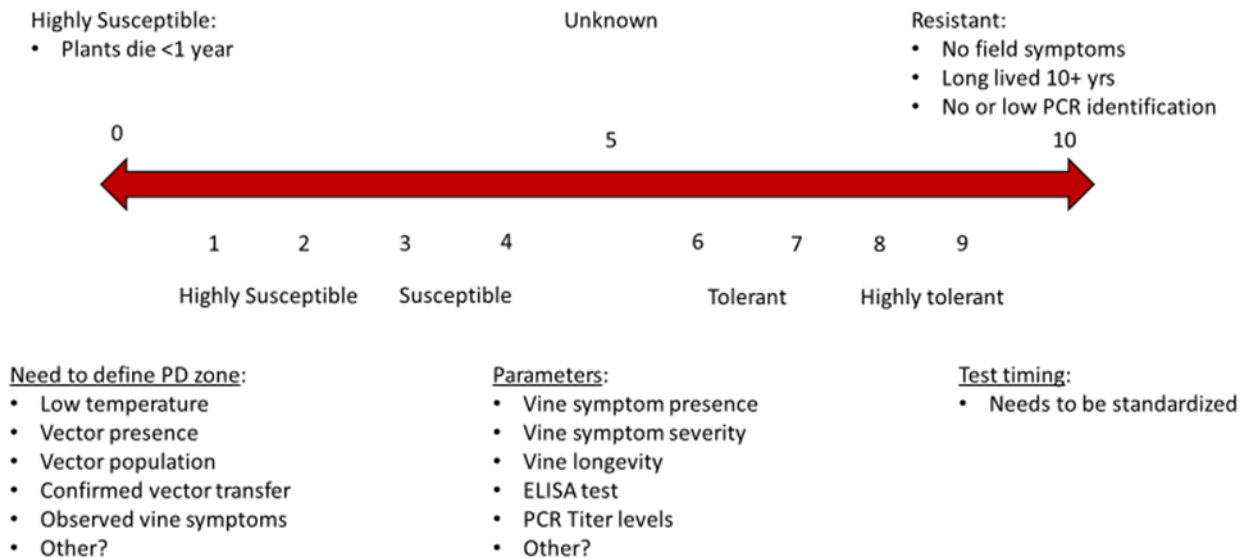
MidSouth: https://grapevarieties.info/?fwp_grape_variety_name=midsouth

Victoria Red: https://grapevarieties.info/?fwp_grape_variety_name=victoria-red

Blanc du bois has been written and is in the publication process. More are in the process of being written and will be published in 2023.

Step 3: Assign PDI based on credible published and unpublished reports

The research into this continues and the scale to be use has been created (see below). It may be modified as needed based on new findings.



Step 4: Build prototype of user-friendly webapp for use by growers in southeastern U.S.

A meeting occurred with Mississippi State University application specialists to discuss options and to begin the design of the webapp. However, the app designer left for a new position and no new app designer has been hired. Therefore, this step was not able to be completed within the timeframe of the project.