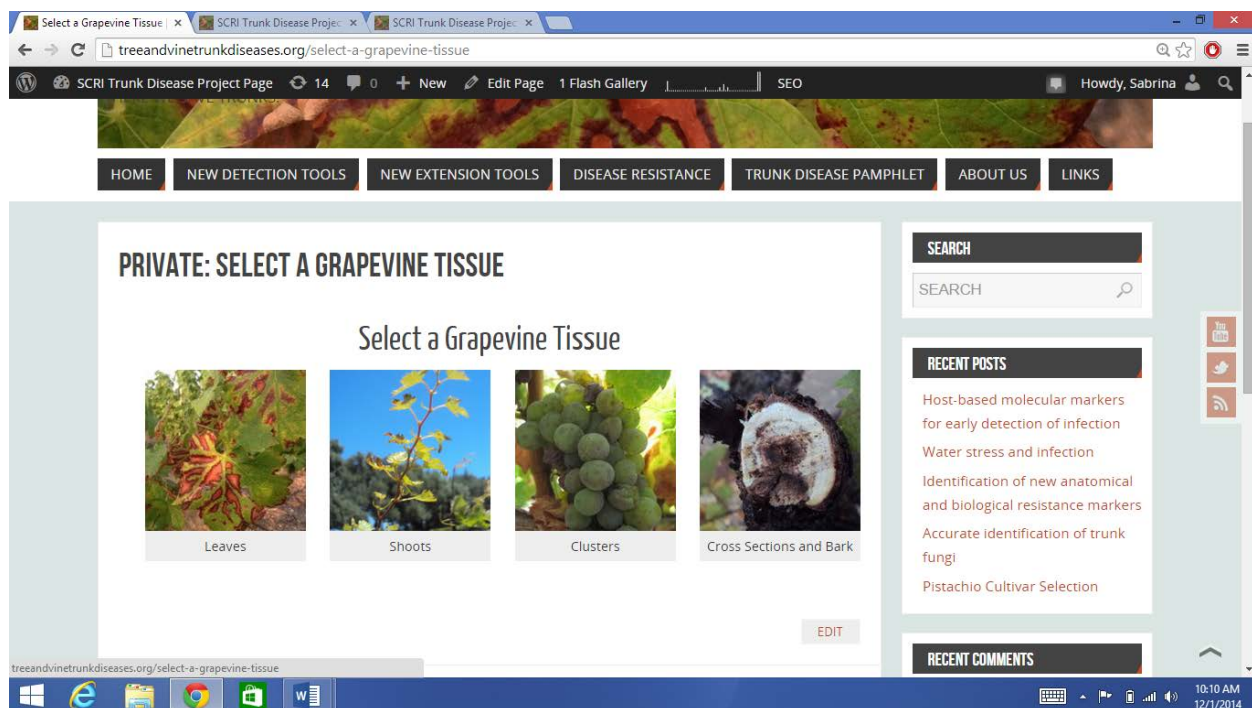


**Development of web-application of grapevine trunk disease diagnostic tool  
Dec. 2014 for SCRI board meeting**

**Mizuho Nita and Sabrina Hartley  
Virginia Polytechnic Institute and State University, AHS Jr. AREC  
595 Laurel Grove Rd, Winchester, VA 22602  
540-869-2560, nita24@vt.edu**

Often time, grapevine trunk diseases are hard to diagnose in the field because many of symptoms are reactions to the infection by the grapevine, rather than “sign” which is the actual pathogen. Thus, growers often either guess what they are seeing. However, treatments for some trunk diseases may or may not work for the other trunk diseases. Therefore, proper diagnostic is the key for the successful grapevine trunk disease management.

The aim for this project is to develop applications that will help grower diagnose trunk diseases using their phone or computer. Currently, we are working on a web application.




After the Trunk Disease Diagnostic App Welcome page, you are sent to App home screen, as featured above. Here you are prompted to select a grapevine tissue: leaf, shoot, cluster, or trunk cross sections and bark. Once you select a tissue, you are presented with a gallery of symptoms that are commonly found on that specific tissue.

treeandvinetrunkdiseases.org/select-a-foliar-symptom


HOME NEW DETECTION TOOLS NEW EXTENSION TOOLS DISEASE RESISTANCE TRUNK DISEASE PAMPHLET ABOUT US LINKS

## PRIVATE: FOLIAR SYMPTOM GALLERY


Select the leaf symptom that best resembles yours.




Marginal Burning



Yellow Speck



Tiger Striping



Chlorotic Cuppled Leaves

SEARCH

SEARCH

RECENT POSTS

- Host-based molecular markers for early detection of infection
- Water stress and infection
- Identification of new anatomical and biological resistance markers
- Accurate identification of trunk fungi
- Pistachio Cultivar Selection

treeandvinetrunkdiseases.org/select-a-foliar-symptom




When you select the appropriate symptom from the gallery, on the next page you are presented with a series of other symptomatic tissues that are associated with the previously selected symptoms. For example, by clicking on “Yellow Specks” you are prompted with the following symptoms on canes or clusters, which are associated with diseases that cause yellow specks on leaves, in this case, Phomopsis cane and leaf spot.

treeandvinetrunkdiseases.org/do-you-see-any-of-these-symptoms

HOME NEW DETECTION TOOLS NEW EXTENSION TOOLS DISEASE RESISTANCE TRUNK DISEASE PAMPHLET ABOUT US LINKS

## PRIVATE: DO YOU SEE ANY OF THESE SYMPTOMS?

Click image for details

YES NO

EDIT

SEARCH

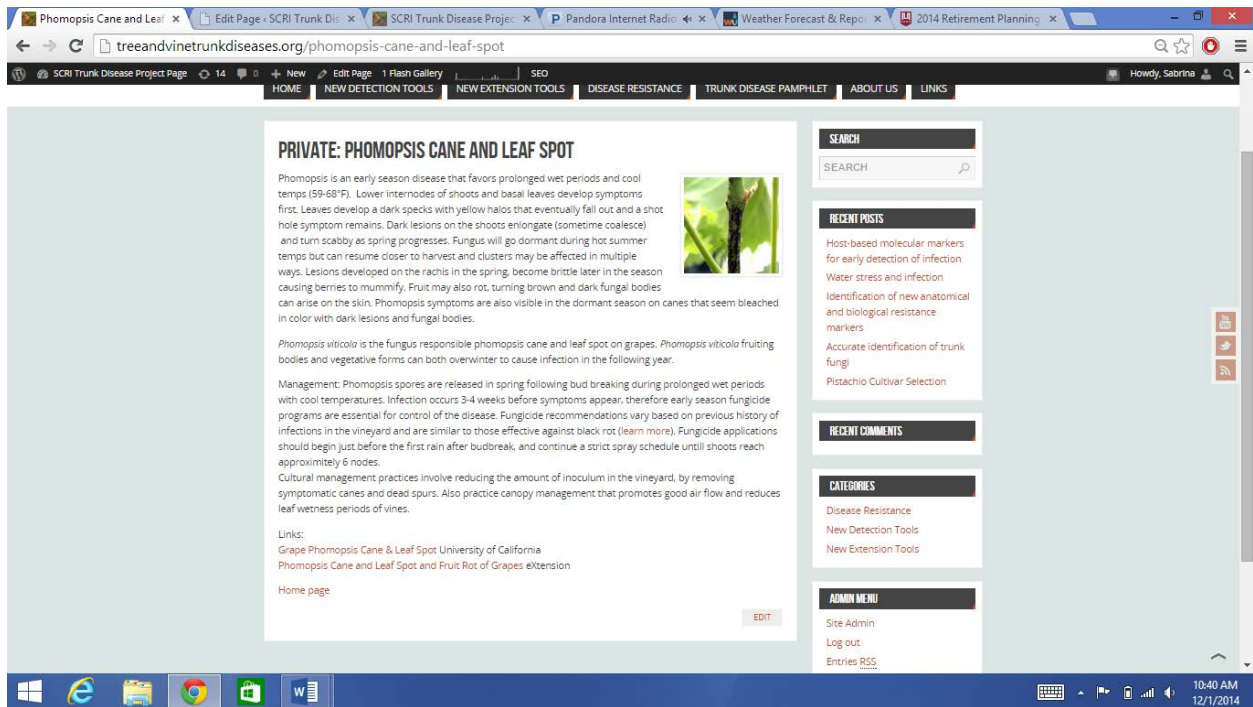
SEARCH

RECENT POSTS

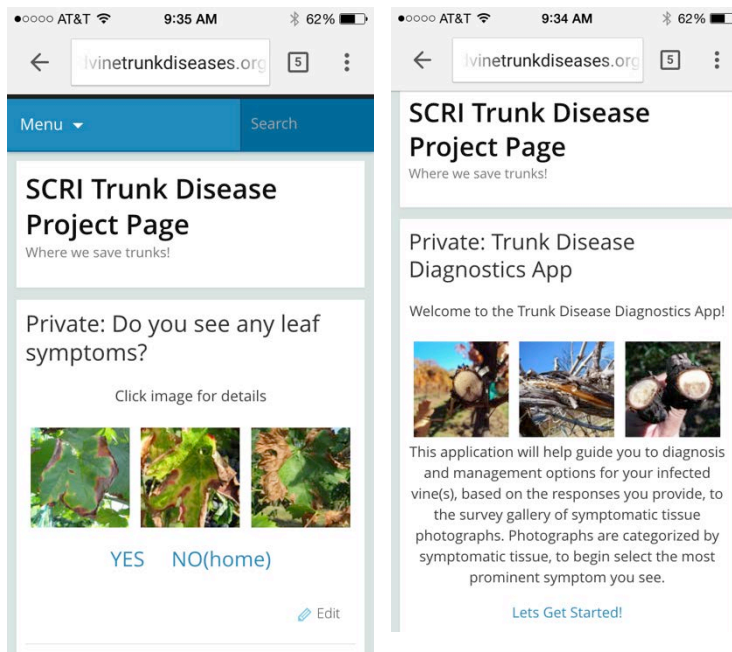
- Host-based molecular markers for early detection of infection
- Water stress and infection
- Identification of new anatomical and biological resistance markers
- Accurate identification of trunk fungi
- Pistachio Cultivar Selection

RECENT COMMENTS

treeandvinetrunkdiseases.org/wp-admin/post.php?post=472&action=edit



The user will go through a list of images that are linked to larger media file gallery with symptom descriptions to key out the issues at the user's vineyard. After selecting the final option at the end of a series of questions, it will lead to the summary and management page. In addition to trunk diseases, this app covers abiotic factors. For example, if you see yellow spots symptoms, but not the other symptoms of Phomopsis, it will lead to the pages abiotic factors on leaf such as leafhoppers and hail.



The app is scalable, meaning that if the user visits the site with their tablet or smartphone, it will scale itself automatically. Pictures on the left are some of screenshots to show an experience with a smartphone.

As of Dec 2014, we are finalizing the design and contents of the app, and we expect it to be published on April 2015.