

SRSFC OUTREACH PROPOSAL: Diagnostic Tool for Eastern U.S. Blackberries

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Objective:

To prepare a diagnostic tool for the world wide web that will enable blackberry growers, agents and specialists to be able to easily identify key disease, insect, chemical injury and physiological disorders via a series of questions in a key-like format.

Justification and Description:

Blackberry production has increased dramatically in the southeastern United States in the past few years. However, information on identification of insect, disease, nutritional and abiotic problems of this crop is scarce. One of the major sources of information, "The Compendium of Raspberry and Blackberry Diseases and Insects" (APS Press) is outdated. Further, the primary emphasis of the compendium is on raspberry, and pests of eastern blackberry are grossly underrepresented. Novice blackberry growers and extension agents are often confronted with a myriad of symptoms on their plants that they are unfamiliar with, that may or may not be problematic. These people are in need of an easy way to determine the likely cause of a problem. Then they can refer to other resources such as their University Extension Specialists, Pest clinics, or published resources for further information on the cause and control of the problem.

There are many web pages that list pests and abiotic problems of crops. However, growers usually are not familiar with scientific nomenclature or even common names of many of the diseases or insects. Growers and agents find that symptom description is the first step in diagnosing a problem. The proposed diagnostic tool starts with symptom description, which in turn leads to an image and the name of a problem. Similar tools have been developed for strawberry, blueberry, raspberry and ribes and can be viewed at:

<http://www.hort.cornell.edu/departments/faculty/pritts/BerryDoc/Berrydoc.htm>

The key requires that you click on words that describe symptoms rather than identify the name of the problem. You continue to identify symptoms and within just a few clicks, an image(s) that depict those symptoms appears and the problem is identified by name.

Methodologies: Digital images were taken in NC, SC, AR and GA and sent to NC for our web site. The collection includes biotic and abiotic maladies including diseases, insect pests and herbicide damage. A web page designer was hired to set up the diagnostic tool modeled after the tools for other small fruit crops. The web page will be permanently located at www.ncsu.edu/berries/. (The temporary location is at <http://www4.ncsu.edu/~ctglen/berries/> due to technical difficulties, we anticipate this will be resolved by the end of 2004.)

Results: The Blackberry Diagnostic Tool was created and will be available for use at www.ncsu.edu/berries. It will be publicized at grower meetings and demonstrated at the Bramble Agent training session in Georgia in 2005. The web site is a dynamic tool and we anticipate it will grow as we identify and digitally illustrate additional maladies.

Conclustions:

This diagnostic format has been a highly effective way to familiarize small fruit growers with small fruit maladies. The addition of a blackberry diagnostic tool would compliment this electronic series for small fruits commonly grown in the eastern United States. Growers, agents and educators will be able to use this tool for identification of blackberry maladies.

Summary and Impact statement:

Blackberry production has increased dramatically in the southeastern United States in the past few years. The success of this growing industry rests on long term proper care of the plants. However, diagnostic information on diseases, insects, chemical injury and physiological disorders of this high value crop is scarce and not centrally located. Our objective was to prepare a diagnostic tool for the world wide web that will enable blackberry growers, agents and specialists to be able to easily identify key disease, insect, chemical injury and physiological disorders via a series of questions in a key-like format. Once the problem is identified, measures to correct the problem can be correctly addressed using other sources such as chemical and cultural recommendations widely available. This diagnostic tool will help to insure that blackberries continue to be high value crop in the southern region of the United States.

Citations: NA