



Biosecurity Rx Digital diagnosis images nip plant disease in the bud

By Becky Phillips, WSU Today



(Photo: Using DDDI system to identify diseased tree. Photo by Norm Dart, Puyallup Research and Extension Station.)

Last spring, a small, nondescript moth alighted on a family apple tree in western Washington. Before it had time to make itself at home, however, it was whisked away by a vigilant crop consultant and identified as the Cherry Bark Tortrix (*Enarmonia formosana*), an exotic pest

which has been slowly migrating down from British Columbia.

Thanks to the Distance Diagnostics through Digital Imaging system - coordinated through the WSU Puyallup Research and Extension station – the emerging pest, whose larvae bore into the bark of fruit trees, was prevented from establishing a new territory in Washington.

Today, crops of all types across the state can benefit from speedy and accurate diagnosis of disease and pest infestations through DDDI. The Web-based service allows growers, crop advisors, county extension agents and Master Gardener plant clinics to take digital photos of diseased plants, insects or weeds and send them to evaluation sites where they are identified by experts.

"The network lets experts across the state view a single sample and reach a consensus," said **Norm Dart**, WSU Puyallup Extension coordinator and manager of the DDDI system. "With many eyes looking at a single sample we get a more accurate diagnosis."



Norm Dart, WSU Extension Puyallup

Originally developed at the University of Georgia, the DDDI system was seen as a biosecurity tool for early detection of exotic or introduced organisms which could affect national animal health and consumer food safety. The system offers rapid, secure sharing of information with appropriate personnel and agencies. Today, the system is in place in ten states including Washington, Oregon, Idaho and Alaska.

In Washington, sixteen counties currently participate in the DDDI network which includes 13 First Detector Labs, primarily based at WSU County Extension offices

and research stations. Each lab is equipped with microscopes, a digital camera and computers - all available as a free resource for Washington residents.

The Washington DDDI system is funded by grants from the Western Plant Diagnostic Network – a branch of the National Plant Diagnostic Network. The grants are administered locally by **Tim Murray** in the WSU Department of Plant Pathology. See more online @ <http://www.puyallup.wsu.edu/dddi/index.html>

According to Dart, the network not only facilitates identification of new, emerging and rare plant diseases, weeds and insect pests - it is also important as a statewide repository for plant health data. As samples go through the system, evaluators get a real-time quantitative view of seasonal disease or pest incidence across the state - allowing extension agents to warn growers of impending problems.

DDDI also offers the benefit of faster turn-around time – samples no longer have to spend days traveling through the mail. Quicker diagnosis helps crop growers save time and money when managing disease outbreaks.



DDDI training session

Homeowners who are interested in having plants or insects identified should bring samples to their local county extension agents or Master Gardener clinics where trained personnel will enter their materials into the system.

In Whitman County, the public may contact county extension agent Ken Hathaway in Colfax to submit a sample via DDDI. Email: klhathaway@wsu.edu, or call: 509-397-6290.