



Crops

UI potato scientists confirm varieties need different pest controls

As a member of the CALS potato team, weed scientist Pamela Hutchinson wants Idaho potato growers to be able to maximize their crop's yield and quality, regardless of which potato variety they're growing, while minimizing environmental impacts.

Hutchinson knows that pests—and pest control—affect different potato varieties differently. At Aberdeen, she is examining how Russet Burbank and Russet Norkotah potatoes respond to infestations of hairy nightshade.

A member of the same plant family as the potato, hairy nightshade is devilishly difficult to control in potato fields. Not only is it a relative, it's a survivor: It can germinate throughout the growing season, producing 1,700-plus berries per plant and 10 to 35 seeds per berry. Because more than 90 percent of its seed can remain viable in the soil for five years, growers planting potatoes every three or four years can find themselves battling seed produced by the same nightshade plants that escaped control the last time around.

In her research, Hutchinson has learned that the larger leaf canopy of Russet Burbank can quickly shade hairy nightshade plants, preventing relatively low- and moderate-density populations of the weed from robbing Russet Burbank of its yields. With its smaller leaf canopy, however, Russet Norkotah can suffer yield losses from as few as two or three hairy nightshade plants per meter of row.

"The potato team understands how varieties differ in other ways as well—and how knowledge of these differences can be used to develop management recommendations specific to each variety," Hutchinson says. *Contact Hutchinson at phutch@uidaho.edu.*

Cooperative breeding program releases new early-developing potato variety

After 13 years in public and industry trials, the new potato variety 'Blazer Russet' was released this winter by the cooperative breeding program of the USDA/ Agricultural Research Service and the UI. The early- to mid-season variety shows considerable potential for both processing and fresh markets, says UI program coordinator Jeff Stark.

One reason is high yields: In early-harvest trials in western Idaho, Blazer Russet surpassed Shepody by 5 percent in total yields and 7 percent in U.S. No. 1 yields.

In late-harvest trials in eastern and south-central Idaho, it outperformed standard-bearer Russet Burbank by 11 to 20 percent in total yields and 62 to 87 percent in U.S. No. 1 yields.

Blazer Russet has moderate specific gravity—a measure that's closely related to solids content—and resistances to sugar ends, tuber malformations, and most internal and external defects.

Contact Jeff Stark at jstark@uidaho.edu.

DID YOU KNOW?

1780

The year that modern potato breeding began.

*Source: National Potato Council

Post-9/11 agricultural pest identification goes digital at UI

UI Extension plant pathologist Krishna Mohan has rolled out a Web-based Distance Diagnostics through Digital Imaging system that will allow UI county extension educators to e-mail digital images of insects, weeds, and diseased plant parts to diagnosticians for identification. The images, along with available samples and relevant information, will be sent to specialized facilities and staff at Parma and Moscow.

Part of the Western Plant Diagnostic Network, this new system will expedite pest identification and—in the case of high-risk pests or bioterrorism—facilitate communication among regulatory and containment agencies.

Interested county extension educators and Master Gardeners can also become certified "First Detectors." They will join a national network trained to recognize potential biosecurity threats, monitor for high-risk pests, and follow protocols for sample collection, submission, and communication. *Contact Mohan at kmohan@uidaho.edu.*