



Idaho Potatoes

UI potato scientists find important help for disease control in storage

Challenged by two important potato diseases—late blight and pink rot—UI Extension Potato Scientists Jeff Miller and Nora Olsen wanted to see whether phosphorous acid would help prevent the diseases' spread in Idaho potato storages. The biopesticide, which Olsen describes as a "cross between a fertilizer and a fungicide," is so low in toxicity that residues aren't a concern to government regulators.

The results: 99 percent of potatoes first artificially exposed to extreme levels of pink rot fungi, then treated with phosphorous acid on their way into storage, escaped pink rot. That compared with 10 percent of untreated spuds. Figures were similarly astounding for late blight.

Phosphorous acid won't stop disease in tubers already infected in the field, Miller cautions, but it prevents its spread to healthy tubers in storage. Miller's and Olsen's findings were so persuasive that the manufacturer of one phosphorous acid product, Phostrol, labeled it as a postharvest spray.

About 450,000 tons of North American potatoes were treated with Phostrol after harvest this fall, Miller says. "The exciting thing is that this is an idea that originated right at the University of Idaho."

"It's something that we can hang our hats on, realizing that we brought it to fruition in the industry," Olsen agrees.

Further research by UI graduate student Shane Clayson is addressing just how phosphorous acid does its good work. This winter, Miller and Olsen are evaluating its effectiveness in larger research bins.

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Four new potatoes: one resists late blight

A long white potato that needs no fungicides to withstand late blight is one of four recent releases from the Tri-State Potato Variety Development Program. Named Defender, it develops late blight symptoms so slowly that growers who would otherwise spray fungicides weekly need not spray for late blight at all.

Also released: GemStar Russet, which consistently produces large quantities of well-shaped tubers, even in water-short years; Summit Russet, a long-storing pota-

to that resists most defects and storage rots, and Western Russet, a high-yielding, high-solids variety that outperformed all competitors in regional early-harvest processing trials.

Potato breeders from the USDA Agricultural Research Service, University of Idaho, Oregon State University, and Washington State University comprise the Aberdeen-based program. It has released 21 new varieties since 1985.

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DID YOU KNOW?

140 POUNDS. The amount of potatoes a typical American consumes each year, about 50 pounds more than tomatoes, the nearest vegetable competitor.

*Source: 2004 Idaho Agricultural Statistics, p.14

Fortified potato flakes may feed people in developing nations

Idaho potatoes may soon find a new use: feeding hungry people in Africa and other developing nations. Idaho, producer of 80 percent of the world's dehydrated potatoes, is always looking for new markets, especially one like the U.S. Agency for International Development (USAID), which distributes surplus food to disaster victims and others in need.

To be eligible, the Idaho Potato Commission had to find ways to fortify potato flakes with iodine, iron, and vitamin A without compromising look or taste. In August 2004 the commission hired Drew Dalgetty, manager of the University of Idaho Food Technology Center in Caldwell, for the task.

"We have succeeded," says Dalgetty. "Next come large-scale feeding studies in developing nations to make sure our products are acceptable to them." He expects those tests will get underway during 2005.

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