CROPS—UI research helps Idaho’s famous crop keep getting better and more varied

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HARVEST A RED, YELLOW, OR PURPLE SPECIALTY POTATO and its skin color will be shiny and bright. Store it a month or two, and the skin will be duller and so will consumer interest. Because rainbow potatoes “need to catch the buyer’s eye”—according to UI Extension Potato Specialist Nora Olsen—CALS researchers are helping Idaho’s potato industry maximize their end-use quality that’s similar to Brundage.

New wheats: high yields, pest resistance

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UNIVERSITY OF IDAHO WHEAT BREEDERS followed their spring 2009 release of the Hessian fly resistant UI Winchester with fall 2009 release of two soft white winter wheat varieties—Bruneau and UICF-Brundage—and two hard white winter wheat varieties—UICF-Grace and UI Silver.

UICF-Brundage and UICF-Grace are CLEARFIELD® wheat varieties that carry a gene for herbicide resistance and can be used as part of a grassy-weed management plan. UICF-Brundage is similar to grower favorite Brundage in agronomic performance and end-use quality.

Both UICF-Grace and UI Silver offer high yield potential, good bread and noodle quality for domestic and overseas customers, good resistance to stripe rust and dwarf bunt, and adaptation to Idaho’s intermediate and low rainfed regions. UI Silver is also one of only a handful of U.S. wheat varieties that carry the SrTm1p gene, conveying resistance to a globally threatening race of stem rust called TTKS.

Bruneau combines high yield potential, good stripe rust resistance, adaptation to high rainfed and irrigated growing conditions, and end-use quality that’s similar to Brundage.

TO ENRICH LIFE THROUGH DIVERSITY THE UNIVERSITY OF IDAHO IS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER AND EDUCATIONAL INSTITUTION.
**Parma research aims to extend onion storage season**

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THE TREASURE VALLEY supplies about 40% of the nation’s winter onions, but its storage season typically ends in May. That curtails profits both to local growers—who can’t sell as much product to local onion ring processors as they’d like—and to those processors—who pay long-haul shipping from other regions come June. At the University of Idaho’s Parma Research and Extension Center, Extension Onion Specialist Mike Thornton is evaluating private onion varieties that can resist sprouting and decay deeper into the summer.

“We’ve identified a couple of varieties with outstanding long-term storage potential that we’ve been able to hold into mid-July,” says Thornton. “If we could process another two months’ of supply locally, it would be a $20 million boost to our onion industry.”

**The next step:** Develop production methods—possibly even a planting-time head-start with onion sets—rather than seeds—to ensure that those longer storing but unfortunately smaller onions can make the generous size that Treasure Valley processors need.

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**UNIVERSITY OF IDAHO TETONIA RESEARCH AND EXTENSION CENTER**

**Potato breeding.** Work performed at the Tetonia R&E Center is essential for the production of new potato varieties in Idaho. Between 3,000 and 7,000 new lines of potatoes are tested here each year. Without Tetonia, the 50-year-old joint USDA-ARS-University of Idaho breeding program at the UI Aberdeen R&E Center would be severely compromised and even risk closure.

All seed for potato breeding for evaluation in the Tri-State (Idaho, Washington, Oregon) and the Western Regional trials is produced at Tetonia. Between 3,000 and 4,000 single hill (first field generation) breeding potato clones and 100 to 575 second field year breeding clones are tested at Tetonia each year in search of clones suitable for Tri-State and Western Regional trials.

**Tuber breeding.** As promising breeding tubers move through the system and industry interest in them increases, the need arises for mini-tubers to allow the production of certified seed for commercial evaluations. The UI produces a large majority of these mini-tubers that feed into Idaho’s potato certification system. About 60% of the university’s mini-tuber production is at Tetonia.

Tetonia also must produce adequate amounts of seed for storage and management production trials, needed before growers can be assured of best fertilizer, water, spacing, and storage recommendations for new varieties.

**Cereal breeding.** Tetonia is also the primary growing location for small grains foundation seed. From 2005 to 2009, Tetonia produced nearly 80% of all Idaho Foundation class small grain seed including:

- Spring barley
- Oats
- Hard red winter and spring wheat
- Dryland and irrigated white wheat.

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**EXPLORE CALS WEB**

**www.cals.uidaho.edu/potato**

THE UNIVERSITY OF IDAHO’S IDAHO CENTER FOR POTATO RESEARCH AND EDUCATION WEB PULLS TOGETHER INFORMATION ABOUT ALL UI POTATO RESEARCH, TEACHING, AND EXTENSION PROGRAMS.

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