

Programs & People

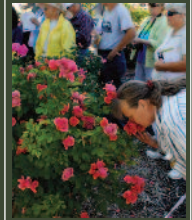
University of Idaho

College of Agricultural and Life Sciences

Winter 2011



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Navigating the New Economy

Budget cuts force changes in CALS

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LETTER FROM THE EDITOR

Contents for this magazine brought special challenges. For one thing, budget tightening means we produce only one magazine in 2010, so we tell half the number of stories we've covered in each of the past 20 years.

For another, budget cuts, statewide staff reductions, and minimized or closed R&E centers cause concern among college leaders, faculty, and staff. As Idaho's land-grant university, our federal mandate since Abraham Lincoln's presidency has been to conduct research to help Idaho citizens thrive and to share relevant research with Idaho residents.

We'll still do that, but new economic realities may come with a price. Concerns are illustrated in our cover stories by **Bill Loftus**—pages 10 to 17. We hope they spark discussion and ideas from you. Share your thoughts via e-mail to **Dean John Hammel** at calsdean@uidaho.edu. Or, send them to our online magazine: with your permission, we'll share them in the letters from readers: p&p@uidaho.edu.

Still, work by our faculty and staff continues to shine. Find tips for feeding young children on page 8 and new 4-H programs aimed at youth at risk on page 24. Freelancer **Diane Ronayne** of Boise showcases rose research by **Steve Love** in Aberdeen. His goal: Find roses proven to do well in Idaho's harsh climates—page 20.

Students and alums continue to make us proud. On page 28, **Bill Loftus** reports on the success of alum **Phil Kaufman's** dream—to make an 11-acre corn maze in the shape of Idaho. Nearly 200 CALS student volunteers raised funds for their club activities and learned a lot while helping the maze succeed.

Three CALS PhD alums from Puerto Rico so impressed their country's university that all three now have research and tenure-track faculty positions. See **Andrea Vogt's** story on page 26. Alums winning awards in 2010 for impressive service are on page 30. And alum **Robert Stovicek** helps us better understand food safety testing on page 32.

MARY ANN REESE, Editor
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How do you illustrate a story about new realities brought on by tough economic times, job losses, and facility closures? Photos somehow don't cut it. To the rescue came University of Idaho art alum **Noah Kroese '04**, who created an illustration for our cover—our first in 20 years. His illustrations on the cover and beginning on page 10, along with **Art Director Shane Jackson's** collaboration, help illuminate college concerns. We hope text and illustrations will generate discussions and ideas from you as we move ahead.

Programs & People is published by the University of Idaho College of Agricultural and Life Sciences and is available free by subscription.

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Programs & People

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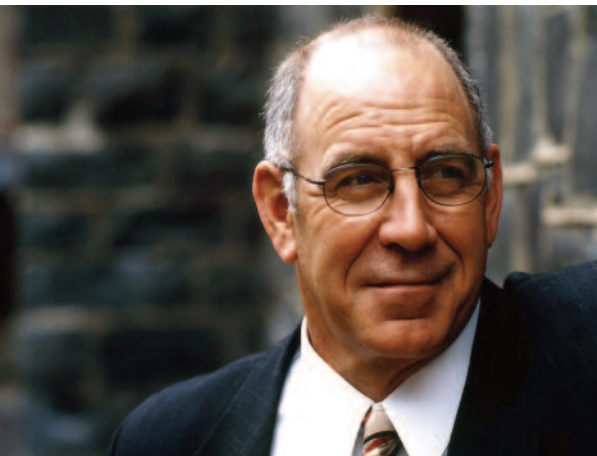
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Joe Vandal loves everybody, including this 2010 Ag Days participant. Sharing September 17-18 with Dad's Weekend, CALS student ambassadors served pre-game BBQ to anybody who wanted great BBQ. Again, high school students came from throughout the Northwest to sample college. Each attended a choice of workshops, toured campus on hayrides, swam, and cheered the Vandals on to a 30-7 victory over Las Vegas.



photo by JOE FALLEN, UI PHOTO SERVICES



dean's view
JOHN HAMMEL

We've probably all heard the old saw that the only constant is change.

SCIENTISTS TRY TO UNDERSTAND OUR WORLD by monitoring change. If we change temperatures or air flow, will potatoes last longer in storage? If we change the chemical properties of a fertilizer, will it produce more corn? How can we change farming methods to reduce soil erosion and protect water quality?

Citizens of Idaho and the United States strive to change our society to make it better for our families and our communities. We try to find that balance between what best serves us individually and what best serves the common good. The College of Agricultural and Life Sciences, the University of Idaho, state of Idaho, and the nation face changes that are unprecedented in our lifetimes.

Record enrollment. For the college, a record enrollment this fall, a 10-percent increase from last fall, produced one of the most rewarding changes I could imagine as dean. The 1,331 students now studying in CALS are here to change their futures, and ours. They leave here intent on changing the world to solve problems and make us all more secure, or they may use their educations to help their families and farms better adapt to a changing world.

Our financial challenges led us to change our approach to how the college operates its nearly century-old research and extension system. We formed a valuable cooperative relationship with the J.R. Simplot Company that was key to continued field operations at the Parma Research and Extension Center. Tree fruit growers and Treasure Valley agricultural interests contributed vital support, too. See our cover stories starting on page 10.

The Idaho Potato Commission, Idaho Wheat Commission, and Idaho Barley Commission contributed funds to continue vital research at Teton. The Sandpoint center is mothballed, awaiting funding to continue its mission (page 17).

Let's get back to change and what we can do. We know that tomorrow will not be the same as today. Each day might offer a setback or a victory, but we hope wins outnumber losses. If there is one constant that changed the course of America and made us the envy of the world, it is our education system. The success of our alums, including stories in this magazine, help us know we are succeeding. Our research and extension education also keep Idaho agriculture strong as Idaho's No. 1 industry.

Our college is down 70 positions since 2009, largely due to a 22-percent cut in our state funding. I do not blame Idaho's legislators for our budget difficulties. In my experience, they work hard to serve their constituents and to serve the state. They have done what they believe is best for Idaho. Still, if we want Idaho to prosper in the future, I believe we need to find a way to increase our investment in education and research.

bookshelf

CREEPY CRAWLER I.D.

Homeowner Guide to Spiders Around the Home and Yard

About 800 of the 3,800 different species of spiders known from the U.S. and Canada live in the Pacific Northwest, including Idaho.

"Even the two potentially most harmful spiders—black widow and hobo spiders—rarely injure people in Idaho," and nobody in Idaho is reported to have died from spider bites, says Edward Bechinski, lead author of *BUL 871 Homeowner Guide to Spiders around the Home and Yard*, published in 2010 by University of Idaho Extension.

Still, we all might feel reassured to keep on hand this 28-page publication identifying spiders from the Northwest's 10 most familiar spider families.

Colored photos identify them and text describes their habits including web styles.

The final section offers multiple tips for spider-proofing your home. Among other things, weather-strip and caulk around doors, windows, and utility lines; fill in siding and foundation cracks; inspect firewood for spiders and egg sacs before bringing it into the house. Also learn about spider traps and when and where sprays are okay.

Order this useful publication for \$5 plus shipping/handling by calling 208.885.7982 or e-mailing calspubs@uidaho.edu.

Or download it and other guides to home and garden pests for free from www.cals.uidaho.edu/edComm/catalog.asp.

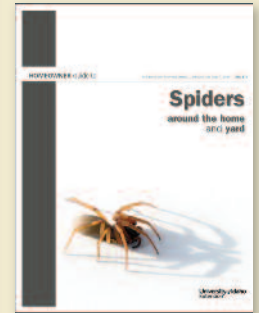




photo © UCCE/ISTU@DREAMSTIME.COM

Parma onion research seeks to extend storage, reap millions for Idaho growers and processors

If Idaho's commercial onion growers can extend the time onions can be stored to 11 months—from the current 9 months—it could mean millions of dollars in the pockets of Idaho industry.

The Treasure Valley supplies about 40 percent of the nation's winter onions, but its storage season, which begins in September, currently winds down in early May when unsold onions start to rot. Local processors then have to pay long-haul shipping costs from other regions. McCain Foods, one of Idaho's major onion processors, estimates if the onion-storing season could be extended by two months, it would be worth \$20 million to local industry.

Two developments show some promise, says Mike Thornton, superintendent of the University of Idaho's Parma Research and Extension Center.

Three years of long-term cold-storage trials for new onion varieties show several varieties retain a "very high proportion" of marketable bulbs after 10 months of storage, says Thornton.

Also, Thornton and a company from Israel recently completed evaluation of a stabilized hydrogen peroxide product that "appears to significantly reduce storage decay."

One caution is that this product is not yet labeled in the U.S. for use on onions, though it is approved as a sprout suppressant for potatoes. "The company will have to do the work to get the product labeled in the U.S. for onions, too," says Thornton.

Then they will have to do a commercial-scale evaluation to convince industry that the costs of product and application are worthwhile. "No telling when or if both of these things will occur," says Thornton.

Contact Mike Thornton at miket@uidaho.edu.

by AMY R. FISHER



UI Extension's Shaklee supports *Just in Time Parenting* website

Want to know how to help your 1-month-old baby enjoy exercise? Get your 2-year-old to cooperate? Your 4-year-old to help with household chores?

Answers are as close as *Just In Time Parenting* (JITP), a new Cooperative Extension System website packed with advice about children from the womb through age 5. Anyone interested can sign up to get free and timely electronic newsletters with insights on what to expect in your child's development.

"There has been a lot of interest and research in early childhood development over the last 10 years," says Harriet Shaklee, University of Idaho Extension's Boise-based family development specialist who contributes to the project. "By pooling the best research and information from family development specialists across the nation, we offer new parents unified and consistent information as they need it."

New parents who sign up can expect the e-mailed newsletters to arrive monthly for the first year, and bimonthly thereafter. JITP's newsletter-filled website can be accessed anywhere in the world. Already parents from other countries are subscribing, says Shaklee, especially those from countries where Spanish is prevalent, since the website delivers information in both English and Spanish.

Though e-mail notices are only in English, Spanish versions of JITP information are available through a child's third year. By 2011 full resources through a child's fifth year will be available in Spanish.

Contact Harriet Shaklee at hshaklee@uidaho.edu. Browse or register at www.extension.org/pages/Just_In_Time_Parenting_eNewsletters.

by AMY R. FISHER

Mom's exposure to plastic byproduct may impact fetal heart development

Preliminary research at the University of Idaho suggests a pregnant mother's daily exposure to bisphenol A (BPA) used in some plastics and epoxy resins that line food and beverage containers could affect development of her unborn child's heart.

"Anecdotal evidence is that the rising incidence of cardiovascular disease may be related to early and long-term exposure to BPA," said Gordon K. Murdoch, Moscow, animal physiologist in the UI Department of Animal and Veterinary Science (AVS). He is also a member of the UI-WSU Center for Reproductive Biology. BPA's appearance in food containers "most certainly results in the potential for daily low-dose, long-term exposure of humans to any adverse effects of this substance," said Murdoch.

BPA is an endocrine disruptor (interfering with functions of a body's natural hormones) that can mimic the body's own hormones and may lead to negative health effects, especially during early development. While initial concerns about human exposure to BPA focused on reproductive health and urogenital development, Murdoch said his team "hypothesized that maternal exposure to BPA during pregnancy may also affect muscle development in their offspring."

His initial research used fetal heart tissue, first of mice and then of rhesus monkeys. Mouse and monkey heart tissues were provided to him by collaborating scientist Pat Hunt at WSU. Grants totaling \$70,000 from the private Passport Foundation-Science and Innovation Fund supported his work alongside UI AVS graduate student Kalyan Chapalamadugu from India.

Murdoch's initial results, soon to be submitted for publication in *Environmental Health Perspectives*, a scientific journal read by health care professionals and scientists, "indicate that daily maternal exposure to BPA does alter the gene expression profile in the developing fetal heart," said Murdoch. He also presented his findings at a September BPA symposium in Raleigh, N.C., hosted by the National Institute of Environmental Health Sciences, which conducts basic research on environmental health and environment-related issues.

"We don't know the exact mechanism that's altering the heart, but something is," added Murdoch, who will continue his research if he gets a \$75,000 supplemental grant requested from the National Institutes of Health.

Contact Gordon K. Murdoch at gmurdoch@uidaho.edu.

by MARY ANN REESE



photo@FOTOGAL@DREAMSTIME.COM

UI-WSU team researches microbiomes' impact on milk cows, human babies

"The microbiome world is exploding," says Mark McGuire, University of Idaho professor of animal and veterinary science. He is a participating faculty member of the University of Idaho's Initiative for Bioinformatics and Evolutionary Studies (IBEST) and also works with the UI-WSU Center for Reproductive Biology.

As leaders in the field of microbiomes in human and animal lactation—providing milk for the young—McGuire and his team are traveling the world from Peru to Sweden to consult collaborators.

A microbiome is everything about microbes including their genetic elements and environmental interactions within a defined environment—in this case a cow's or human mother's lactation system. McGuire says his team is discovering that "the function and health of the physical body is impacted by the vast array of bacteria that make up a community in tissues."

Mastitis, for example, a potentially fatal inflammatory infection of mammary glands in cattle, is caused by a single species of bacteria. This disease costs the U.S. dairy industry up to \$2 billion a year. McGuire hopes results from his research might cure or even prevent mastitis completely "within five years."

Mother's milk. His research also may impact our ability to supplement the health of human mothers and their children. "For years we've known about benefits that a breastfeeding infant receives through his or her mother," says McGuire, "from protection against illness and allergies to a decreased chance of obesity. This is due in part to up to 500 types of probiotics in human milk versus perhaps one or two currently added to baby formula."

The Gates Foundation in late 2010 funded \$100,000 for McGuire's research to determine the influence of human milk's microbiome on the infant's gastrointestinal tract. He will collaborate with his wife, scientist Shelley McGuire, at Washington State University.

Contact Mark McGuire at mmcguire@uidaho.edu.

by AMY R. FISHER



photo@NICO SMIT@DREAMSTIME.COM

Study examines fertilizer use in wheat; Idaho's best/worst nutrient use crops include spuds, onions

Improvements in nutrient management result in cleaner and safer surface and ground water supplies, says University of Idaho Extension Soil Specialist Bob Mahler, Moscow.

A member of the Pacific Northwest Regional Water Resources Team, Mahler is working with Oregon State and Washington State university scientists to conduct a three-state study to document nutrient use in wheat—the first such wheat study in 20 years.

“Application of fertilizer has a lot to do with how well the nitrogen is used by the crop,” says Mahler. “The best time to fertilize wheat, for example, is in April and May. But it is also the muddiest time of the year, and crop dusting is an expensive option.” As a result, most farmers fertilize at the time of planting, resulting in wheat having only a 45-percent nitrogen use efficiency. Survey results in the spring will document whether nitrogen use efficiency in wheat has improved in 20 years.

According to Mahler, nitrogen use efficiency in Idaho crops varies widely.

Potato farmers “spoon feed” their crops over the growing season, giving just the right amount when needed to ensure the largest, healthiest potato crop, says Mahler. Sprinkler irrigation systems also help prevent fertilizers from washing away or leaching through the ground, resulting in a 75-percent nitrogen use efficiency for the potato—the highest in Idaho.

Then there's the onion. Mahler says most onion farmers furrow irrigate—the most inefficient irrigation method—which tends to wash away or leach fertilizers, resulting in nitrogen use efficiency well below 50 percent.

Switching to more efficient sprinklers is not an option for most commercial growers because the surface water they use for irrigation can be full of bacteria that rot onions. But UI's Parma Research and Extension Center superintendent and onion specialist Mike Thornton reports onion growers are switching to drip irrigation. About 25 percent of onion acreage is now under drip to take advantage of reduced fertilizer and other inputs.

Contact Bob Mahler at bmahler@uidaho.edu or Mike Thornton at miket@uidaho.edu.

by AMY R. FISHER

Greg Möller, Sherlock Holmes, and sleuthing “pine nut mouth”

First a San Francisco reporter called University of Idaho's Greg Möller, professor of environmental chemistry and toxicology at the UI-WSU School of Food Science, asking what he knew about “pine nut mouth”—a long-lasting bitter or metallic taste that develops in the mouths of some people after eating pine nuts. It can last up to two weeks.

“The unpleasant taste isn't the response you want from your dinner guests after serving up your favorite pine nut pesto fettuccine,” said Möller, who now gets “quite a few inquiries” each month about the disorder.

So he wrote what he knows about the topic for a food technology magazine (see URL below). Since then, with PBS News Hour asking for an interview, the *Los Angeles Times* blogging about it, the *Irish Times* publishing an article describing it, and the European Food Safety Authority expecting to report on it by end of 2010, Möller and his colleagues have conducted some informal research on the topic, and he says this fall “we're trying to recruit an undergraduate researcher to take on the project.”

The problem eventually resolves itself, but the puzzle of why it affects some people has piqued the Sherlock Holmes in him.

“My colleague, Professor Caleb Nindo, used an electronic nose instrument on some pine nut samples and curiously found elevated linalool oxide on some bulk bin samples (meaning they're not as fresh). Linalool—a terpene compound—is a common pleasantly scented natural product found in pines and many plants, and it is used in many commercial products,” Möller added. “However, the oxidized form linalool oxide is linked to contact dermatitis, a chemical sensitivity in a small percent of people.”

So, could that be who done it? Research may tell.

Contact Greg Möller at gmoller@uidaho.edu. Read his article at <http://www.ift.org/food-technology/past-issues/2010/may/features/online-exclusive-pine-nuts.aspx>.

by MARY ANN REESE

SIX Guiding Principles



Feeding Young Children

story by AMY R. FISHER and MARY ANN REESE

photos by BRAD BECKMAN

Dr. Laurel J. Branen

ljbranen@uidaho.edu
Professor of Foods and Nutrition.

A registered dietitian, Branen specializes in nutrition education. She teaches courses in nutrition, foods, and eating disorders.

Dr. Janice Fletcher

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Professor in Child, Family, and Consumer Studies and Director of the UI Child Development Laboratory.

She teaches courses in child development and specializes in feeding children in group settings.

THE MOST IMPORTANT THING WE CAN DO to reduce childhood obesity “is help children stay in touch with their internal cues of hunger and fullness,” says Laurel Branen, University of Idaho professor of family and consumer sciences (FCS) at the University of Idaho, Coeur d’Alene.

But just how do you do that at a childcare center or at home?

Branen and colleague Janice Fletcher, also an FCS professor at UI-Coeur d’Alene, have parlayed some \$2.6 million in USDA grants since 1993 into workshops, for-credit courses, and practical multimedia-rich advice on best practices for feeding young children in group settings, including a popular website. Underlying all of their materials for childcare providers and others who serve and prepare food for children are six guiding principles. “Follow these and you should have no problems with food and your children,” says Branen.

Videos of children demonstrating best practices recommended by Branen and Fletcher will be accessible on a new website in spring 2011, along with tip sheets, frequently asked questions, and suggestions for packing healthy lunch boxes. It will replace the currently available website listed on page 9.

“If a picture is worth a thousand words, then a video is worth a million,” says Branen. “To see a 2-year-old serving

Six guiding principles

All Branen-Fletcher materials expand on ways to implement these principles: **(1)** Adults should eat with children; **(2)** Adults choose what is served and how it is served; **(3)** Children choose how much to eat; **(4)** Children need a variety of foods; **(5)** Children should serve themselves; **(6)** Adults set the feeding environment.

himself a spoonful of food and then think hard before serving himself another is proof positive that children can learn how much they need and can serve themselves.”

Audiences for Branen’s and Fletcher’s research are mainly childcare providers. “We can have the biggest impact by focusing healthy eating and physical activity on childcare, preschool, and Head Start providers and pediatricians,” says Fletcher.

But there’s much in their materials that can guide parents, too.

“Feeding children is an intimate and complex part of parenting,” observes their updated Feeding Young Children website focusing on ages 2 to 5. “The joy of seeing children become competent in eating is a bonus for the work of feeding children.”

FREQUENTLY ASKED QUESTIONS

While these frequently asked questions for feeding children ages 2 to 5 come mainly from people who run preschool and childcare programs, parents can benefit, too.

OBESITY

Q: *What advice do you have for parents of obese children?*

A: Try to find out why the child is so focused on food. Is it a way to reward or console himself/herself? Assist the child in recognizing internal cues and responding when he/she is full. Ask the child if her tummy is still hungry, to keep her in touch with these cues. Children, like adults, often overeat when they really enjoy a food. Remind them they will be able to have it again, so they don't need to overeat it now.

OVER-SERVING

Q: *How do you deal with children who over-serve themselves and don't eat it all?*

A: Young children don't have a lot of experience serving themselves and need guidance from adults. Watch to

see if children serve themselves just because they enjoy the activity. Perhaps they can have an activity later in the day similar in action, such as filling cups with sand. Remind the child he can take a little now and have more later.

BREAD AND MILK

Q: *Two children in a daycare setting choose to eat bread and milk all the time. Is it okay that they never choose to eat anything else?*

A: Adults decide what to offer. Children choose how much and whether to eat. Eventually they'll decide to eat different foods. Keep offering a variety of foods. Offer bread later in the meal. Adults model behavior, so help the children become comfortable with new foods. Don't push them, but offer variety.

"NO THANK-YOU" BITES

Q: *What do you think about a "no thank-you" bite? Shouldn't children try a variety of foods?*

A: We discourage a "no thank-you" bite because children are very subtly being forced to eat something that they don't like, which reinforces their dislike for the food. Hesitancy to try new foods is a stage that most

children go through, and it will be outgrown. Children will be more willing to try new things as they see others doing it.

FAMILY-STYLE

Q: *Does "family-style service" mean the children serve all the food themselves, or just some of the time?*

A: Family-style means having children serve themselves from common serving bowls and plates. It also involves sharing and passing food. It is important to have serving utensils that children can handle. Cereal bowls and plates are easy for even 2-year-olds to pass. Adults may need to serve foods such as soup.

ON THE RUN

Q: *How do you deal with the child who doesn't sit down long enough to eat? He just wants to run around.*

A: It is a major choking hazard if a child runs around while eating. Remember the importance of routines. Adults set the eating environment. Children make choices within the limits, and one of the limits is that they sit at the table during mealtime. Talk about what happens at the table; even if they don't feel like eating, they can come for a few minutes and have conversation with the people there.





High \$takes

stories by BILL LOFTUS

illustrations by NOAH KROESE

NAVIGATING THE NEW ECONOMY: BUDGET CUTS FORCE CHANGES IN CALS AND MAKE FOR MURKY FUTURE

ACROSS THE NATION AND IN IDAHO, a years-long financial storm washed away supports that once bridged current operations with future plans. A crisis built on faulty Wall Street decisions, bad mortgages, and burgeoning federal debts threaten to derail an educational, extension, and research enterprise the state and University of Idaho required a century to build.

The crisis is forcing the University of Idaho's College of Agricultural and Life Sciences (CALS) to travel uncharted paths. Since 2009, CALS cut vacant positions, cut spending, and then cut its workforce, eliminating some 70 jobs—nearly a fifth of the college's 405 positions—to meet a 22-percent reduction in state funding of its Agricultural Research and Extension (R&E) budget during fiscal years 2010 and 2011. State funding dropped by \$5.6 million to \$22.6 million in fiscal 2011.

Like Idaho agriculture itself, some college programs prospered, while others withered because of diverse and unpredictable reasons. More fortunate research and extension programs tapped innovative sources of funding. Some researchers headed for greener pastures. Some retired. Some moved off-campus to create new businesses.

More students enrolled this fall but found fewer faculty and fewer classes awaiting them. One of the college's strong grant-

attracting branches, the Department of Microbiology, Molecular Biology and Biochemistry, is the focus of restructuring, possibly out of CALS.

If viewed free of political passions or philosophies, changes facing the college raise critical questions. How much can or should the state invest in education to create a versatile workforce? How much can state government invest in research to support new businesses and agriculture, Idaho's single most important industry? As private investors pay more for research, does the public lose access to new crop varieties and new technologies? How much can the state and counties invest in University of Idaho Extension to address public needs with research-based knowledge—from poverty to obesity and family finance?

"It seems like the University of Idaho is being forced to drift away from one of our primary land-grant missions—to serve agriculture and rural communities," worries former college Dean Larry Branan. "Our success over the years has been to bring research, teaching, and extension programs directly to the people of Idaho at a time and place that meets their needs. What is at stake is CALS' ability to engage Idaho citizens as our numbers of staff decline around Idaho. We simply can't do everything we have done in the past."

1st Decade of 2nd Century—New ways of doing business; shift to private funding saves Parma center
The college's budget presents a complicated story, a road full of twists and turns. These pages explore some of the



AS PRIVATE INVESTORS pay more for research, does the public lose access to new crop varieties and new technologies?
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many ideas, many routes, and one clear destination: a future based on present decisions but still unwritten.

With the first decade of its second century nearly complete, the college faces a shift in how it does business. In 2001, officials and supporters celebrated the college's centennial by dedicating the \$13 million Agricultural Biotechnology Laboratory.

Federal, state, and private funds paid for the new building, which added to the college's and the university's ability to employ advanced methods to address critical agricultural, food safety, and even medical issues. "The Ag Biotech Lab made us a bigger player, eligible for some \$20 million in grants during the next decade from the National Institutes of Health and National Science Foundation and others," said CALS Dean John Hammel. "It put Idaho on the map for statewide medical and scientific research initiatives." And it gave dozens of Idaho young people chances to conduct cutting-edge research with many of Idaho's universities—a step to higher-paying jobs critical to American competitiveness.

Within a decade, the college has shifted from celebrating new, advanced research facilities to scrambling for ways to salvage critical research centers like Parma, whose history reaches nearly as deep as the university's.

Even 4-H, one of the nation's most celebrated programs for developing youth leadership, is impacted. Idaho 4-H this year began charging participants a \$5 annual fee to help defray costs. In 2003, a study of 4-H youth in ninth grade in 16 Idaho counties showed they were least likely to engage in risky behaviors among their age group. Which raises a question: If an enrollment fee cuts the number of youth in 4-H, does all of Idaho pay more when even a couple of youth who might have avoided trouble in 4-H instead land in the juvenile justice system?

2009: Parma's jittery year

The 200-acre University of Idaho Parma Research and Extension Center in south-



New \$5 4-H fees aim to strengthen programs in Idaho

UNIVERSITY OF IDAHO EXTENSION 4-H YOUTH DEVELOPMENT serves more than 36,000 youths each year, providing opportunities for young people in grades K-12 to develop skills through projects requiring diligence and budding leadership.

Budget cuts required by reduced state funding led to staff reductions in the 4-H office that undermined its ability to serve 4-H members and the nearly 4,000 volunteers across Idaho.

Early this year, the College of Agricultural and Life Sciences asked each 4-H participant to contribute a \$5 annual fee. The additional \$5 per child—on top of county fees ranging from \$6 to \$25 a year per person—led some to fear it could hurt participation.

University of Idaho 4-H Youth Development Director Arlinda Nauman said she's heard that concern but said evidence so far shows little effect. Counties that have already submitted the fee before the Nov. 15 deadline show stable membership numbers.

"We didn't go into this lightly," Nauman said. "The new fee represents an investment to make 4-H better able to survive reduced state support. The fee will be used to improve the 4-H website, improve technology, and expand Internet-based training opportunities for youth and volunteers."

Orofino's Whipple's Feed offers to pay new fees

In Clearwater County, the new fee generated concern because many families are hit particularly hard by the recession, said Clearwater County Extension Educator Randy Brooks. His county's unemployment rate ranked among the highest in Idaho at 13.2 percent in July compared with the statewide average of 8.6 percent. Some 16 percent of Clearwater County residents fall below the poverty line compared to 13 percent statewide.

Concerns that the new fee would discourage families from enrolling youth in 4-H brought a creative response from one of the county's 4-H supporters.

Whipple's Feed on College Avenue in Orofino decided to adopt a new strategy: Offer to provide member scholarships to ensure all of Clearwater County's 170 4-H members could remain in 4-H in lieu of spending a similar amount at the county fair to buy a sheep, pig, or steer from a single 4-H member. When their scholarships went unclaimed, the store operators donated directly to the 4-H Leaders Council, providing it the opportunity to offer help where it is needed.

Whipple's Feed is operated by Dave and Claudine Zender, whose two boys both participated in 4-H. In addition, Claudine works for the state 4-H program as an extension associate.

Nauman said she believes many others feel as strongly that 4-H deserves support and that youth participation in 4-H benefits young people and society. "I think some counties would find benefactors similar to that in Clearwater County if they asked," she said.

Contact Arlinda Nauman at anauman@uidaho.edu.





photo by MARK LAFOREAUX

western Idaho became the best-known example of the college's tough choices in meeting new budgets.

Parma is Idaho's only research facility with programs dedicated to high-value specialty crops such as mint, onions, alfalfa seed, tree fruits, table and wine grapes, and a host of new fruits including pluots, a hybrid of apricots and plums. Critical research here also tackles prevention and cures for diseases and pests including nematodes, which can decimate premier Idaho crops including potatoes and onions.

In January 2009, CALS Dean John Hammel warned legislators and stakeholders the budgets contemplated could force the college to close two or more research and extension centers, or worse, unless private or other funding could be found. "Will you still be in business in three decades?" Hammel challenged one group of Treasure Valley growers concerned about Parma's closing. "Of course," they answered. "Well, I'm not sure our college will be here," Hammel warned.

By December 2009, Treasure Valley residents and CALS could celebrate success in finding alternative funding to keep the Parma center operating—for the next five years, anyway. J.R. Simplot Company agreed to underwrite some of its budget, contributing \$300,000 for each of five years in exchange for conducting its research on 17 of the center's 100 acres of cropland.

Others followed suit. Tree fruit growers offered \$30,000 a year in a similar five-year deal to underwrite orchard maintenance. The Treasure Valley Agricultural Coalition, representing community and agricultural interests, pledged more than \$130,000 over two years.

Idaho's potato growers successfully reap rewards for growing the state's No. 1 and most famous crop, thanks in large part to a successful decades-long partnership with University of Idaho researchers. For Doug Gross, a grower and former Idaho Potato Commission chairman and a university alumnus, the economic forces at work on the college should lead his industry to reassess its commitment to the college.

"Research done at the Parma center and elsewhere is extremely valuable to production agriculture. It gives us as producers tools to compete in a difficult marketplace," Gross said after news about the Parma center's troubles hit home. Gross once worked as a researcher at the center. "If we want to continue to do the work there, the rest of the industry will have to step up and contribute more than they have in the past to maintain a presence at Parma."

Private funding saved the Parma R&E Center. Without Simplot, fruit growers, and coalition members, among others, Parma's path to a future ended at a steep cliff. Sandpoint and Tetonian didn't fare so well (see page 17).

While private funding appears crucial, Branen, Hammel, and other ag leaders worry whether seeking private funding will take so much faculty time that the needs of Idaho citizens get lost. "Can we retain our ability to be a source of unbiased, research-based information that is available to everyone?" asks Branen.

"Many faculty and staff will be forced to work on ways of supporting their programs through national grants that are less focused on Idaho and local issues. There are probably ways to survive this and retain our ability to focus on Idaho, but the very rapid loss of funds and people has not allowed time to strategically re-focus what we are doing," said Branen. "Instead we have been forced to shut down and then rebuild, if that is even possible."

But Branen's years with the college also leave him philosophical. "Over the last century plus, we have survived many threats to the college and been reinvented to move forward on several occasions. I think that still is what is happening. It probably will make some mad and unhappy, but that is expected."

Who wins and who loses?

While private funding makes sense as far as keeping research going in Idaho, it's not without its trade-offs. "When public monies fund research, Idaho citizens reap the benefits in new varieties, new technologies, new businesses," said Hammel. "But as the college shifts to





CALS Losses in 2010-2011

LOST: 70 FACULTY—
1/5th of all college and
extension positions

LOST: \$5.6 MILLION—
CALS budget now
\$22.6 million,
20% of 2009

**2 OF 12 R&E
CENTERS CLOSED**
or greatly diminished
(Sandpoint and Tetonia);
Parma is now
privately funded

private funding, remember that the rewards go first to those who pay the bills. Are Idaho citizens comfortable with that model?"

CALS impacts on Idaho

In its broadest mission, CALS provides critical support to Idaho agriculture, the state's economic foundation. In 2006 Idaho agriculture generated \$21 billion in total sales and 156,600 jobs for the state. Individual agricultural sectors—primarily crops like potatoes and wheat or animal industries including dairy and beef—rise and fall depending on markets. Idaho agriculture's diversity nearly always balances declines with advances to post reliable growth.

"The college continually seeks new ways to make its operations sustainable both financially and environmentally," says Donn Thill, Idaho Agricultural Experiment Station assistant director.

While it's hard to tally the entire college's value to the state, these four points illustrate a variety of impacts:

Brundage wheat's success; battling potato cyst nematodes

Bob Zemetra, the college's Moscow-based wheat breeder for 26 years, developed the soft white winter wheat Brundage, now the most popular variety among Idaho growers. In 2010, Brundage comprises 10 percent of the state's wheat crop, which yielded \$512 million in 2009. Zemetra also uses the ag biotech lab to lead studies of the pale cyst nematode, hopefully averting a threat to Idaho's potato exports.

Every food science graduate got a decent-paying job

Kerry Huber, a food science professor, teaches in a department that provides a sure bet for students seeking jobs. Idaho's program merged with Washington State University's three years ago to form the joint School of Food Science. In 2009, every Idaho food science graduate landed a job in an industry where pay starts at \$50,000 or more or pursued graduate education.

Retired professor grows cow pregnancy business in Moscow

Garth Sasser, who retired in 1999 as a professor of animal science, licensed the right to market a discovery he made on campus about how to detect cow pregnancies. His business, Biotracking, now operates in Moscow and employs researchers including Larry Branen, a food scientist and twice CALS dean; his son, Josh Branen, a 2008 CALS Ph.D. in molecular biology; and a number of other former CALS faculty and student alums.

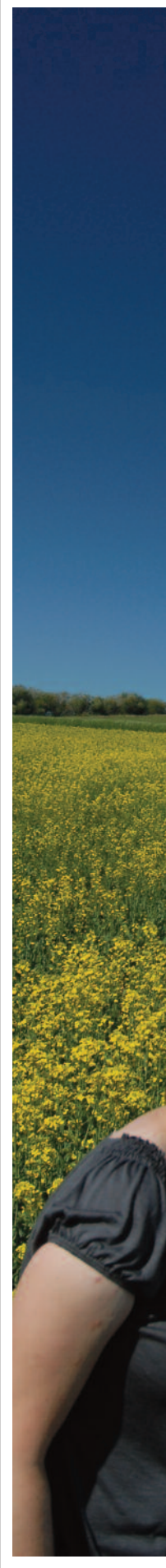
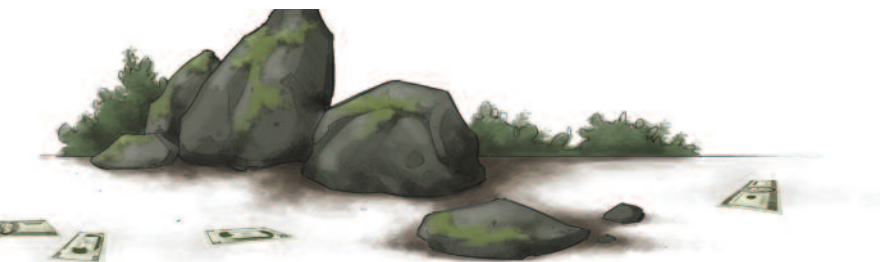
Grants aid fight against poverty in 49 small towns

Since 2003, Priscilla Salant, UI coordinator of outreach and engagement, won private grants totaling more than \$2 million. Partnering with other colleges, Idaho agencies, and University of Idaho Extension faculty, Horizons programs brought 18 months of poverty-fighting capacity-building to 49 small Idaho towns stretching from Bonners Ferry to Albion, each with poverty rates of 10 to 30 percent. Results are new businesses, new visions, new hope. (See page 18.)

The college and the university need to produce maximum benefits for the state, believes UI agricultural economist Stephen Cooke. He and graduate student Bharathkumar A. Kulandaisamy, in analyzing Idaho's economy, find that most of the West's intermountain states share a common problem: They are caught in a low-skill, low-wage trap. Idaho workers' wages lag national averages for similar jobs by nearly \$9,000 a year.

Other studies show that high-skill economic growth depends on research and development in combination with education and training. That formula has helped Colorado escape the low-skill, low-wage trend in most western states.

The challenge facing CALS, the university, and the state becomes whether the state will or can invest in research and education to support its future or whether private funding will or can fill that need to support the state's economy. ■





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 "IT RAISES THE QUESTION
 of how much Idaho
 stands to lose if our
 college's ability to
 perform top-quality
 research keeps getting
 whittled away."



photo by MARK LAMOREAUX

Tiny, multi-tasking oilseeds reap millions in UI research

OILSEEDS SO TINY THEY'D FIT ON THE HEAD OF A PIN are generating millions in University of Idaho research dollars, and they hold agricultural promise for Idaho and the U.S. From 1998 to 2008, canola production doubled in Idaho to 21,500 acres and tripled in crop value to \$4.4 million, and that's just one oilseed crop. Others include mustard and rapeseed.

"Our research in oilseeds provides a fine example of how the University of Idaho generates money for the state and for industry," says Donn Thill, Moscow, assistant director of the century-old Idaho Agricultural Experiment Station (IAES).

"And it raises the question of how much Idaho stands to lose if our college's ability to perform top-quality research keeps getting whittled away," adds Thill.

\$4 million in research from Wyoming to Gibraltar

Moscow-based Jack Brown, research faculty in the Department of Plant, Soil, and Entomological Sciences, has caught the eye of U.S. and international investors. They moved first through a Gibraltar-based company, Eco-Energy in 2006, investing \$2 million in his breeding program for oilseeds canola, mustard, and rapeseed. Brown has bred and conducted field trials of promising lines in Romania, Spain, Argentina, and Uruguay as well as on university land in Moscow.

Last year, \$2 million more came to Brown's research from Wyoming-based AAP USA and its European arm, AAP PLC. Their interest is Brown's research into brassica species that produce valuable edible oils including canola and mustard and plant chemicals just as highly prized for agricultural uses.

Crops with multiple uses aid grower profits

Brown's efforts have produced the condiment mustards IdaGold, a yellow variety used in mustards for diners, and Pacific Gold, an oriental or brown mustard.

Both varieties also provide farmers with tools to improve other crops such as strawberries and potatoes, a market that attracted AAP's investment. Austria-based Jean Benoit Sarazin leads the AAP effort to market IdaGold, Pacific Gold, and a new variety, Kodiak, to farmers. AAP licensed marketing rights to Brown's mustards and is now working to increase the market for their agricultural applications. Revenues from previous license holders generated \$800,000 back to Brown's research since 2000.

Sarazin wants farmers to think of each variety not only as condiments, but also as tools to target specific needs. Mustard plants grow until they flower and are plowed under. In the soil, mustard plants release chemicals that can kill emerging weeds, nematodes, and other pests. This green manure aspect of oilseeds may find a broader market as methyl bromide, a synthetic soil treatment used to protect high-value crops, is phased out.

Contact Jack Brown at jbrown@uidaho.edu. ■





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 THE FOUNDATION CHALLENGED
 the college to create a research and
 extension center that would also expand
 educational offerings in the Salmon area.

Nancy Cummings Center helps Idaho's \$1 billion beef industry thrive

MORE THAN A DECADE IN THE MAKING, the 1,044-acre Nancy M. Cummings Research, Extension and Education Center near Salmon ranks as a leader in the nation for range-based beef cattle studies. Established in 2000, it is poised for explosive growth in applied beef and forage research and integrated beef research thanks to its new Temple Grandin-designed cattle working facility, reproduction unit and laboratory, and variable frequency drive controllers for irrigation pumps.

The addition of a state-of-the-art GrowSafe cattle feeding system funded largely by federal grant dollars in 2008 allows researchers to precisely monitor individual animals' diet and feed-use efficiency. That sort of work is fundamental to ensuring Idaho's \$1 billion beef industry can compete with those in other states and internationally.

Helping Idaho enter Kobe beef market

One such study this summer provided a practical exercise with a decidedly world-spanning flavor—American Kobe beef. Produced by Snake River Farms, the Wagyu cattle that originated in Japan are coveted worldwide for their tender, tasty meat.

AgriBeef, which operates Snake River Farms, sent 92 young Wagyu bulls to the Cummings Center to use the GrowSafe system for a study that finished in early October, said John B. Hall, Cummings Center superintendent. The system, bought with a National Science Foundation

grant to stimulate competitive research, uses radio transmitter ear tags to operate feed bunks. Individual animals go to any feed bunk. Data collected tell researchers how much time an individual animal spent eating and how much it consumed. When researchers calculate in the animal's weight gain, the study yields the individual animal's feed-use efficiency. And that determines which young bulls will produce future generations and which will produce the next round of tasty American Kobe beef.

Feed efficiency is particularly critical for Kobe beef production, noted Carl Hunt, University of Idaho animal and veterinary sciences department head. Wagyu eat feed grain for up to 500 days to develop the rich, marbled meat that diners prize, compared to beef cattle that are normally fed the grain for 150 to 250 days.

The GrowSafe system allows the center to conduct the large-scale studies that few other research locations can pursue with cow-calf beef operations typical of Idaho beef production. "What we're using the system for now will be adapted to conduct other important studies," Hall said.

Land gift makes beef research center possible

The Cummings Center marked a new era in the UI College of Agricultural and Life Sciences research system. Beginning in 2000 and completed in 2005, it took shape through wishes of the Auen Foundation of Palm Desert, Calif., to honor Nancy M. Cummings, a longtime Salmon Valley resident. Some 85 percent of operating dollars including funds for seasonal and part-time staff come from cattle sales (herd: 360 cows and 70 replacement heifers); the other 15 percent comes from the state.

Contact John B. Hall at jbhall@uidaho.edu. ■

photo@NING FENG JOHANSSON



photo by BRAD BECKMAN

Sandpoint's in mothballs for now; Tetonia is much diminished

THE UNIVERSITY OF IDAHO'S northernmost 95-year-old Sandpoint Research and Extension (R&E) Center sits idle, its research facilities winterized and awaiting a thaw in the financial freeze that has gripped Idaho and most of the nation.

Sandpoint, with nearly 100 acres—valued at \$7 million—was a world leader in western huckleberry and bilberry research and one of three top resources on the continent for commercial haskap (edible-fruited honeysuckle), currant, and gooseberry production—all emerging specialty crops ideally suited to the rapidly expanding market for natural foods rich in anthocyanins, antioxidants, and other bioactive compounds.

Meanwhile, at southeastern Idaho's 93-year-old Tetonia R&E Center, state budget reductions led to staff cuts from five to two. Reduced to a research farm, the former center is now administered through the Aberdeen R&E Center 150 miles to the southwest.

Historically prized for growing potatoes, small grain seed crops, and Idaho Foundation Seed, and protected by its 6,200 feet elevation and its isolation from insects and diseases that threaten other Idaho areas, Tetonia's acreage has shrunk from almost 600 to 150 acres. Those were saved only because "two of our leading potato researchers said it was essential to maintain our research program at Tetonia," admits college Dean John Hammel. "We have worked hard to do that."

Funding Tetonia's diminished field operations is some \$150,000 from the Idaho Potato Commission, Idaho Barley Commission, and Idaho Wheat Commission.

Sandpoint and Tetonia were among three centers targeted for reductions or closures by a statewide task force in 2009 as severe budget cuts loomed. The third, Parma, was discussed on page 12.

Can Sandpoint R&E Center be saved?

Sandpoint operations continued until summer 2010, but were suspended when substitute funding failed to materialize. A committee charged with preparing a new strategic plan to determine the center's future began seeking alternatives early in 2010.

Agriculture operates on a different scale in Sandpoint, however, and that limits the ability of center advocates to find funding, believes Idaho Sen. Shawn Keough, one committee member and a champion of continuing the center's operations. She represents her constituents. "The community cares very deeply about the center. They want it to continue, they want it to have the research component, and they want it to have the presence of the college and university in the community."

The nursery industry, one of Idaho agriculture's strongest growth sectors, benefitted from research at Sandpoint, she noted. "It has really strong roots in that area." Along the way, however, a gap developed between what the community wanted from the center and what it could provide. If the center's programs and community desires can be aligned, chances for financial support may emerge yet.

Sandpoint's future could rely more on the rising popularity of small farms, locally grown produce, or food processing. Supporting the center will require advocates, potential funding partners, and college and university officials to think beyond traditional support and programs. Keough said, "I am hopeful that we will find a way. It's not been a great couple of years, but the silver lining in these clouds may be the need to seek an opportunity to add new directions and new partners for relevant work coupled with self-sustainable funding." ■

AG'S IMPORTANCE TO IDAHO—2006 FIGURES

\$21 BILLION IN TOTAL SALES—20% of Idaho's total

156,000 JOBS—17% of Idaho's total workforce


\$4.2 BILLION IN WAGES—15% of Idaho's total

\$8.4 BILLION GENERATED IN VALUE ADDED—17% of gross state product.

Source: Contributions of Agriculture to Idaho's Economy: 2006 at <http://www.cals.uidaho.edu/edComm/pdf/CIS/CIS1144.pdf>.

Sandpoint operations continued until summer 2010, but were suspended when substitute funding failed to materialize.





Young kayakers at Cascade's new Kelly's Whitewater Park consult with four-time world freestyle kayak champ Eric Jackson (in orange jacket). It's a Homedown Throwdown where young kayakers show off their freestyle moves. Photo by Dan Gallagher, *The Long Valley Advocate*.

by TRAVIS MASON-BUSHMAN

EXPANDING IDAHO'S HORIZONS

7 Years of effort and \$2.5 million later, 49 Idaho small towns benefit from UI Extension's Horizons program



WITH HELP FROM University of Idaho Extension’s Horizons program, some 10,000 Idahoans banded together in **49 rural towns** to build a more prosperous future. Empowered by Horizons’s training in leadership, organization, and communication, ordinary people are making extraordinary contributions to their communities. Even former cynics now agree: **HORIZONS WORKS!**

Cascade mayor: From skeptic to enthusiast
“At first I was skeptical—I thought Horizons was just another gimmick, another meeting I had to go to,” Cascade Mayor Dick Carter said. “It turned out to be the best thing that’s ever happened in our community.”

In his and 48 other towns, 18-month-long poverty-fighting programs developed and funded by the Northwest Area Foundation launched transformations. Beginning in 2003, Idaho towns with 5,000 or fewer residents and a poverty level above 10 percent could apply. “Rigorous participation standards required at least 15 percent of residents to participate in the visioning process,” said program director Debbie Gray, Moscow.

During conversations, each town’s residents examined poverty where they live; next came community visioning. UI Extension staff around the state asked a seemingly simple question: What do you want your town to be in the future?

After visioning came action

Steering committees found ways their communities could reach—or at least move toward—their goals. Coaches, often county UI Extension educators, worked alongside each community, providing help on how to navigate complex political and cultural minefields; build relationships with state, federal, and private partners; write grants; manage conflict; and more. Seed grants of \$10,000 helped each town develop infrastructure. Here’s what happened in three towns.

Cascade’s new whitewater park

Hard-hit by changing timber economics, Cascade’s Horizons participants sought a new area focus: Tourism. Seizing a long-sim-

mering proposal to establish a whitewater kayaking center along the nearby Payette River, UI students and faculty worked with residents to draft regional recreation plans. Town residents found a benefactor to fund a multimillion-dollar kayak park.

Officially opened in June 2010, Cascade’s Kelly’s Whitewater Park, cornerstone of a larger park, is already drawing enthusiasts from around the nation. “The whitewater park had been chugging along for years, but Horizons came along and put a great big engine in it to get it done,” Carter said.

For Plummer, an upgraded library

Plummer’s 70-year-old library was woefully undersized and poorly equipped for the Information Age. Efforts to fund a new facility failed at the ballot box in 2007. But, empowered by Horizons, residents worked with the Coeur d’Alene Tribe, spread the message, and registered new voters. Back up for a vote in 2008, the library bond passed with overwhelming support.

“The new library will raise the level of learning and achievement in our community,” Tribal Director of Education Chris Meyer said. “I’m grateful for the Horizons experience. The relationships built, the impact that it’s had on our communities and our people. Those things can’t be overstated.”

Renewed identity for Ririe

Ririe residents worried about losing their community’s unique identity. Changing population demographics and growth outside traditional town limits meant connections among townspeople were fading.

To reverse the trend, Horizons revived an annual community celebration, expanded reach of the city’s monthly newsletter, and, with the school district, launched adult education classes. “The first step to kicking poverty is to make people aware of issues. Then we can start taking care of each other,” said steering committee member Annika Davey. “Even small steps can bring back our sense of pride in our community.” ■

What’s next for Horizons towns?

Project manager Debbie Gray is particularly impressed with, “the depth of commitment shown by local residents to the future of their towns. It’s inspiring to see what people that care so much about their community are willing and able to accomplish.”

UI Extension staff will continue supporting Horizons communities with a menu of trainings such as leadership development, grantwriting, and a statewide rural conference.

Most importantly, work being done by Horizons participants will hopefully continue. As Lava Hot Springs steering committee member Tim Frymire put it:

“With Horizons, we’re growing together, learning how to solve problems, and making our town a better place to live.”

Contact Debbie Gray at dgray@uidaho.edu. Learn more about Idaho Horizons at <http://www.extension.uidaho.edu/horizons/>.

Travis Mason-Bushman

graduated with a UI journalism degree in 2010 and stayed in Moscow to help write a booklet summarizing Idaho’s Horizons program.

RESULTS FROM 7 YEARS OF HORIZONS PROGRAMS

in small Idaho towns include (above from left) new van service to medical and other appointments for Riggins, a flourishing kayak park in Cascade, economic development in Arco, and increased regional identity for Shoshone. Photos by Bill Loftus and Christy Fallen



Roses!

52 VARIETIES TO TRY IN IDAHO'S HARSH CLIMATES

story by DIANE RONAYNE

*"If you love roses,
they're good for everything
... we think of them as
being in a little bed and
fuss over them, but they
aren't like that; they
can be in pots at the
front steps, function as
landscape elements like
hedges or groundcovers,
or be used to hide
unsightly things."*

STEVE LOVE,
Aberdeen R&E Center
Superintendent and
UI Extension
horticulture specialist

"A ROSE IS A ROSE IS A ROSE." Well, not quite. Contrary to Gertrude Stein's famous phrase, rose varieties differ dramatically in just about every aspect of their being. From flower color, shape, and scent to plant size, blooming season, and hardiness, each has its own unique character, appeal, and horticultural needs.

Rose lovers in parts of Idaho face particular challenges—if you live above 4,500 feet, or have a short growing season (110 or fewer frost-free days), or live in a USDA hardiness zone 4 or lower—be of good cheer. Help is here.

Researchers at the University of Idaho's Aberdeen Research and Extension Center near American Falls have published a list of 52 winter-hardy roses that can climb an arbor, dazzle with summer-long blooms near a home's entry, or even cover unsightly objects as hedges or groundcovers.

For five years—in concert with the Aberdeen Rotary Club and Aberdeen Gem Community Improvement Association—UI Extension's Community Horticulture Specialist Steve Love has been planting and testing a number of rose varieties to determine which are tough enough to handle everything Idaho winters can throw at them.

Results are in University of Idaho Extension's *Hardy Roses for Harsh Climates* (bulletin no. 874), a 14-page booklet illustrated with photos of rose varieties Love determined are most likely to succeed in the Gem State. In addition to a list of the hardiest, best adapted, and most attractive of roses, the bulletin explores whys and wherefores of rose selection and walks the reader step-by-step through planting, pruning, mulching, fertilizing, and winterizing both the hardy and more tender varieties.

Lessons from a summer rose tour

"A lot of hybrid and wild species have been used to create the roses we grow now. What you as a home gardener do with them depends on your needs and their growth habits," Love told some 30 southeastern Idaho gardeners who joined a two-hour tour he co-hosted with UI Extension educator Lance Ellis from Fremont County.

For example, Love said, both varieties Sally Holmes and Henry Kelsey can survive 20-degree-below-zero winters, and both bloom season-long. However, Holmes' semi-double blooms are light-salmon in color, and the plant grows only 3 feet tall, while Kelsey has medium-red blooms and stretches to 6 feet—need-to-know characteristics that differentiate their landscaping potentials.

Last July, Love led the first of what he hopes to be an annual University of Idaho Extension rose tour at Aberdeen's Rotary Park, which now enhances the southeastern entrance to this town of 1,800 residents. The park is one of his rose test plots.

Roses at their height of scent and color that warm July morning grew in 11 beds on a triangular half-acre, each plant labeled with its common name, Latin name, and market class—climber, floribunda, grandiflora, hybrid tea, miniature, modern shrub, or old garden.

Roses sniff tests; when to prune

While some would argue that appreciating a rose's scent is subjective, Love boldly spent two days sniffing and rating each rose variety for that quality. He reported finding Stanwell Perpetual to be superior, but conceded, "Usually the older, antique roses remain the most fragrant."

As for pruning, watch for blooming pattern. Old rose varieties such as Harrison Yellow that bloom only once a season set their flower buds on old wood in the fall. Hybrids developed in recent decades, on the other hand, bloom throughout the season. They grow buds on new wood they thrust up in spring.

"That's why pruning depends on the blooming pattern: You don't want to cut off flowers by pruning at the wrong time of year for once-blooming plants," cautions Love. "Old or heirloom roses usually require a summer prune, but for most modern roses, pruning in March or early April is ideal. Cutting in fall will contribute to a little more winter damage. But if you wrap the plant, or if you live in a high-snowfall area, it's okay to prune

a little in the fall."

Love then demonstrated pruning techniques.

Because Canadian-bred varieties are so hardy, pruning is needed only to shape the bush or control its size. Pointing to examples of Morden and Parkland rose varieties, he said, "These are completely hardy, adapted to our soils, and a little more 'domestic'—they don't look wild. They also grow larger than the hybrid tea roses because they never die back."

A variety's hardiness also determines the fertilizer it needs ... or doesn't.

"Most milder-weather roses are tender, so most of the plant dies in winter and is pruned away in the spring. For that reason, it needs more nutrition, since the whole plant is growing back. However, varieties in

The rose garden decorating Aberdeen's town entrance doubles as test plots for UI Extension's Steve Love. It showcases 170 hardy rose varieties.
Photo © Diane Ronayne



the Aberdeen garden are mostly hardy, so they survive winter relatively intact. We don't use much fertilizer, because we're not trying to regrow plants from nothing every year."

Love led the group from bed to bed, showing off varieties grouped by market class, arranged in this way for easier comparison, since nursery roses are typically labeled by market class.

Speaking of the modern shrub roses, he often differentiates by origin. Roses that tend to do particularly well in



Rose tour participants sniff for fragrance and listen for tips on caring for hardy roses in Idaho's harsh climates during a July 2010 tour in Aberdeen. Photo © Diane Ronayne

high-altitude, short-season settings are those bred in Canada—Parkland, Morden, and Explorer—as well as modern varieties bred around the world and those bred in the mid-20th century by Dr. Griffith Buck at Iowa State University.

When and how to plant; rose longevity

When someone asked when to plant roses, Love readily responded. "Hybrid teas are not hardy, so plant them in the spring, and let them get established through summer so they're strong and healthy and have a good root system going into winter. If a rose is hardy, though, you can plant it bare-root in spring or from a pot almost up until the ground freezes in the fall—there's no magic time."

Using a whiteboard and marker, Love sketched the proper planting process. "Dig a hole big enough to spread the roots, with a hill in the middle to put the roots over. If you fertilize, use one low in nitrogen—otherwise you'll encourage leaf growth at the expense of the root system. You can add mulch, but at least half of the dirt you put back in the hole must be native soil, so it's uniform with the soil around the plant, and water will move through it easily. When you're done, the root system must be below-ground. If it's a tender variety, the graft bulb should be two to three inches below the surface so it can survive winter. If the bulb freezes, the plant dies."

Love prefers "own-root roses" to those with two vari-

eties grafted at a bulb because they recover more quickly in spring, and, if the plant does die back to the ground in winter, everything that comes up will be true to type. One thing to watch for is the variety's tolerance for the high-pH soil common in southern Idaho, he warned. The good news is that once established, bush roses can survive for 50 years or more if they like their growing conditions.

"The whole point is beauty." Unfussy roses in pots, as groundcovers, camouflage

Love stressed the versatility of roses, too. "If you love roses, they're good for everything—there are so many different kinds and uses, they can be planted in different places in your yard for different effects. Traditionally, we think of them as being in a little bed and fuss over them, but they aren't like that; they can be in pots at the front steps, function as landscape elements like hedges or groundcovers, or be used to hide unsightly things."

The rose tour group was as varied as the objects of their desire.

As a child, Pat Kolbet of Moreland fell in love with hybrid tea roses when she used to bury her face in them on her grandfather's farm. "I didn't realize then how much time it took him to care for them," she said. Returning to Idaho as an adult in 1996, she took a Master Gardener class and began growing roses of her own, eventually starting a landscaping business and presiding over the Blackfoot Advanced Master Gardener group.

Robert Pitman, Pocatello, ordered his landscape roses from a catalog "because no one sold them here then." He planted them on the south side of his house, "and now it's glorious all summer. I deadhead them but don't do much else, except give a little mulch and a little fertilizer every two years. The whole point is beauty." Another gentleman mentioned he was a member of the American Rose Society. Monica Allen, Idaho Falls, coordinates the Bonneville County Master Gardener office, open during the summer to answer questions about gardening, diseases, and pest control, and to provide outreach education to children.

Rotary Park as demonstration garden

After the tour, Love explained the genesis of the Rotary Park rose garden project. "People often ask us at the research and extension center how to grow roses. One of the keys is having the right varieties. If you don't, it's a struggle. So I said, 'Let's try a bunch of different roses, including a lot I know will grow well here, and use the garden for education and demonstration purposes, as well as a beautiful entrance to the town.'"

Love belongs to Aberdeen's Rotary and the Gem Community groups, "so we had those relationships already in place. My interest was to evaluate rose varieties. Rotary wanted to create a memorial garden, and Gem just wanted to make an attractive community place. The Ifft Foundation stepped forward with \$3,000 to buy the initial plants, and we were in business. We're all getting something out of it, and the garden has really worked well—we now have 170 varieties. It's not a scientifically replicated trial, though. We just plant varieties we think might survive, and we pull out those that don't; it's survival of the fittest."

FAVORITES IN STEVE'S ROSE GARDEN


Some of Steve Love's favorite hardy roses, planted in his own home garden, are listed below.

 FLORIBUNDA


 MINATURE

 SHRUBS



 **CHUCKLES**
Medium (3') upright plant; pink-white blooms, slightly fragrant




 **ELIAS** – Medium (3') upright plant; pink-white hybrid tea form, strong repeat bloom, moderate fragrance




 **MORDEN SNOWBEAUTY**
Medium (4'); spreading, large double, white flowers, moderate fragrance




 **QUADRA**
Moderately large (6') climbing shrub; large, red, fully double blooms, slightly fragrant




 **FRED LOADS**
Medium (4') spreading plant; flowers medium orange, medium large, semi-double, slightly fragrant




 **FERGUS GAMEZ**
Medium (4') plant; flower light salmon to white, medium-large, double, moderate fragrance




 **PEARLIE MAE**
Medium (4'); very large yellow-pink hybrid tea form, fragrant



 **QUIETNESS**
Medium (3') spreading; pink, very large hybrid tea form, moderate fragrance




 **MILLIE WALTERS**
Small (2') upright plant; orange/peach flowers, small, fully double, slightly fragrant



 **GRIFF'S RED**
Medium small (3'); large double velvet red blooms, slight fragrance




 **PINK MEIDLAND**
Medium (4'); upright, pink with white eye, not fragrant



 **SUNRISE, SUNSET**
Small (2') spreading; double pink/yellow flowers, medium size, moderate fragrance




 **COUNTRY SONG**
Strong repeat pink-apricot bloom, moderate fragrance



 **HOPE FOR HUMANITY**
Medium spreading (4'); large, double, dark red flowers, moderate fragrance



 **PRAIRIE HARVEST** – Medium (4'); repeat bloom, large double pink, moderate fragrance



 **WINNEPEG PARKS** – Medium (3') upright plant; flowers red, very large, double, moderate fragrance

More University of Idaho Resources for home gardeners

Learn about University of Idaho's Master Gardener classes and find a wealth of home gardening information at <http://www.extension.uidaho.edu/mg/>.

The Southeast Idaho Master Gardener website, www.extension.uidaho.edu/mgse, links to other helpful online information.

Steve Love maintains the University of Idaho Extension website for home gardeners. www.extension.uidaho.edu/homegard.asp

Contact Steve Love at slove@uidaho.edu.

Download the rose publication at <http://www.cals.uidaho.edu/edComm/pdf/BUL/BUL0874.pdf>

Diane Ronayne is a Boise-based freelance writer and photographer.



“Gates of history swing on small hinges. Maybe this 4-H program is a small hinge that will dramatically change someone’s life.”

MIKE DITTENBER, Executive Director,
Farmway Village, Caldwell



Children-at-risk grants: 4-H brings support to youths in 5 low-income Idaho communities

by MARY ANN REESE

“WE GET TO DO FUN THINGS,” said Hilda, age 9, pursing her lips while sanding wooden squares for the birdhouse she would make that day. “It gives us something to do. We get bored at home all summer,” chimed in MacKenzie, 13.

This summer, 4-H—University of Idaho Extension’s youth program known for developing leadership skills and helping youths avoid risky behaviors—came to mainly Spanish-speaking children at Caldwell’s low-income housing complex, Farmway Village. Caldwell is one of three Idaho communities to benefit from a new 5-year \$600,000 grant from the USDA’s CYFAR program—Children, Youth, and Families at Risk.

Farmway’s 1,200 residents, 800 of them children under the age of 18, live a couple miles from town in low-income housing for a community often isolated. “Kids here are starving for things to do,” said Farmway Executive Director Mike Dittenber. “Their parents are socially isolated. They rarely go into town for a movie or a dance. When you bring an organized program like 4-H and give kids edu-

cational opportunities, it’s great.” The summer 4-H program touched some 10 percent of Farmway’s youth. It is followed by afterschool programs for ages 5 through 12.

Other programs from Bonners Ferry to Burley
Also grant-funded are 4-H afterschool programs in Potlatch and Bonners Ferry. This is Idaho’s second active CYFAR grant, which makes 4-H Director Arlinda Nauman, Moscow, “ecstatic! Some states don’t even have one, let alone two such grants.” She credits Maureen Toomey, UI Extension 4-H Advisor in Caldwell, for writing and managing the grants and staff for “designing relevant programs.” Idaho’s other CYFAR grant—now in its fourth year—impacts youth in Burley and Coeur d’Alene Indian Reservation’s Worley. Follow program results at cyfar-reporting.cyfernet.org/public/OverviewsSearch.aspx.

Grants last five years to give participants enough time with innovative programs and nurturing mentors to bolster their sense of options in life through extra learning in technology, science, and arts. Exercise and healthy eating are another focus, as is community service. Each program



Caldwell's Farmway Village youth show off birdhouses they built and decorated in the 2010 summer 4-H CYFAR-funded workshops. Children also played games, enjoyed snacks, built robots, and sampled a variety of other crafts. The 4-H program is ongoing after school in collaboration with Caldwell schools. Farmway Village provides office and workshop space. Photos by Brad Beckman

aims to continue when grants end, supported by host communities. Each location selects projects from hundreds of 4-H curricula suitable for different age groups. Mentorship also is critical—preferably at least one adult per 15 students. Middle and high school students volunteer as tutors.

Somewhere to learn on Fridays

Bonnors Ferry, now in its sixth year of 4-day public school sessions, has 4-H to thank for Friday educational programming for up to 30 of the district's K-6 students. Youths come for 10-hour sessions every Friday to use the school's gym for volleyball, dodge ball, or other active games.

Learning is often interactive. Using pedometers, prior students "walked from Bonners Ferry to the equivalent of Central Mexico," says Erika Thiel, Boundary County's 4-H coordinator. To encourage their technology, science, and math skills, students created documentaries, writing scripts and using computer software to create and animate clay figures, download photos, add music, and, in the end, entertain parents with a mini film festival. Thiel is excited about plans for more stringent evaluations to track what children accomplish this year. "We need a paper trail to document what our kids learn and do."

A relief for parents

For parents, Friday programs are a relief on several levels.

"On Fridays, I would have had to find a babysitter or send my daughters to their grandparents," says Angela Tucker, whose job runs the normal 5-day workweek. Daughter Jadin, 10, attended the Friday 4-H program in 2008. Older sister Aubrey, now 14, attended for several years, returning in 2008 as a mentor helping younger kids with homework.

"If I didn't have the afterschool academy ... well, let's just say I would probably be fat right now," says Aubrey. "I would have sat on the couch with a bag of chips and watched TV every Friday. That would have been horrible!" And, Friday sessions "helped me as a student because I got all my school work done without distractions. I didn't have to worry about homework the rest of the weekend!"

Does the program really help youth at risk?

"When you're going to develop a community, you need to bring many different players to the table, because you never know how a child's interest will be ignited," believes Dittenber. "When you bring 4-H to under-represented children, we may be setting a course for lifelong change. Gates of history swing on small hinges. Maybe this 4-H program is a small hinge that will dramatically change someone's life."

Contact Maureen Toomey at mtoomey@uidaho.edu.

A woman with dark hair, wearing a floral tank top and black leggings, is crouching in a coffee field. She is smiling and looking towards the camera while holding a branch of coffee cherries. The background is filled with lush green coffee plants and a clear sky.

Universidad de Puerto Rico

Trio of new CALS PhDs joins
University of Puerto Rico faculty

by ANDREA VOGT

YANIRIA SÁNCHEZ DE LEÓN '07, digs her shovel down to see which Caribbean tropical species of earthworms call Puerto Rico's coffee plantations home. She knows first-hand that new species are down there just waiting to be found, for she is the first person in 20 years to dig up a live giant Palouse earthworm that even made the Jay Leno show last year.

Today, Sánchez de León is one of three University of Idaho College of Agricultural and Life Sciences (CALs) Ph.D. graduates conducting research in sustainable agriculture in mountainous central Puerto Rico. Teaching with her at the University of Puerto Rico's Utuado branch campus is Yaniria's husband, plant scientist **Javier Lugo-Pérez '07**, and entomologist **Mariangie Ramos '07**.

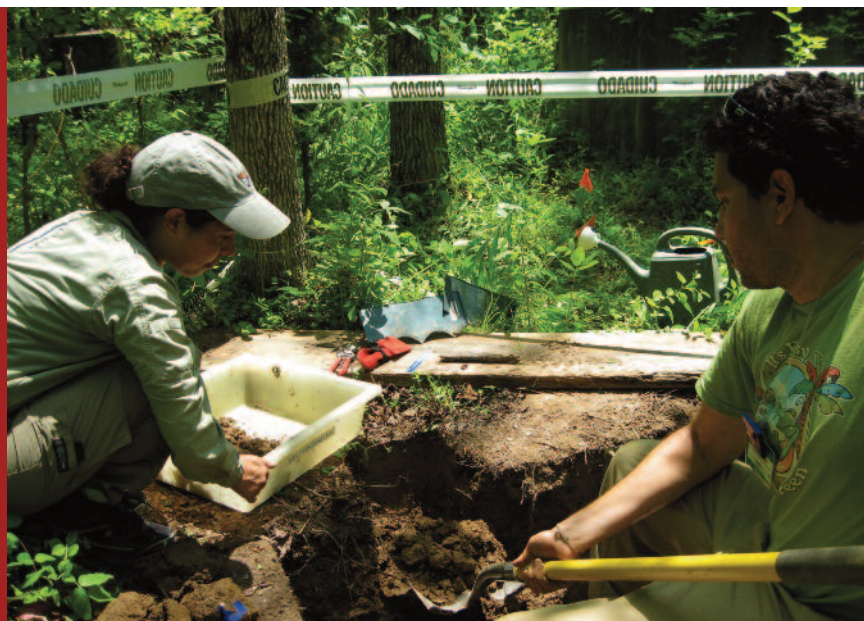
In Utuado, the three new professors research environmentally friendly agriculture, including the study of earthworms, beneficial insects, and cultivation of microscopic organisms that prey on the two main coffee pests in the region—coffee leaf miner and coffee berry borer. All three study and map organic coffee plantations in municipalities of Utuado and Orocovis with help from a two-year \$150,000 USDA sustainable ag grant.

Ironically, the more environmentally friendly method of growing coffee without pesticides and in the shade is the “old way” that many Puerto Rican coffee farmers still use. While Sánchez de León looks beneath the soil surface, Ramos focuses on organic control of weeds and pests above ground.

Worms as ecosystem engineers

Sánchez de León collects worms in a cooler for transport to a lab. She calls them “ecosystem engineers” for vital roles they play in promoting healthy ecosystems. They transfer plant debris and contribute to the subsurface food and nutrient web. They dig tunnels allowing water to percolate and air to circulate.

Bioindicators of soil health, worms also interest the U.S. government for how they fare in stressful conditions—such as under global warming pressures. On a forest stand in



Husband-wife team Yaniria Sánchez de León and Javier Lugo-Pérez dig in Tennessee soil to see how CO₂ infusion impacts worms; worm populations increase. At left Mariangie Ramos looks for coffee plant pests.

Tennessee's Oak Ridge National Laboratory, researchers have spent more than a decade piping thousands of tons of carbon dioxide into sweetgum trees to simulate the greenhouse gas effect. Sánchez de León and Lugo-Pérez still travel there to study impacts this decade-long blast of greenhouse gas is having beneath the soil.

Findings indicate tree root systems burrow deeper than usual under elevated CO₂. “We are finding higher earthworm density, too,” said Sánchez de León. “Now we just need to understand why.” She and her husband take turns traveling to Oak Ridge, relying on their mothers in Puerto Rico to help look after their 1-year-old son, Alejandro.

For Ramos, her university job makes her the third generation of educators. Her grandmother was a teacher, her mother a university professor. “When I told my family I was coming back to Puerto Rico for a tenure track position, it was sort of like an unplanned pregnancy . . . everybody was happy, but it was unexpected,” laughs Ramos.

UI's IGERT program helped

Sánchez de León and Ramos were part of the UI's first IGERT project—Integrative Graduate Education and Research Traineeship. Funded by the National Science Foundation, it requires students to work in interdisciplinary teams and address

issues at the interface of agricultural and forest sustainability and biodiversity conservation.

Ramos and Sánchez de León researched coffee agroforestry systems in Turrialba, Costa Rica, guided by UI professors Nilsa Bosque-Pérez, entomology, and Jodi Johnson-Maynard, soils. Home base was Costa Rica's Tropical Agricultural Research and Higher Education Center, co-hosts with UI of a doctoral program.

“Our society faces serious natural resource and agricultural sustainability issues as land is increasingly fragmented,” said Bosque-Pérez, new interim dean of the UI College of Graduate Studies. “The best way to tackle these issues is with well-prepared scientists able to work in interdisciplinary teams.”

She sees these alums, whom she personally recruited, as proof the UI's IGERT program works. “All excellent students, each really engaged with communities where they conducted research,” said Bosque-Pérez.

“I loved my experience in Idaho,” recalls Ramos. “I had a great advisor, was in a great program, and the people I met are like a family.”

All three credit UI's graduate programs with winning their coveted academic and research posts.

Andrea Vogt, an international freelancer living in Pullman and in Italy, is a UI journalism graduate.





PHIL KAUFMAN'S DREAM AND THE CLEARWATER CORN MAZE

IT'S A-MAZE-ING

by BILL LOFTUS

Visit www.uidaho.edu/cormmaze for more photos of the 2010 Clearwater Corn Maze

THE CORN GREW AT LEAST AS HIGH as an elephant's eye at the Clearwater Corn Maze by Lewiston's Roundup grounds. On October weekends, 11-foot tall cornrows towered over knots of families, lovers, and moms with strollers. Armed with maps, they eased their way through paths outlining Idaho and its counties. At night, corn tassels glowed, illuminated by fairground lights, while closer to the ground flashlights helped visitors read maps and see their feet. CALS students in red vests patrolled, cheering on visitors and guiding the lost.

Ten checkpoints throughout the maze challenged explorers with ag-related questions. How much honey does one bee produce in its life? How many eggs does a chicken lay in a year? To know the answers, you had to find each checkpoint. It wasn't so easy.

Nearly 200 CALS students volunteered for one of the most novel educational experiences anywhere.

An exercise in agribusiness, agritourism, and precision agriculture, the maze drew together the college, Kaufman Farms of Lewiston, and the Lewiston Roundup Assn., which provided land and facilities.

Phil Kaufman dreamed it and made it happen

Halfway through the maze's 9-day run, more than 4,000 visitors had found their ways through the 2.6 miles of paths. "You can usually find your way out ... eventually," assured college alumnus Phil Kaufman '06, of Lewiston.

Kaufman grew the nearly 11-acre cornfield, fulfilling a dream that began in a 2002 classroom when he was a freshman assigned a farm and ranch management project. Kaufman earned his bachelor's in agricultural systems management with a minor in agribusiness from CALS. He worked for Monsanto growing seed corn, first in the Columbia Basin, then California's Central Valley. He returned to Lewiston after his employer retooled its business plan including a proposed transfer to Hawaii. Instead, Phil now grows wheat with his family and transformed a dream into reality.



Phil Kaufman '06, measures corn's progress before corn maze is cut to outline the state of Idaho and its counties. At left, 11-foot stalks tower over excited visitors dressed to conquer 2.6 miles of maze trails. Photo at left by Mark LaMoreaux; above, by John Foltz

"The project is transformational for students who operate it," said John Foltz, the college's academic affairs dean and enthused maze supporter. "Our students are really engaged in experiential learning, actually running a business, being responsible to each other, and providing customers with quality service," Foltz said. In 2009, Foltz worked with Phil's brother, Steve Kaufman, to grow a maze at a different location. The 2009 corn grew to 9 feet before a record cold spell killed it, ending plans.

Both efforts have been "a big organizational lesson for the students," says Foltz. The biggest challenge is operating it, requiring at least 15 volunteer students whenever it's open. Most weekends more than the minimum students showed up to park cars, sell tickets, patrol the maze, and guide the lost.

University of Idaho President Duane Nellis visited the 2010 maze, navigating it with his wife, Ruthie. He, too, views it as "a rich learning environment through which the

college is developing local leaders who can address their communities' challenges and opportunities."

If there's been a surprise for student corn maze chairman Clark Gill, it's that things went so smoothly. A senior studying agribusiness, Gill helped ensure that enough students turned out to operate the maze. Gill and other students also helped when the maze was designed and GPS points on a map became the twisting, turning paths through corn plants not quite knee high. They helped place irrigation pipe and sprinklers to sustain the corn through July and August.

Maze visitors jumped from 100 to 160 an hour between the first and second weekends, making it "a greater success than we'd anticipated," said Foltz. Tickets at \$5 each gave Lewiston a new family-friendly event. Funds raised will be shared by the sponsors. CALS students' portion will fund club activities. Hopes are the maze will be an annual event.

Among hundreds of calls to Phil Kaufman from maze enthusiasts, one was unique. A woman and her sons trekked the maze the first weekend, checking off one thing on her bucket list as she went through chemotherapy.

UNIVERSITY OF IDAHO
COLLEGE OF AGRICULTURAL & LIFE SCIENCES

2010 Alumni Awards

Please join us in congratulating the 2010 CALS Alumni and Friends Award recipients for their outstanding service to the college, Idaho, and their professions. Awards are sponsored by the UI CALS Alumni and Friends Association board of directors. Find information and nomination forms for the annual awards at www.uidaho.edu/cals/alumni.friends.

DISTINGUISHED ASSOCIATE

JAY PENICK, Spokane, Wash., serves as president and chief executive officer for Northwest Farm Credit Services and Agricultural Credit Association. Under Jay's leadership, his company implemented a scholarship program of \$32,000 each year for students attending higher education.

PHIL SOULEN, Weiser, is influential in Idaho's farming and ranching communities. Soulen has served on the University of Idaho Silver & Gold Cabinet, the UI Foundation, the College of Natural Resources Advisory Board, and the College of Agricultural Consulting Council. He is a member of the University Leadership Circle and the Steer-A-Year Club and is president of Phi Delta Theta fraternity. Phil has served Idaho as Agriculture Task Force chair for Gov. John Evans; chair of the Lamb Council for American Sheep Producers; and president of the Idaho Wool Growers Association. Phil currently serves on the Weiser Cemetery District and the foundation board for Weiser Hospital.

ALUMNI ACHIEVEMENT

ALLISON TOUCHSTONE '95, '97, '10, Kuna, is a senior instructor in the University of Idaho Department of Agricultural and Extension Education, Boise. After teaching at Kuna High School for 9 years, she served as program manager for agriculture and natural resources with the State Division of Professional-Technical Education.

STEVEN BRAUN '95, '04, Troy, has instructed in agricultural science and technology and served as FFA advisor

for Troy Junior/Senior High School for 15 years. Steve has been recognized by the Idaho Vocational Agricultural Teachers Association (IVATA) and the National Association of Agricultural Educators. He was honored as the Idaho Ag Teacher of the Year in 2004, 2007, and 2008.



Outstanding service award recipients. Top photo: left of Dean John Hammel is Jeff Harper, and to his right, Doug Gross. In the bottom photo, alongside Development Director Kimberly O'Neill (white blouse) are, from left, Steve Braun, Allison Touchstone, and Robb Steinke.

TRAVIS JONES '99, '02, Boise, is executive director of the Idaho Grain Producers Association. Travis graduated from Leadership Idaho Agriculture in 2008 and now serves as chairman of the CALS Dean's Advisory Board. He has served as the CALS representative on the Council for Agricultural Research, Extension, and Teaching (CARET). Travis was elected co-chairman of the 2011 Larry Branan Idaho Ag Summit.

DISTINGUISHED ALUMNI

MIKE RUSH '77, '82, Boise, is executive director of the State Board of Education. Rush has served as president of the National Association of State Directors of Career and Technology Education, has received the Distinguished Service Award from the American Vocational

Information Association, and honorary state FFA degrees in Idaho and Pennsylvania. He also received the Honorary American FFA degree.

ROBB STEINKE '84, Twin Falls, is a senior relationship manager for Rabo AgriFinance and is senior appraiser and manager of the company's western U.S. appraisal division. Actively involved in his community, Robb serves with Boy Scouts, the school board, and Knights of Columbus. He also advises both the Dean's Advisory Board and CALS Department of Agricultural Economics and Rural Sociology.

STEVE WILDER '79, '87, Meridian, runs one of Idaho's premier secondary agricultural education programs at Meridian High School. Wilder is president-elect of the Idaho Vocational Agricultural Teachers Association (IVATA). He is also a member and one of Idaho's voting delegates of the National Association of Agricultural Educators (NAAE). Steve is also active with the Idaho Wool Growers Association, Lions, Kiwanis, Boy Scouts, and 4-H.

DEAN'S AWARD

DOUG GROSS '75, Caldwell, is president and owner of Gross Farms, Inc., and Gross Seed Co. Also, he is vice-president of the Southern Idaho Potato Cooperative. Doug has served on the Idaho Potato Commission and is currently on its Ag Affairs Committee. Doug is a member of the U.S. Potato Council and serves on the Wilder Fire Department Board.

JEFF HARPER '75, Mountain Home, is president and owner of Flying H Farms and Flying H Seed. Jeff serves on the board of directors of the U.S. Potato Council and is president of the Potato Variety Management Institute. Jeff was appointed to the Idaho Potato Commission by Gov. Butch Otter and currently chairs the Research and Education Committee. He's also on the local Northwest Farm Credit Board of Directors and is an active Vandal Booster.

classnotes

2000s

NOE GALVAN '06, Madison, Wisc., completed his DVM at the University of Madison-Wisconsin School of Veterinary Medicine in June 2010. He is an intern in Food Animal Medicine and Surgery at the University of Missouri, College of Veterinary Medicine.

KRISTY HENSCHIED '01, Pasco, Wash., earned her Ph.D. in molecular biology from the University of Oregon in 2007. She has completed her second year as a tenure-track faculty member teaching biology at Columbia Basin College.

CRYSTAL ISON '97, '04, '09, Boise, graduated with her education specialist degree in December 2009. This is her second year teaching family and consumer sciences with the Meridian School District.

ADAM MCCABE '06, Lone, Ore., is a fieldman for the Morrow County Grain Growers.

ERICKA MEDALEN '00, '02, Boise, is the new associate director for Catholic Charities of Idaho in Boise. Medalen, a graduate of the School of Family and Consumer Sciences, serves as program lead for the statewide agency. Medalen previously was community services director for Community Action Partnership in Lewiston and early childhood educator for the Houston School District. Founded in 2000, Catholic Charities of Idaho is one of the newest members of Catholic Charities USA, a national organization of Catholic social service agencies helping more than eight million Americans annually. Focus is fighting poverty.

ANN (KONEN) MILLER '07, Jordan, Mont., welcomed a new baby girl, Arianna Elizabeth, born November 11, 2009. Arianna joins big sister Gwendolyn Ray born September 23, 2008. Ann also has accepted a new position as the Wyoming Pork Producers Council Executive Director. This position is in addition to her continuing position as executive director of the Montana Pork Producers Council.

ANNETTE (MELTON) WEEKS '95, '01, Vancouver, Wash., earned the National Board of Professional Standards Teaching Certificate in Agriculture and Environmental Sciences in December 2009.

1990s

MELINDA BECKER '98, LaGrande, Ore., teaches PE and health at LaGrande Middle School. She also coaches the LaGrande High School Volleyball team and the 8th grade girls basketball team at LaGrande Middle School and loves it!

LINDA (HUNTER) KEES '90, Boise, has started her own nutrition consulting company specializing in sports nutrition. Her company offers metabolic testing, grocery store tours, in-home pantry evaluation, and many other types of nutrition counseling.

JOY (SELLARS) WHITE '98, Pasco, Wash., has been a family child care provider for young children for more than a year. She and her husband, Alan, welcomed their second daughter, Kyla Brynn, on August 15, 2008.

1980s

CAROL STIFF, PH.D., '83, Milton, Wisc., was appointed executive director of Kitchen Culture Education Technologies Inc., a 501(c)(3) that promotes plant science education. Currently their primary focus is advising, selling supplies, and teaching workshops that support home and classroom plant tissue culture.

1970s

FRED HASKIN, DVM '71, Elk Grove, Wisc., has eight beautiful grandchildren, with three new additions in 2009! He still runs and owns his own mobile veterinary business treating horses exclusively. He also enjoys playing tennis, watching NBA basketball, and savoring life.

1940s

CARLOS BENJAMIN '49, Pasco, Wash., feels like he aged 40 years in October as he jumped from 39½ to 87 years of age overnight.

THANK YOU to all who returned their alumni updates by July 2010. Ann (Konen) Miller will receive a CALS travel mug. Everyone else gets a CALS luggage tag. Please send us your updates by August 31, 2011. (See form p. 35).

IN MEMORIAM

Donald Benedict '39
Agricultural Education
Lewiston, May 18, 2010

Nell Anne Iddings, Friend of CALS
Greenbrae, Calif., June 29, 2010

Erling Johannesen '45
Animal Husbandry
Emmett, June 5, 2010

R. Loren Kambitsch '43
Agronomy
Lewiston, Sept. 8, 2010

Dorothy Lindsey '63
Microbiology
Pasadena, Calif., July 2, 2010

Arthur Woodrow Reynolds '41
Animal Husbandry
Idaho Falls, Nov. 26, 2009

Jeannie Romans, Friend of CALS
Dean's Assistant
Moscow, June 7, 2010

Lamont Smith '51, '68
Dairy Science
Roy, Utah, Aug. 7, 2010

Violet Whittaker '31
Home Economics
Jacksonville, Florida, April 15, 2010

“Beetle” Bill celebrates 90



William “Beetle Bill” F. Barr celebrated his 90th birthday at an October 20 CALS reception honoring the University of Idaho emeritus professor of entomology. Barr “ushered in the era of entomology at the University of Idaho when he arrived here in 1947,” praised James B. “Ding” Johnson, head of the college’s Department of Plant, Soil, and Entomological Sciences. Barr hired Johnson. Under his tenure, the UI’s entomological museum named for Barr grew to more than a million specimens.

When food safety counts

UI Alum Robert Stovicek speaks from PrimusLabs on food safety testing

by ANDREA VOGT

A UNIVERSITY OF IDAHO PLANT SCIENCE ALUM today runs a successful raw and organic food safety testing company whose facilities stretch across the United States, Mexico, and Central and South America.

"In 2009 we audited more than 10,000 unique fresh produce operations," says Robert Stovicek '81 '85, CEO for PrimusLabs, with headquarters in Santa Maria, Calif. His experience and outlook are reassuring. "There is no question in my mind that fresh produce consumed today is grown and handled under more hygienic conditions than in the late 1980s or, for that matter, any period prior."

During an interview with *Programs & People* magazine via e-mail, Stovicek credited his bachelor's and master's in plant science from the University of Idaho, along with studies from Michigan State University in crop science and environmental toxicology, for "providing the ideal training" for his success.

His sense of humor and complexity of his profession show as he explains how he got hired by PrimusLabs in 1988: "My edge over 300 applicants was that my cover letter and resume were the only ones that the selection committee could understand."

Stovicek helps demystify the world of fresh food safety.

Q. *How "safe" is the American food supply? What kinds of checks and balances are in place, and what steps should still be taken?*

The attention to sanitation and hygiene practices on the farms and in facilities handling fresh produce has gone through a night-and-day change in the past 20 years.

Primus assists buyers interested in avoiding growers and handlers operating unacceptably; but on a more positive note, Primus assists suppliers who are operating appropriately gain buyer recognition.

Perhaps a better measure of confidence in the fresh produce supply would be to ask individuals working within various agencies responsible for safeguarding the American consumer. In most cases I see no appreciable changes in their eating habits. They continue to consume fresh produce, recognizing the commodity's favorable nutritional value.

Often these individuals purchase produce from local farmers markets. These regulatory agents are fully aware that the produce they are buying has a lower probability of being grown or handled by individuals aware of the very guidelines developed by the overseeing agency.

In contrast larger fresh produce operations are frequently subject to review by buyers, third-party auditing entities, as well as state and federal



regulators. Their buying patterns provide a pretty strong vote of confidence in the general safety.

Q. *What are the most pressing concerns facing the food industry today?*

I will limit my comments to the fresh produce industry. The most important concern is aligning buyers and suppliers' interests. When aligned, the two will search for integration of safe production efforts, and from there a pursuit of perfection becomes their mutual objective.

Q. *Are your labs in Mexico, Chile, and Peru necessary because a large portion of our U.S. fruit and vegetable supplies arrives from those markets? What percentage of produce coming from these countries is tested and certified?*

American consumers and middle-class consumers the world over enjoy a wide range of high quality fresh produce throughout the year. Prior to the mid-twentieth century, even kings and queens could not afford the range and quality of fresh fruits consumed by average Americans today.

Year-round availability requires suppliers to work globally. The percentage of a commodity imported can be nearly 100 percent all year for tropical commodities such as bananas. In other cases, only a small percentage of fresh produce is sourced from outside of the United States, for example potatoes.

The percentage of domestic and foreign operations exposed to audits of their farms, cooling facilities,



packing houses, sanitation, and hygiene practices varies by commodity. A high percentage of operations growing or handling commodities that have been implicated as vectors for human pathogens with products destined for the United States are audited. In 2009, Primus audited more than 10,000 unique fresh produce operations.

Q *Concretely, how does the work PrimusLabs is doing prevent food safety recalls?*

Increasing grower and handler awareness of potential risks associated with various agricultural practices is a critical aspect of Primus' service. We write audits to be grower friendly. Audit guidelines are made public. And web-based tools that help suppliers prepare for an audit are free. The statistical probability of any given fresh produce serving causing an illness is rare, but zero probability is the goal. That requires all participants to be involved.

Q *Have PrimusLabs technicians ever caught a problem early on in the food supply chain and prevented a wider disaster?*

Yes! Clearly we can't talk specific cases, but our labs do find issues and report back to clients. Some clients employ a "test and hold" policy; our test results become a "positive release" mechanism for their food safety systems. Our auditors do sometimes find serious issues, some of which cause "automatic failure" of the audit.

Q *In May 2000, international retailers launched the Global Food Safety Initiative (GFSI), setting requirements for food safety through benchmarking. This followed a number of serious food safety scares. Describe how that pivotal moment impacted your business.*

The Global Food Safety Initiative (GFSI) successfully standardized logistical parameters. Agreement on these standards significantly reduced the cost of transactions for buyers and suppliers. From the very beginning, the organizing agency, CIES, had the active commitment from most major grocery retailer CEOs. CIES formalized auditing schemes. It focused on safety to the exclusion of other potential concerns such as sustainability.

PrimusLabs provide microbiological testing, pesticide residue testing, sampling, and auditing to certify that foods are organic or sustainable or quality. Primus was the first entity to gain recognition under the GFSI. The program formalized services that Primus had been performing throughout the Western Hemisphere for some 15 years.

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES
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The Alumni & Friends Association assists the college with alumni events, helps recruit students, and promotes the College of Agricultural and Life Sciences wherever and whenever possible. If you are interested in becoming active or in filling a vacant position on the board, please call 208.885.6446 or send an e-mail to [CALSAIumni@uidaho.edu](mailto:CALSAlumni@uidaho.edu)



COLLEGE OF AGRICULTURAL AND LIFE SCIENCES

Winter-Spring 2010-11 Events Calendar

NOVEMBER 2010

- 6 Football vs. Nevada, Kibbie Dome
- 12 Football vs. BSU, Kibbie Dome
- 22-26 Fall Recess
- 25 Thanksgiving Day
- 27 Football vs. Fresno State, Fresno

DECEMBER 2010

- 4 Football vs. San Jose State, Kibbie Dome
- 9 Alumni Holiday Event, Davenport Hotel, Spokane
- 10 Alumni Awards for Excellence Banquet, Moscow
- 11 Winter Campus Commencement, Moscow
- 18 Close of Fall Semester
- 24-27 Christmas—UI Closed
- 31 New Years Eve—UI Closed

JANUARY 2011

- 12 Spring Semester Classes Begin
- 17 Martin Luther King Day—UI Closed
- 27 Ada County Silver and Gold, Boise
- 28-29 UI Alumni Association Board Meeting, Boise

FEBRUARY 2011

- 1-3 Spokane Ag Expo & Pacific Northwest Farm Forum, Spokane, Wash.
- 14-16 Larry Branen Idaho Ag Summit, Boise
- 15 All CALS Award Nominations Due, Including Alumni & Friends
- 16-17 Leadership Idaho Ag Alumni, Boise
- 21 President's Day—UI Closed
- 23-26 Lionel Hampton International Jazz Festival

MARCH 2011

- 14-18 Spring Break Recess
- 25 Vandal Friday

APRIL 2011

- 7 Moscow Silver and Gold
- 15-17 Mom's Weekend
- 25 CALS Spring Awards Banquet
- 29-May 1 Delta Gamma Centennial

MAY 2011

- 2 UI Commencement, Boise
- 3 UI Commencement, Idaho Falls
- 9 UI Commencement, Coeur d'Alene
- 12 Alumni Hall of Fame Reception
- 13 Alumni Hall of Fame Induction Luncheon
- 14 UI Commencement, Moscow
- 30 Memorial Day—UI Closed

Dear Alumni and Friends:

Once again the College of Agricultural and Life Sciences is celebrating an increase in enrollment as students choose to pursue degrees at the University of Idaho. This year's total enrollment is the largest in the college's history, and we expect to also graduate the college's largest senior class this year.

We hosted another successful Ag Days in September! High school students from around the Pacific Northwest joined us for the fourth year to take part in CALS-sponsored workshops and activities such as Biodiesel 101, Livestock Evaluation, Conventional Plant Cloning, and Precision Agriculture, to name a few. These workshops allow students to experience college and see our beautiful campus.

CALS owes a special thank you to Magic Valley and Treasure Valley alumni who organized and sponsored a bus to transport high school students to Ag Days. Their hard work and commitment to CALS is greatly appreciated.

Corn Maze. Another great event that occurred this fall due to alumni involvement was the CALS Corn Maze. This collaborative effort sponsored by Kaufman Farms, the Lewiston Roundup, and CALS, was located next to the Lewiston Roundup grounds in Lewiston. It was open for nine dates in October. If you didn't get a chance to visit this year, please put this on your calendar for next year as CALS would like to make this a yearly event. Also, thank you to Primeland Cooperative and Blue Mountain Ag Equipment for donating the seed, fertilizer and equipment necessary to make this a success. Read more about it on page 28.

Please take the time to send us your updates—via "snail mail" by using the form below. Or, if you prefer, you can submit a class note online at www.cals.uidaho.edu/classnotes/. We welcome your news! If you're interested in volunteering or becoming a more active alum, feel free to drop us an e-mail at calsalumni@uidaho.edu.

Sincerely,

Jason Tindall, President, Alumni & Friends Association
College of Agricultural and Life Sciences

University of Idaho students finish North American Dairy Challenge in top tier

University of Idaho College of Agricultural and Life Sciences (CALS) students completed a top-tier finish at the North American Intercollegiate Dairy Challenge against teams from across the U.S. and Canada.

Teams from 30 universities visited working dairies near Visalia, Calif., and made recommendations to improve their operations based on the students' observations and training. Hosted by Cal Poly and California State University-Fresno, the intercollegiate dairy spring 2010 event challenged four-member teams to prepare professional-caliber presentations for herd owners and industry judges.

Amin Ahmadzadeh, CALS associate professor of dairy science and team coach, said, "Our students' presentation was right on the money."

UI team members included Crystal Burke, Billings, Mont.; Jackie Wuebben, Astoria, Ore.; Stew Russell, Emmett; and Carl Betts, Eagle.

Contact Amin Ahmadzadeh at amin@uidaho.edu.

Send in your
Alumni Updates &
WIN PRIZES!

Moved? New job? Just married? Kudos? Let us know! We welcome your submissions for classnotes.

All alumni who return a completed alumni update card by **August 31, 2011**, will be entered in a drawing. The grand prize winner will receive a CALS coffee mug. All entries will receive college luggage tags. So send those updates!

Name _____ year graduated _____

Please check if new address

Address _____

City/State/Zip _____

Phone home _____ office _____ e-mail _____

Here's my news! _____

Mail us, fax us, or visit our website to keep us updated. Office of Development, College of Agricultural and Life Sciences, University of Idaho, P.O. Box 442331, Moscow, ID 83844-2331. Fax 208.885.6654. www.cals.uidaho.edu/classnotes/



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IN THIS ISSUE

Alums join faculty at University of Puerto Rico
CALs scholars take skills learned in Idaho to coffee growers

CALs Amazing Corn Maze

Thousands find way through Idaho-shaped paths in corn

Can plastics impact a baby's heart?

Preliminary research suggests an unpleasant possibility



photo by JOE PALLEN, UI CREATIVE SERVICES

Climbing over hay bales laden with a fencepost is just one of the CALs Ag Olympics competitions for UI College of Agricultural and Life Sciences students each spring. Some 50 students competed in the third annual one-day 2010 event. Other challenges: CALs Fear Factor: Eat a bowl of crispy mealy worms and fried crickets bathed in molasses. Before eating them (nobody got sick!), participants learned that insects—high in protein, vitamins, and minerals—are food staples for 80 percent of nations. Also, savvy southern Idaho students could set six siphon tubes (used in sucking irrigation water from ditch to crop) within seconds while faculty new to the process took up to 7 minutes. CALs Idol: Winning singers, seniors Sylvan La Cross and Kathy Wunsch, performed at the CALs Awards Banquet later in the spring.