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22  USC vs. WSU
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October
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Check out the special CAHNRS
President’s Associates Thank You
events on page 44.

For a complete
Extension calendar, visit:
ext.wsu.edu/calendar/index.asp

Visit the CAHNRS
Alumni and Development
Web site at:
cahnrsalumni.wsu.edu

Front cover:
Tree Fruit Research and Extension
Center apple trees in bloom. Photos
by Randy Dawson, Dawson Photograph,
randy@dawsonphoto.com.

Inside cover:
An old barn window frames the
surrounding Snake River landscape
on the Sheep Creek Ranch, founded
in 1884. Photo by Lagene Taylor,
Extension Publishing and Printing.
Jefferson County 4-H Club Honored by Northwest Area Foundation

MEMBERS of the Jefferson County 4-H Club, Big Quil Enterprises, have been raking in the clams—and oysters, mussels, geoducks and cash.

The club, which operates its own shellfish business, received the Northwest Area Foundation’s annual “Great Strides Award” earlier this year.

The $100,000 national award from the St. Paul-based foundation honored the club for making innovative strides in reducing long-term poverty in the community. The money will be used to continue Big Quil Enterprises and create living wage job opportunities for local youth, as well as share key lessons with other communities to expand the success.

Big Quil got its start through the Quilcene/Brinnon Connecting Schools and Communities Initiatives that ended last spring, funded by the Bill and Melinda Gates Foundation. The initiative connects students to community resources through service learning and project-based educational opportunities.

The students in Big Quil Enterprises seed and harvest shellfish at a leased beach on the Big Quilcene Bay on Hood Canal, and then sell them to area shellfish distributors and consumers. The students also manage the beach and use different shellfish propagation techniques, according to Pamela Roberts, Jefferson County 4-H coordinator.

Historically, Jefferson County’s economy depended on the now depressed timber industry. As a result, many areas of the county have high rates of unemployment and poverty. The aquaculture shellfish industry is starting to turn that around.

“It’s really important to sustain the Big Quil program as a model of youth entrepreneurship,” Roberts said. “Like any business, Big Quil needs to become profitable. They aren’t there yet, but I think the Northwest Area Foundation sees the potential, and that’s why they are investing in it.”

For more details, please visit 4h.jefferson.wsu.edu.
WSU Plant Scientists Ranked Fifth Most Productive in U.S.

WSU SCIENTISTS conducting research on plants and animals are among the most productive in the nation, according to a survey published earlier this year in The Chronicle for Higher Education.

WSU plant scientists were ranked the fifth most productive in the U.S., while WSU zoologists placed at No. 10. The results indicate the two programs are in the top tier of the approximately 7,300 doctoral programs around the country evaluated in the survey.

In terms of journal articles published per faculty member and percentage of works cited by others, WSU plant scientists ranked second and third, respectively.

Ralph Cavalieri, associate dean of CAHNRS and director of the Agricultural Research Center, said, “This ranking confirms the quality, energy and intellect of our plant science faculty.”

WSU GRIZZLY BEARS MAKE NEW FRIENDS

TWO WSU GRIZZLY BEARS made friends with State Sen. Erik Poulson, D-West Seattle, and Sen. Majority leader Lisa Brown, D-Spokane, when the two legislators came to campus last fall to discuss the future of WSU’s 21-year-old bear research program with university officials. Charles Robbins, director of the Bear Research, Education and Conservation Program, and O. Lynne Nelson, assistant professor of Veterinary Clinical Science, have proposed creating a National Bear Center. The new center would provide expanded facilities for a wide range of captive bear research and help educate both students and the public about bears, their needs, their role in nature and how humans can interact with them safely. The proposed facility location is a vacant area across the street from the current facility at the junction of Grimes Way and Airport Road in Pullman.

GOOD-BYE BORING WEB SITE! CAHNRS has redesigned its site to truly communicate the vibrancy, diversity and excellence of our students and faculty. And, yes, it had to be fun, too. We wanted a site where you, our alumni and friends, could get up-to-the-minute, fascinating and fun news and features about goings-on in your college. We wanted a site that tells the story of life, learning and research in WSU’s largest and most diverse college.

And that’s just what we’ve got. The college sites are dynamic and engaging, with student success stories, club profiles and research news that makes a difference. They feature videos, blogs and ways to request information about our programs.

Go to www.cahnrs.wsu.edu and discover the renaissance for yourself. Start with the CAHNRS main page, but click on “WSU Ag and Current and Future Students,” too, to find more great news, photos and videos.
Does This Look Too ‘Poochie?’

PLAIDS, PLEATS AND CANINE MODELS were among the newest additions to this year’s WSU Mom’s Weekend fashion show.

“Collection Avant-Garde” featured the “extraordinary” work of nearly 30 student apparel designers as well as hundreds of student models, artists and production assistants, according to fashion show director Jennifer Infanger, WSU alumna and instructor in the Department of Apparel, Merchandising, Design and Textiles.

“We use a lot of the student body to put on this show,” said Infanger. A crowd of over 2,000 attending the annual event were treated to several new trends.

“Several people used plaids in their designs, which we haven’t seen before,” she said. “This year’s show also featured a lot more edgy, everyday clothing, not just prom dresses.”

Pleats and ruching were a big part of some of the student fashion lines this year. One student even designed some canine couturier to complement her people apparel. “We had dogs on the runway for the first time,” Infanger said.

The fashion show is the culmination of the department’s Fashion Line Development (AMT 412) and Special Event Production (AMT 496). Judged on cohesiveness of garments in their line, quality of construction and creativity, seniors Alain Miller of Montesano and Serena Hightower of Wenatchee won “Best of Show” Mollie Pepper Outstanding Student Designer Awards.

WASHINGTON STATE 4-H is on the road to establishing a special 4-H license plate designed to increase visibility and provide it with a conservatively estimated $250,000 within just four years.

The Washington State 4-H Foundation is working with the Washington State Department of Transportation on its application packet, which includes gathering the signatures of 3,500 people who plan to purchase the plates. If approved by WSDOT, the application will result in the availability of a plate sporting the 4-H clover. The Foundation would receive a percentage of the purchase price of each set of plates.
Endowed Viticulture and Enology Chair Fund Gets a Big Boost from Wine Auction

This year’s “A Celebration of Washington Wines” gala and auction provided a significant boost toward establishing a $1.5 million endowment fund for a chair in WSU’s Viticulture and Enology Program. The sold out sixth annual gala raised a record total of more than $235,000, with net proceeds being dedicated to the new endowment.

Base funding for the position was provided in the Unified Industry-based Agriculture Initiative approved by the state Legislature this year. The endowment will fund the salary supplement and operating funds for the position.

“The wine industry is the fastest growing segment in Washington state agriculture and they need a well-trained workforce to continue to grow and expand,” said CAHNRS Dean Dan Bernardo. “This endowment will be used to attract a world-class leader for this growing program who is an internationally recognized scientist and possesses the expertise to expand research and marketing activities within the program.”

Washington is second only to California in domestic wine production with more than 30,000 acres providing an estimated $3 billion to the state’s economy. The industry grew out of research conducted at WSU more than a half century ago.

WSU Wheat Breeder in the News

Wheat breeders usually toil in obscurity. Washington State University’s Steve Jones may be the exception.

In June, Jones’ pursuit of a wheat variety that sprouts year-after-year instead of dying after producing seed was featured in the science section of the New York Times. Through crosses of wheat and wild grasses, Jones, Timothy Murray, chair and professor of plant pathology, and a bevy of graduate students, have bred perennial wheat that will sprout year after year. But significant challenges remain before growers get any seed.

Last fall, a front-page Wall Street Journal article mentioned how Jones and his colleagues at WSU use genetic markers to speed development of wheat varieties that resist fungal diseases. That research could be especially beneficial to farmers who wish to reduce their usage of chemical fungicides.

This summer, Jones was quoted in the July issue of Gourmet magazine in a story about wheat and its alternatives.

“And, In My Opinion....”

Washington Gov. Christine Gregoire explains her position to 4-H News reporter Kyle Simon, 17, of Cle Elum. Simon was among the nearly 300 attendees from across the state who gathered in Olympia for the 2007 4-H Know Your Government Conference. The theme of this year’s conference was the media’s impact on voter outcome. 4-H’ers took on the roles of reporters, editors, producers, photographers and researchers while working on issues for television, radio, newspapers and magazines.
Jim Cook Finally Got His Farm

Jim Cook gave up his dream of farming long ago to go into science. On June 28, the member of the National Academy of Sciences finally got his farm: The Washington State University Cook Agronomy Farm.

“It has been 50 years since I made that decision looking over my shoulder and looking at my bride-to-be that I’m not going to be a farmer,” Cook told an audience of 200 at the Precision Farming and Direct Seed Field Day. “Guess what? Now I am.”

During a career spanning 40 years at WSU, Cook, a plant pathologist heading the USDA-ARS Root Disease Laboratory, was the first R.J. Cook Endowed Chair in Wheat Research. In 2003, he was asked to serve as interim dean of the college.

Friends and colleagues heaped praise on Cook. “He is one of the most well-known spokespeople for agriculture in the western world,” said WSU President Emeritus Samuel H. Smith. “He can talk with anybody and explain things to anybody.”

Cook was instrumental in convincing the university to purchase the 140-acre Cunningham Farm north of Pullman in 1997 to study direct seed cropping and precision farming technology on a large scale.

Kidwell Begins New Adventure

Kim Kidwell, spring wheat breeder and award-winning teacher and advisor in CAHNRS, is the new associate dean for academic programs in the college.

She assumed her new responsibilities Aug. 1. “Kim is an energetic, visionary professional who brings a wide range of skills to the college’s academic programs and student recruitment efforts at both the graduate and undergraduate levels,” said CAHNRS Dean Dan Bernardo. “She is an accomplished scientist, an exceptional teacher and a great communicator. I’m looking forward to having a person of her caliber as part of the CAHNRS administrative team.”

Kidwell said she is looking forward to the opportunity to put her skills to work in a new way. “This is a natural and exciting progression in my career. It brings to bear all of the skills I’ve developed to this point. There is important work to be done, and I look forward to being part of the team,” she said.

Bernardo noted that Kidwell is the only WSU faculty member who has an active teaching program in both agriculture and human sciences. Besides her agriculture classes, Kidwell created and teaches Human Development 205, an experiential-based interpersonal communication course. She also teaches a graduate course involving advanced classical and molecular approaches to plant breeding.

Kidwell is a professor in the Department of Crop and Soil Sciences where she leads the spring wheat breeding and genetic research program. She has developed and released eight new varieties of spring wheat during her tenure at WSU. She will transition into her new position over the next three years to maintain the momentum of her spring wheat variety release efforts, fulfill existing research commitments, complete research involving patent-pending technology and document continual research productivity.

ALL IT TAKES IS TEAMWORK

Youth attending the 2007 4-H Teen Conference on the WSU campus in June work as a team to “turn over a new leaf” (represented by a small green tarp) while keeping both feet on it. Discussion followed as groups talked about what leadership skills helped them succeed. More than 100 Washington youth and adults attended this year’s conference. (Photo by Lisa Harness)
MAKE NO MISTAKE. Agriculture is a top priority of Washington State University, according to WSU President Elson Floyd.

The new president has re-established the institution’s commitment to one of the state’s largest industries at a number of events since assuming his new responsibilities at the end of May.

“Agriculture is vitally important to Washington State University,” Floyd told an audience at the Spillman Farm field day on July 12. “That is my promise. That is my pledge. That is my commitment to you.”

The new president said that, in his opinion, “We have allowed that commitment to slip over time... We can’t be all things to all people, but agriculture will be a top priority.”

Economic development also makes the top priority list, he said.

“This university already is a major economic catalyst for this community and this state,” he said. “Now, we are going to start quantifying and expanding that.” A concrete example is the president’s recent appointment of John C. Gardner as vice president for economic development and extension.

Floyd reaffirmed the role of WSU Extension and its offices in every county in the state. “Extension has been buried too deep in the organization,” he said. “Every county in the state has an Extension office, and we’re going to use that the best way we can. The land-grant university has a responsibility to do everything possible to improve the quality of life for Washingtonians.”

Gardner Named Vice President for Economic Development and Extension

JOHN C. GARDNER has been named to the new position of vice president for economic development and extension for WSU. He began July 1.

Prior to coming to WSU, Gardner was vice president for research and economic development at the University of Missouri where he worked closely with WSU’s new president, Elson S. Floyd, the former president there.

“Economic development is a vital part of what we do for our state and region,” Floyd said in announcing the new position. “To be as effective as possible, I think it is important for us to coordinate our efforts under unified leadership.”

Gardner’s first priority is becoming familiar with all of the assets and points of public contact that WSU offers statewide. In his first week on the job, he logged about 1,200 miles visiting campuses, research and extension centers, county extension offices and learning centers.

Gardner says that many people have an “ivory tower” notion that universities sit outside of the real world of trade and the economy.

“In fact, I think most people would acknowledge that we’re moving from an economy based on things to one that’s based on ideas, a knowledge-based economy” says Gardner. “If universities are reservoirs of knowledge, creativity and ideas, then that puts us at the center of the new knowledge-based economy.

“The bottom line is that the university has such a large role in the economy today and a larger role in tomorrow’s economy that we have to go about reorienting ourselves to acknowledge that role and play a productive part in it,” says Gardner. “My specific job is to catalyze that change at WSU among teaching, research and extension.”
Lauren Hall wants to “open people’s eyes to the possibilities of smart design. Aesthetics and profit are important, said the recent graduate of the interior design program, “but just as important is design that is efficient and environmentally responsible.”

This concept is embodied within the U.S. Green Building Council’s Leadership in Energy and Environmental Design program, the “nationally recognized benchmark for the design, construction, and operation of high performance green buildings,” according to their Web site.

Hall is serious about sustainability—so serious that she sat for and passed a design-and-build LEED examination usually only tackled by professionals. One of Hall’s teachers, interior design associate professor John Turpin, said, “it’s highly unusual for students to take and pass the exam. Having taken the exam, I can truly vouch for the amount of time and energy she had to commit to the process.”

Sustainable designers specify locally obtainable, environment-friendly and durable materials. They also integrate science to design smart. For example, Hall used special computer software and the WSU Lighting Lab to help her design a naturally lit building to reduce dependence on artificial sources.

Durability is a key issue for Hall, who sees a lot of the built environment tossed up for quick profit without any thought for overall quality and longevity—especially low-income housing. “It doesn’t have to be that way,” she said. “You can build within budget and still have something that lasts and is attractive.”

Having graduated in May, Hall plans to earn a graduate degree in architecture. And after that? “My goal,” the Kennewick native said, “is to come back to eastern Washington and spread the word about sustainable design.”

“I was surprised and a little embarrassed to be the center of attention,” Di Filippo said of the event. “I feel like I’m a good employee, but mostly I’m just a hard worker. I’m really involved in my job because it’s in my major—human nutrition. It’s easy to be enthusiastic.”

His boss, CAHNRS professor of human nutrition Terry Shultz, said Di Filippo’s performance goes far beyond the expected.

“Michael started out washing test tubes, autoclaving flasks and cleaning the hood, but soon also was helping doctoral graduate student Susan Fluegel perform cell cultures on human liver cancer cells. We also sent him for training on blood-borne pathogens and radiation safety procedures.

“We saw how he could be of help in another project—ongoing research into the benefits of milk’s whey proteins on lowering blood pressure in humans.”

Di Filippo, from Spokane, came to WSU “specifically for its outstanding human nutrition program.” He plans to graduate in May 2008 with a bachelor’s degree, and either go on for a graduate degree in human nutrition or registered dietitian credentials. In 10 years, he sees himself managing a clinical research team.

“Want to Learn More?”

WE’VE ADDED SOMETHING NEW to Connections. As you read through this issue, look for the “More on the Web” icon indicating that additional information is available online. By providing this additional content, we hope to strengthen our commitment to provide a “world class, face to face” connection with you.
The same type of bacteria that help break down paper mill waste could also become an increasingly viable source of environmentally-friendly biopolymers that can be used to make bioplastics, glues and composite building materials.

WSU Civil and Environmental Engineering Professors Mike Wolcott and Jinwen Zhang have teamed with other scientists and engineers at WSU, the University of California-Davis, the Idaho National Engineering Lab and the U.S. Department of Energy to focus on a class of naturally-occurring bacteria that produce and store polyhydroxyalkanoates, or PHAs, which are chain-like molecules called polymers found in plastics, glues, plants, and even mussel shells.

"Polymers are what bind the fibers together in wood or plants or plastics," Wolcott explained. "Until now, the plastics we've been using have been petroleum-based. We could reduce our dependence on international oil if we could make the way we produce PHAs more cost-effective and find new uses for a less-pure version of them."

Firms in the U.S., China and Brazil have commercially produced PHAs using fermentation techniques for many years. But, Wolcott said, the current process is expensive financially and environmentally.

Wolcott's research group is attacking both challenges. They are exploiting the fact that the same type of bacteria being grown commercially for PHAs are used by paper mills in their water reuse sites to convert phosphates into phosphorous.

"The production of PHAs by those bacteria has been fairly low," he said. "One challenge is to find the right environmental conditions at the waste water treatment site to enhance production... We are trying to get these guys as fat as possible. By regulating the treatment process, we can substantially increase the amount of PHA produced in addition to reducing the phosphates to a very low level."

Wolcott also has developed composite materials that can utilize a simple centrifuge process for extracting PHA into a crude form. This physical process is much less damaging to the environment and more economical than the current chemical extraction method. When used in the construction industry, the composites can provide a large market for crude PHA.

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**Bacteria Help Build Bioplastics, Naturally**

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It may be more economically and environmentally friendly to grow folate than it is to manufacture the water-soluble B vitamin linked with prevention of birth defects and heart disease, according to WSU researcher Sanja Roje.

Supported by the National Science Foundation, Roje is investigating—at the genetic level—how plants produce and use folate.

"Once we understand that," said Roje, an assistant professor in WSU's Institute of Biological Chemistry, "we can manipulate the genetic material to help plants produce more."

Most plants do produce folate, but not in significant enough amounts to be a practical source of the vitamin for humans and other animals. Consequently, a synthetic form of folate—folic acid—is manufactured for supplements and fortified foods. The synthesis process is less than environmentally friendly.

"Currently, we have to chemically synthesize folic acid in a process that produces a large amount of toxic waste," Roje said. "If we can develop plants that provide enough of the vitamin without synthesizing it, it would eliminate some of the production costs as well as the environmental costs."
PRESCHOOL BEHAVIOR MAY PREDICT ADOLESCENT AGGRESSION

It may be possible to identify young children who are likely to develop aggression problems and prevent that behavior from becoming reality, thanks to ongoing research by WSU Human Development Professor Nicole Werner.

Werner is among the first in the country to study relational aggression among pre-school children, which is the manipulation of individual or group relationships as a way to hurt peers.

“Children as young as age 3 use relational aggression,” Werner said. “The classic examples are when a child says ‘you can’t come to my birthday party’ or the pre-schooler version of the silent treatment (covering one’s ears to shut someone out). Even at that age, they have gotten the picture that they can use relationships to get what they want or to express anger.”

Much of Werner’s work examines the origins of that understanding. Focusing on the parents—primarily mothers—of preschool children, she has looked at the differences in how parents say they would respond to relational aggression (excluding a disliked peer) versus physical aggression (kicking that peer).

Deciding when to discipline

According to Werner, “There is less variation in how most parents respond to physical aggression. One hundred percent of mothers in one study said they would do something in response to their child’s physical aggression, but only about 50 percent would intervene in a case of relational aggression.”

The consequences of that are not surprising, Werner added. “Mothers who said they would be less willing to intervene in cases of relational aggression had children who were more relationally aggressive and less pro-social, helping, caring, etc. according to preschool teachers.”

The benefits of being able to detect relational aggression at an early age are significant, Werner said. “It is very possible that this is a behavior predictor of children who will have problems down the road; this might give us a way to identify, intervene and prevent those problems early in development, especially among girls. We haven’t had any early- to mid-childhood risk factor that has proven to be very viable up to this point.”

Effective Riparian Buffers Vital for Fish Health

The importance of riparian buffers to protect fish-bearing waterways has become a fact of life in Pacific Northwest agriculture. But what constitutes an effective buffer for protecting water quality? How wide do buffers need to be and what species should be included to be effective? Is it possible to generate an economic return from a buffer to help offset the cost of installation and maintenance and land taken out of crop production?

For three years, Associate Professor of Natural Resources Jon Johnson and his team have been conducting on-farm research in the Skagit Valley under a U.S. Department of Agriculture grant to find answers to those questions.

“Most of the previous research focused on upland, mountainous areas where two to three hundred foot buffers may be needed,” Johnson said. “Research has been lacking on how to manage floodplain riparian areas where agriculture is practiced, like the Skagit Valley.”

Johnson and his team installed 120 test wells and equipment on two farms bordering waterways in the Skagit Valley, to test impacts on the water quality of different buffer compositions. They planted two buffer plots with fast-growing hybrid poplar and two with red alder. An existing mature stand of native trees on the one farm also provided an opportunity to test its efficacy as a buffer.

“We tested water samples six times a year in each plot at various distances from the field to the waterway to determine the effectiveness of the trees in taking up nitrates and phosphates and keeping them out of the waterways,” Johnson said.

“What we’ve found is that where root systems reach the water table...a row of poplars [is]...very effective...in taking up nitrates and keeping them out of the waterway.” Johnson said that tests done in November and December when nitrate levels in were heaviest revealed 1,000 parts per million of nitrate in samples from the adjoining field, but only one part per million at the first row of poplars.

The U.S. Environmental Protection Agency standard for nitrates in drinking water is 10 parts per million.
Gene Research May Boost Dairy Herd Efficiency and Human Health

Basic research performed in WSU’s Department of Animal Sciences has found that dozens of genes change in dairy cows when they start milking. The finding eventually may help dairy producers identify those dairy cows that use feed most efficiently to make milk and stay healthy.

The research could also benefit humans by identifying gene patterns in adipose tissue, or fat, that best support breastfeeding and compounds made by cows that enter their milk and improve human health.

“The role of adipose tissue in reproduction has been a matter of study for decades,” said John McNamara, WSU Animal Scientist. “The pinnacle of adipose tissue function is reached in pregnancy and lactation, in which animals first store fat, and then use it during later pregnancy and lactation, followed by restoration for the next reproductive cycle.”

Excessive adipose growth is known as obesity. Understanding adipose tissue is critical in species survival, human breastfeeding, obesity and efficient food production.

“In addition to being a major energy storage organ, adipose tissue is a source of several regulatory and health proteins, including those controlling feed intake, inflammation and immunity,” McNamara explained.

Milking genes

McNamara’s research team analyzed gene expression in adipose tissue of dairy cattle in late pregnancy and early lactation. They found that in dairy cattle dozens of genes in adipose tissue change when the animals start making milk. Five major genes were shown to increase during lactation so that the cow can use her stored body fat to make milk.

These five genes included three that respond to nervous signals to allow body fat loss and two that allow lipase to break down fat for the body to use.

“These proteins have been studied intensively in the control of obesity, but little was known about their role in species survival during pregnancy and lactation,” McNamara said.

McNamara’s team also found that feeding supplemental chromium, a required dietary supplement, changed the expression of several critically important genes.

The scientists have filed a provisional patent application on use of the gene chip process to help identify animals that respond most efficiently to diet.

Not all trans fatty acids are nutritional villains. Shelley McGuire, WSU associate professor and nutritional scientist, is studying the breast cancer-preventing benefits of a specific natural trans fatty acid—conjugated linoleic acid or CLA—found primarily in cow’s milk and beef products.

In the late 1980s, scientists found that CLA inhibited cancer cell growth in animals, especially mammary tissue. Further studies indicated another surprise, that it also helped promote weight loss, which lead to the development of a synthetic version that today is marketed commercially. Experiments that increased levels of this synthetic CLA in the diets of dairy cattle revealed a reduced fat content of their milk.

Based on these studies, McGuire and her students are researching the role of CLA in the human breast and milk it produces during lactation.

The McGuire group discovered that CLA is a component of human milk, in concentrations equal to those in cow’s milk. “Given its anti-carcinogenic properties, we began to wonder if we might be able to lower breast cancer in lactating women by advising them to eat diets high in naturally-occurring CLA or consuming supplemental CLA? And if so, what would be the long-term outcomes in terms of maternal and infant health?”

McGuire explained that “While a woman is lactating, nearly every dietary fat introduced into her body is actively drawn to the breast for inclusion in the milk she produces. That might make it a perfect time to emphasize healthy fats such as CLA.”

Another question her research group is examining deals with the effects of taking CLA supplements to lose weight while breastfeeding. And what about the influence of synthetic CLA on milk fat content?

“More than 60 percent of a nursing baby’s calories come from milk fat, so understanding what regulates human milk fat content is critical to understanding normal infant nutrition,” McGuire said.
To burn or not to burn? That is one question that Jonathan Yoder, an associate professor in the WSU School of Economic Sciences, is examining in his research concerning the economic risks of wildfire mitigation.

Yoder’s research specifically focuses on the difficult economic tradeoffs and institutional barriers that must be confronted for a balanced approach to forest management and wildfire risk mitigation.

Since the Great North Idaho wildfires of 1910, wildfire policy in the United States has focused primarily on suppression of wildfires. But it is becoming increasingly clear that a narrow emphasis on suppression has its weaknesses.

First, Yoder explained, much can be done to lower risk before a wildfire ignites, such as reducing their fuel by clearing vegetation, especially around buildings and other highly valued properties. Second, excluding all wildfire from an ecosystem can erode its health and lead to more intense and destructive wildfires in the future, said Yoder. Prescribed fire may, in some circumstances, be a useful tool for managing wildfire danger and the overall structure of ecological systems.

“We are trading two different risks,” he explained. “It is true that prescribed fires do escape and cause damage. That is one risk. But what are the risks associated with not performing prescribed burning? Not managing vegetation growth can lead to even more damaging wildfires.”

The power of incentives

Yoder said current incentives for mitigating the risks of wildfire before they happen are too weak from an economic perspective.

First, most homeowner insurance covers damage caused by wildfires, so individual property owners have less incentive to invest in precautions against wildfire. Second, wildfires do not abide by property boundaries. Benefits from one landowner’s risk reduction efforts often spill over to neighboring landholdings, but the full cost of risk management are usually borne by the landowner alone.

Finally, Yoder cites public agency firefighting as another reason for weak incentives to reduce wildfire risk. “There are good reasons for publicly funded firefighting, but it substantially reduces the individual financial risk to the landowner, which in turn weakens the incentive for that person to invest in preventing or mitigating wildfire.”

Yoder’s research examines the effectiveness of two approaches to improve individual landowner risk mitigation. “One way to strengthen the economic incentives is to provide subsidies for vegetation reduction,” he said.

“Secondly, insurance companies are beginning to recognize that property owner incentives are too weak. In states such as Arizona, New Mexico and Colorado, some insurance companies are now requiring policy owners to meet certain risk mitigation standards.”

What’s Your Legacy?

Have you included the College of Agricultural, Human, and Natural Resource Sciences in your estate plan?

• In a bequest through your Will or Living Trust?
• As a beneficiary designation on your life insurance or IRA?
• Through a Charitable Remainder Trust or Gift Annuity?

The CAHNRS Alumni and Development Office and WSU Foundation Gift Planning Office will be happy to provide you and your advisors with examples tailored to your personal goals.

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Washington State University Foundation
WSU researchers feel like long-shot lottery winners after discovering that endangered Columbia Basin pygmy rabbits are once again breeding in the wilds of Washington.

Len Zeoli, a WSU doctoral student in the Department of Natural Resource Sciences, was shocked recently while doing field studies to see a young pygmy rabbit hop out of a burrow and just sit there looking at him.

“I could hardly believe my eyes,” said Zeoli. “We have been studying these animals daily for months, but did not have a clue that a female already had given birth to a litter of kits.”

Twenty of the endangered rabbits, which on average weigh less than a pound, were experimentally reintroduced to native sagebrush habitat in eastern Washington in March to determine if captive-reared females would breed in the wild after release. But within days, half of only eight females in the group were lost to predators, including coyotes, hawks and owls.

“Although the Washington Department of Fish and Wildlife quickly took steps to control predation, the odds of four female rabbits being able to survive the breeding season and reproduce were close to zero at that point,” according to Rod Sayler, conservation biologist at WSU. “We knew we were going to lose more rabbits and we did.”

Then, at the beginning of June, with only one female and one male surviving in the wild, Zeoli made two remarkable discoveries.

Renewed hope

“Len came rushing into the Endangered Species Lab at WSU a week ago, jumping up and down like an excited little kid,” Sayler said. “He had just found the sole surviving female digging a natal burrow and lining it with grass, the last step before she gives birth and hides her litter underground for about two weeks while nursing.

“Now he discovers a partially grown juvenile from another litter. This means that at least two litters of pygmy rabbit kits have been born in the wild. We feel like we’ve won the lotto.”

Dave Hays, endangered species coordinator for WDFW, agreed. “With so few rabbits reintroduced to the wild, and so many natural odds to overcome, the birth of two litters is both unexpected and exciting,” he said. Biologists viewed the initial release primarily as a learning tool to improve reintroduction techniques and boost survival rates in the future.

Steps to population survival

“The reintroduction of pygmy rabbits is a numbers game,” Sayler said, “because they are food for so many predators. To jump-start a pygmy rabbit population in the wild, we must release many more rabbits, or provide better protection from natural predators.”

“We’re working on new ways to exclude predators and improve female survival,” said Zeoli. “It will still take many years, lots of hard work, and maybe some more luck to reach the ultimate goal of restoring a self-sustaining population. But this baby step of seeing the first breeding in the wild by captive-reared animals renews hope that this endangered rabbit will not go extinct.”

Columbia Basin pygmy rabbits in Washington were declared endangered in 2001 by the U.S. Fish and Wildlife Service, after the one remaining population crashed for unknown reasons. Biologists rescued 16 wild pygmy rabbits to begin a captive breeding program at WSU and the Oregon Zoo just before the last known animals disappeared in the wild.

Go to academic.cahnr.wsu.edu/media/pygmy-rabbit.html for a video about WSU’s endangered pygmy rabbit breeding and release program.
The wood chips and sawdust were flying as the WSU Logger sports team successfully defended their title at the 2007 Association of Western Forestry Clubs Conclave last March in Idaho. The team faced tough competition from athletes all over the Pacific Northwest—and beyond—showing up to compete in feats of forestry prowess broadcast by ESPN's college sports channel.

The win was the team’s 12th straight victory. WSU Logger Sports dominated the competition, winning by 120 points. Each first-place victory earned the team ten points.

“It was a great team effort,” said Megan Pence, the team’s club president and political science major. “We represent WSU in style,” said Vice President Josh Goicoechea, an ag education major.

Both men and women compete in logging events at competitions in the western United States, which include a variety of chopping and sawing events that determine who is the fastest and can demonstrate the most finesse.

Goicoechea described chain-saw races as “the NASCAR of logging competitions.” Then there’s ax throwing, which is scored by depth of impact and accuracy of throw. The agility of competitors is tested in log rolling and pole climbing events, which also are timed. Competitions regularly include tests of woodland knowledge such as the ability to identify plant species and navigate through dense forest with only a compass.

A diverse competitive field

Participants come from a wide variety of majors and backgrounds, including political science, pre-vet, finance, construction management, civil engineering, agricultural education, animal science, natural resource sciences and history.

“Several team members have some sort of logging or forestry background, but most of us don’t,” said Pence. “We have a winning reputation,” said Goicoechea, and that’s helped recruit new members eager to compete in a challenging sport. “But as serious as the competition gets,” he added, “cooperation rules the day among the participants. There’s always good-spirited competition, and everyone places a strong emphasis on safety.”

Pence agreed. “One of the best things about competing in logging sports events is that everybody makes friends all over the West Coast,” she said.

“That, and chopping wood,” said Willi Boni, the team’s finance and entrepreneurship major. “Chopping wood is what it’s all about.”
Though decades apart in age and training, the 2007 recipients of the CAHNRS Women's History Recognition Award have at least two things in common—they are WSU alumnae and excel in the classroom as well as their research and service.

Sherill Richarz and Mary Wiedenhoeft were recognized during the annual celebration of Women’s History Month this spring. CAHNRS is the only college at WSU that honors its alumnae with such an award.

Richarz and quality teaching for children

Richarz’s career in early childhood education spans more than three decades. She earned her master’s degree in childhood development from WSU in 1977 and became a leading advocate for young children and the people who care for them in Washington and beyond.

“Sherill was one of the early visionaries and workhorses in the struggle to bring much needed credibility, status and resources to those who serve young children and their families,” wrote human development Professor Brenda Boyd, who nominated Richarz for the CAHNRS award.

Richarz was key to the implementation of Head Start in rural and migrant communities and expansion of its training and program development across the Pacific Northwest and Alaska. In addition, she was a founding member of the Washington Association of Educators of Personnel in Early Childhood Education, and in the early 1990s, served as co-chair of the Early Childhood Career Development subcommittee of the state’s Child Care Coordinating Committee. She also took the lead in the development of the preschool-third grade teaching credential at WSU.

In the classroom, Richarz—who retired from WSU in 1998—was known as a positive, supportive mentor who encouraged her students to excel.

Now 80, she has watched early childhood education and childcare change dramatically since she first began working. “In the beginning, preschool was more of an enrichment experience for upper middle class kids, whose mothers weren’t working,” she said. “The profession is still up against acceptance by people who think quality childcare is nothing more than ‘watching’ children.”

Wiedenhoeft on agronomic and student growth

Wiedenhoeft, who earned a Ph.D. in crop science from WSU in 1986, currently is a professor of agronomy at Iowa State University. She is nationally recognized for her teaching excellence, receiving the Agronomic Resident Teaching Award from the American Society of Agronomy in 2005.

“I try to put the information into context and have my students use the information right away, so it’s not just a bunch of disconnected facts,” Wiedenhoeft explained. “Our job is to teach our students to be independent thinkers and problem solvers.”

She also has built a strong research program in the areas of sustainable agriculture and alternative crops, including winning funding for work with flax production in Iowa.

Wiedenhoeft said the field of sustainable agriculture has changed considerably in the past two decades.

“At first, it was just something for the kooky hippies,” she said, smiling. “Then it became a buzz word with everyone trying to put their own slant on it. Now, people are really interested in it and care. They understand that we need it more than ever because some production systems don’t take into account externalities like the economy, the environment and human beings.”

Wiedenhoeft attributed much of her success to her WSU professors. “You encouraged me. You taught me. You pushed, and you inspired me,” she said. “Thank you for that.”

CAHNRS Women’s History Recognition Award Nominations

The CAHNRS Women’s History Committee is seeking your help in identifying graduate women for two annual awards based on outstanding contributions in the following areas:

1. Community Leadership & Public Service
   For those who have distinguished themselves in their community (local, regional, national or international) through leadership, public service or any combination of these activities.

2. Professional & Academic Leadership
   For those who have distinguished themselves in their profession through career contributions, research and development, publication or any combination of these activities.

Please consider nominating graduates who would make good candidates for these awards during the 2007–08 academic year.

Forms can be found at www.cahnrsalumni.wsu.edu/events. We look forward to your nominations of our outstanding graduates.
A TRACE OF HISTORY
Memory of Historic Greenhouses to be Preserved in Display Garden

BY BRIAN CLARK
MARKETING AND NEWS SERVICES

There’s more on the Web! Please visit cahnrsalumni.wsu.edu/connections.

Thousands of students have passed through the trio of greenhouses built in 1951 on Wilson Road. This spring the venerable greenhouses were torn down.

Gone—but not without a trace. At the suggestion of former WSU President V. Lane Rawlins, the two-thirds-acre site of the old greenhouses will be reused as a horticulture and landscape architecture display garden. Phil Waite, associate professor of landscape architecture, is heading up the project.

“The design of the garden will be focused on keeping some of the history of the previous users of the site in place,” Waite said. This way, the thousands of alumni who worked or took classes in the greenhouses will be able to come back and peruse the walls and walkways that remain as traces of their personal history.

“The proposed display garden is in a very public location,” Waite continued. “It’s adjacent to the French Administration and Lighty Student Services buildings, Lewis Alumni Centre and Ensminger Pavilion—all locations frequented by campus visitors.” As new and prospective students form an impression of WSU within minutes of their arrival, the garden will serve as a potent “visual sound byte.”

Waite and his students will design and build the display garden over the course of the next four or five years. While he has created conceptual plans that elegantly fill the site, it’ll be up to students to create working designs—and build from those plans. “Horticulture and landscape architecture students from four different courses will be directly responsible for the design, construction and maintenance of the garden,” Waite said.
The Changing Face of Western Washington R & E Centers

By Denny Fleenor • Marketing and News Services

WSU’s Puyallup and Mount Vernon research and extension centers have a long history of contributing to Washington’s agriculture, and continue to keep pace with the issues local communities face today.

The Puyallup REC was established in 1894 as part of the state’s agreement to accept federal Hatch Act funds for the founding of what was then called the State College of Washington.

The REC at Mount Vernon got its start during World War II when vegetable seed growers in five northwestern Washington counties needed help to challenge serious disease and pest threats. By 1948, the State College of Washington was operating out of a permanent research station.

Today, both facilities are gearing their missions and facilities to address anticipated future challenges.

Mount Vernon

In Mount Vernon, an $8 million investment, more than $2 million provided through community support, has transformed what was a nearly 60-year-old unit into a “full stand-alone research and extension center with state-of-the-art facilities,” said interim director Debra Inglis. “It’s been very exciting.”

On a wet Wednesday evening last December, a standing-room-only crowd of more than 200 people joined WSU President V. Lane Rawlins, CAHNRS Dean Dan Bernardo and other dignitaries to dedicate the centerpiece of the revitalized facility, the Agricultural Research and Technology Building.

The ARTB replaces some 15,000 square feet of obsolete and substandard space. It provides nearly 19,000 square feet of state-of-the-art laboratories for entomology, fruit horticulture, vegetable horticulture, vegetable pathology, seed pathology, water resources and weed science. The building also includes office and administrative space and a public auditorium and demonstration kitchen.

Rawlins told the crowd that the facility is representative of the university’s commitment to live up to its “world class, face to face” slogan. “This is a resource that will foster world-class research that will affect the whole world,” Rawlins said. “This facility is a joint statement by WSU and this community that we are first class. We will work to be the best.”

The expanded facility is allowing the REC to expand its staff and provide a more integrated multidisciplinary approach to agricultural research and outreach. The faculty has already grown to include an entomologist, vegetable horticulturist and value-added product specialist.

The Olsen Heritage House provides nearby housing for graduate students, post-doctoral researchers and visiting scientists to further support research activities. It’s a classic 1914 farmhouse completely refurbished thanks to the efforts of Skagitians to Preserve Farmland and the generosity of Allan Osberg, grandson of the original occupants.

Inglis said the transformation at the Mount Vernon facility was about more than the planning and coordinating of a new physical facility. “The whole effort has really helped us renew and strengthen our relationship with the community.”

The public auditorium is already proving to be an important community asset, as Inglis is able to tick down a list of classes and meetings held there.

“Our REC came into being because of grower and community involvement more than 60 years ago. It’s only fitting that community involvement and financial support have helped us provide a new facility that will support agriculture in northwestern Washington and throughout the state well into the 21st century,” Inglis said. “We all have a great deal of optimism for the future.”

The Agricultural Research and Technology Building is the centerpiece of the revitalized WSU Mount Vernon Northwestern Washington Research and Extension Center.

(Photos provided by Kathy Gleisner, NWREC)
Puyallup

Changes to the physical facilities at the Puyallup REC aren’t as dramatic as those at Mount Vernon, but its shift in mission reflects the dramatic changes in the surrounding community over its 113-year history.

In 1894, the Puyallup valley was a sparsely populated farm community and most of western Washington was agrarian. Puyallup REC director Jon Newkirk likes to point out that today, 60 percent of the state’s population is within 50 miles of the WSU facility.

“In real estate they talk about the importance of ‘location, location, location,’” said Newkirk. “Since we’re located in the center of the state’s urban corridor, we offer a real opportunity for WSU to engage urban communities through Puyallup.”

Newkirk adds that “We are now an urban-based center committed to supporting sustainable communities,” which he distinguishes by good long-term health prospects.

The political environment is ripe for WSU programs that promote sustainable communities, according to Newkirk. “Almost every local government from Vancouver to Blaine has adopted sustainability policies. Political leaders are clear about their desire to clean up Puget Sound, restore salmon runs, support organic and sustainable agriculture, find alternatives to petroleum products and address the impacts of climate change.”

Newkirk is quick to point out that community impacts are not a product of location or facilities, but of faculty and staff commitment and program quality. The Puyallup REC has nearly 125 faculty members and staff implementing more than 20 programs providing research, extension and education services to the region’s citizens in support of the sustainable communities concept.

Among those programs Newkirk highlights are in the areas of youth development, organic and sustainable farming, and nutrition and diabetes education, which last year recorded more than 100,000 educational contacts.

A role model for sustainability

Newkirk intends to use the Puyallup REC as a dynamic example for techniques to sustain long-term community health; in other words, to walk the talk. Plans call for retrofitting the campus using low impact development techniques such as installing rain gardens and pervious paving materials to prevent stormwater runoff. Already initiated is a five-year community effort to restore banks on the salmon-bearing Clarks Creek that borders about 3,000 feet of the REC property.

New laboratory facilities give the faculty and staff additional tools for more extensive research. “We’ve added a molecular science lab, a biocontainment facility for research on plant pathogens like Sudden Oak Death, a fish toxicology lab, and we’re working to develop a state-of-the-art water quality lab,” Newkirk said.

On the educational front, the Horticulture and Landscape Architecture faculty are working with area community colleges to develop a degree program that should be in place in 2008. The long-term goal is to offer up to three degree programs.

Community interaction

Newkirk believes the Puyallup REC will be able to continue offering exciting new programs via expanded funding sources because of its urban location and strong program base.

“We think we have great opportunities for new programs to use our resources to interact with urban communities on such issues as sustainable development, urban integrated pest management, water quality and natural resources issues, agricultural systems, nutrition education and bioenergy,” Newkirk said. “We believe the future at Puyallup is really bright.”
A Fruitful Partnership

Research Joins Industry to Lead Washington to Top of U.S. Tree Fruit Market

BY KATHY BARNARD
MARKETING AND NEWS SERVICES
“In some of the more sensitive varieties, I could pick just half of the crop and then only about half of that could be packed,” he remembered.

Larry Schrader, a scientist at the WSU Tree Fruit Research and Extension Center in Wenatchee, had a solution. He developed an apple-like sensor to measure the fruit’s surface temperature to let orchardists know when a cooling spray of water over the orchard canopy would be most effective in preventing sunburn. (See related story on page 20.)

“I used that sensor in one block,” Fuller said. “The first year, I used a third of the water for cooling I’d used in the past and ended up with four times the amount of sellable fruit.

“Now that is answering a problem for industry,” he continued. “I can put dollars and cents to it. And that’s just one example.”

Seventy years of support and partnership

The 70-year partnership between WSU and the state’s tree fruit industry includes hundreds of success stories like the orchard sunburn sensor.

Growers and scientists working hand-in-hand have led Washington to the top in terms of tree fruit sales. The annual economic impact of the tree fruit industry is around $6 billion, by far the highest of any agricultural product. The state is the largest producer of apples, pears and sweet cherries, both fresh and processed, in the U.S. Washington consistently grows more than half the apples in the country, and well over three-quarters of its pears and sweet cherries. Around one-third of Washington’s fresh fruit is exported. The Washington apple is known and respected around the globe as an icon of quality.

The researcher-grower partnership didn’t happen by accident. At the urging of the Washington State Horticultural Association, the state legislature established an experiment station in Wenatchee in February 1937 with an appropriation of $62,500 and a clear message to focus on tree fruit. The TFREC has since become the hub of a statewide tree fruit research and extension program led by the CAHNRS Agricultural Research Center and WSU Extension.

Since the TFREC’s inception, researchers have focused on apples, pears and sweet cherries, along with some investigation of apricots, peaches and plums. Their study includes all phases of orchard culture, pest control, fruit harvest and handling, fruit maturity, grading and packaging as they relate to the basic sciences—plant physiology, entomology, plant pathology, soil science, horticulture, economics and biochemistry.

Results

TFREC entomologists pioneered Integrated Pest Management by helping growers find pesticide alternatives or supplements to control a variety of pests from mites to codling moth. Many say there wouldn’t be an organic tree fruit industry in the state had it not been for the research of curr-
recent and former TFREC Directors Jay Brunner and Stanley Hoyt, respectively. Brunner’s development of a way to use pheromones to disrupt codling moth mating and Hoyt’s initiation of biological control of mites allow orchardists to manage these devastating pests and still grow healthy organic crops. (See related stories on page 21.)

WSU apple breeder Bruce Barritt is working with new CAHNRS faculty on bioinformatics and genomics to use data-mining techniques to identify and isolate genes that carry desirable fruit characteristics. (See related story on page 23.)

Mitigating what happens to fruit after it’s harvested is another strength of the program. Researcher Chang-Lin Xiao studies post-harvest fungal diseases in apples and pears to determine their relationship to handling and storage conditions. He’s discovered that many problems begin in the orchard even though they don’t manifest until after harvest. WSU Extension specialist Gene Kupferman works closely with the fruit packing industry in Wenatchee on issues surrounding the use of chemicals in post-harvest storage and packing. (Read more at cahnrsalumni.wsu.edu/connections.)

Sustaining success

The Washington State Tree Fruit Research Commission funds much of the research WSU scientists conduct at the TFREC. Local growers used their own funds to create the Commission in 1969, and currently assess themselves for each ton of fruit produced, which is used to fund a small staff and approximately $3.5 million worth of research annually, most of it performed by WSU faculty.

“The tree fruit growers of the state have always been an innovative lot and always wanted to be more effective and efficient in their operations,” said Brent Milne, a third-generation tree fruit grower. He is assistant manager of the Wenatchee-based McDougall & Sons Inc. orchard and packing company and a WTFRC board member. “The WTFRC was formed by some pretty exceptional people who had a bigger vision for the industry.”

Both Milne and Fuller consider their relationship with WSU a true partnership.

“WSU is invaluable at keeping us on the right track into the future,” said Milne, who also is a WSU alumnus.

At any given time, WSU scientists have numerous projects underway at Fuller’s orchard. “We go to them. They come to us. There’s no dividing line,” he said.

Another key partner for the tree fruit industry in Washington is the USDA. Scientists with the ARS are co-located at the WSU TFREC and work closely with WSU researchers.

(continued on page 22)
Pioneers of Integrated Pest Management

Tree Fruit Research & Extension Center Entomologists Pioneer Environmentally Friendly Pest Control

If it has to do with managing insect pests to grow better tree fruit, chances are it originated at the WSU Tree Fruit Research and Extension Center in Wenatchee.

For decades, entomologists here have pioneered environmentally friendly ways to control the myriad insects that make growing quality tree fruit difficult, or in some cases, impossible. In the tree fruit industry, names like Stanley Hoyt and Jay Brunner are synonymous with innovative solutions for pest problems.

“This wasn’t a very large research station until after World War II,” said Hoyt, a former TFREC Director. “That was when we started having three entomologists here; the insect problems were really raising their head.”

Hoyt is generally credited with starting what has become a world-renowned integrated mite management program for apples. His work on biological control of mites began in the early 1960s when spider mites threatened the entire apple industry.

After extensive research and observation, he found that the miticides growers were using did a better job of killing the mites’ natural predators than the mites themselves, which had quickly developed a resistance to the chemical.

Outsmarting the pests

In 1965, working with local WSU Extension educator Bill Hudson, Hoyt set up what became the first large commercial use of Integrated Pest Management. Growers found relief by avoiding insecticides that damaged natural predators and either reducing or eliminating other chemicals such as fruit thinning agents or changing the way they were applied. The result? A healthy crop with fewer pesticides and less money spent on inputs. “The predators did the job, and we took the credit,” Hoyt has said.

Brunner tackled another nemesis of tree fruit—the codling moth, literally the “worm in the apple.” He developed a way to use pheromones to disrupt the moths’ mating cycle, thus reducing reliance on broad-spectrum insecticides.

Brunner and Hoyt’s work gave rise to the new and burgeoning organic tree fruit industry, which many say would not exist without their ground-breaking efforts.

“When I first started,” said organic orchardist Ray Fuller, “there were not very many tools to use in pest control. It was more a matter of ‘Well, that block has more codling moth; it’s the first to go.’”

Applying ecological principles

Brunner said IPM has been the basis for the success of the Washington tree fruit industry in the recent past and will be the basis of its success in the future.

“Pest management evolves naturally from an understanding of biological processes,” he said. “More and more, the reliance on conventional broad-spectrum insecticides is diminishing in many apple orchards as new pest control tactics are introduced. Along with public concern about pesticide residues on food and farm worker safety issues, the development of pesticide resistance in pests, especially codling moth, has brought a new sense of urgency for alternatives. The challenge for researchers is to develop alternative pest control tactics as part of a complete management program that maintains the yield and quality expected by growers and demanded by consumers.

“I firmly believe that IPM, which is grounded in the principles of ecology, is the best stewardship blueprint for agriculture.”
Jim Hazen, executive director of the Washington State Horticultural Association.

“On the whole, what we do is complementary to what the WSU researchers do—nothing competitive,” said Jim Mattheis, ARS laboratory leader, WSU alumnus and plant physiologist specializing in fruit quality and fruit ripening. “And that has not happened by accident. We work hard to maximize the resources we have.”

Jim Hazen, executive director of the Washington State Horticultural Association, said he believes the entire partnership has given Washington growers a competitive edge.

“The individuals in the association are very forward thinking because of that research base,” he said. “It helps them see around corners. For example, the ARS and WSU played a key part in identifying the elements that define quality in tree fruit—that has helped hold our position in the world market.”

Labor is biggest challenge

When asked to identify the largest issue Washington tree fruit growers will soon face, Fuller and Milne don’t hesitate. “Labor,” they answer in unison.

Currently, both growers say they’re managing. But it’s getting more and more difficult. “We’re still harvesting a crop,” Fuller reports, “but the labor

(continued from p. 20)

When the Washington State Tree Fruit Research and Extension Center was founded 70 years ago, it literally was out in the middle of nowhere. Gradually, though, the city of Wenatchee grew up around it, leaving no room for expansion and causing the imposition of restrictions on research activities.

A new orchard site just southeast of town is “large enough to accommodate our tree fruit research and education programs, but also provides the opportunity to expand into some other interesting areas of fruit research, such as wine grapes and some of the berries,” according to TFREC Director Jay Brunner.

Although Wenatchee is the hub of WSU’s tree fruit research program, Brunner points out that scientists in other parts of the state are also conducting important work that can benefit from the TFREC expansion. Notable examples are Gary Moulton’s cider apple production from the WSU Mount Vernon Northwestern Washington Research and Extension Center and Markus Keller’s advancement of the state’s wine grape industry from the WSU Prosser Irrigated Agriculture Research and Extension Center.

Room to grow

The WSU Board of Trustees approved the purchase of Sunrise Orchards in March 2006 to help compensate for selling 70 of the TFREC’s original 100 acres three years ago to the Wenatchee School District because of encroaching housing development.

The new TFREC site includes 150 acres of orchard property, 20 acres of highway frontage and 137 acres of undeveloped land. (Photo by Randy Dawson)

The TFREC office, labs and shop will remain on the 30 acres still owned by WSU in Wenatchee. The new site includes 150 acres of orchard property, 20 acres of highway frontage and 137 acres of undeveloped land.

Thousands of young apple, pear and cherry trees were planted at the new orchard in May. Washington nurseries, including VanWell, C&O and Columbia Basin Nursery, donated all of the trees. Similarly, local growers and businesses donated equipment needed for the planting.

Brunner said that some of the newly planted trees will be useful for research by next year, but the majority will require three years of growth before they bear enough fruit to study the effects of pathogens.
“Apple breeding is like looking for a needle in a haystack,” said Bruce Barritt, the scientist who leads WSU’s apple breeding program.

“We work with huge populations of seedlings,” Barritt said, looking for desirable traits: the apple that is crisp, tart yet sweet, and pleasing to the eye. “It’s all about the consumer,” he added. “We use the molecular tools available to make the selection process more efficient.”

Barritt’s “haystack” is the thousands of trees he sorts through in the search for new varieties. Meanwhile, some of his colleagues are searching through a very different kind of haystack: the genomes of members of the plant family rosaceae.

Rosaceae includes Washington’s largest crop—apples—as well as cherries, peaches, berries, almonds, roses and some 4,000 other species. In terms of economic value, rosaceae is the third most important family in temperate regions of the world, including the U.S., where its aggregate wholesale value is approximately $7 billion. “Apples are a $1 billion crop in Washington alone,” noted Barritt.

A team effort

“We are looking at 250,000 gene fragments and pulling out what’s meaningful,” said WSU bioinformaticist Dorrie Main. Bioinformatics is a relatively new science that employs computer databases to manage huge amounts of biological information.

The meaningful gene fragments pulled from the haystack are then turned over to horticultural genomicists Amit Dhingra and Cameron Peace, both assistant professors and scientists in WSU’s Department of Horticulture and Landscape Architecture.

The two genomicists work with growers to identify desirable traits. “Growers are the real scientists,” said Dhingra. “They have all sorts of knowledge gained in their fields and orchards that guide us in our research.”

The scientists are able to zero in on desirable traits using a technique called marker-assisted selection. A marker is simply a recognizable feature of the genetic landscape that is associated with a trait of interest.

The texture of an apple—how firm, crisp and juicy it is—is indicated by genes that code for a plant hormone called ethylene. The tartness of an apple is produced by malic acid, which also is correlated with a specific gene. Some characteristics, though, such as sweetness or size, are not so easy to locate on the genetic landscape.

Genetic markers for sweetness have to be “teased out of the genome,” said Barritt.

Traditional variety breeding requires scientists to wait up to ten years to see the fruit a selected tree bears. The process is not only painfully slow but expensive, too. Marker-assisted selection speeds up the process, greatly increasing the efficiency of the breeding program.

“It’s still a work in process,” Barritt said, “but we have an incredible team.”

— Brian Clark
A Softer Approach

Organic Tree Fruit Industry Continues to Grow

For Ray Fuller, the decision in the mid-1980s to raise tree fruit organically was a personal choice. “I was looking at spending many years as an orchardist and spending a lifetime around pesticides wasn’t going to be a good thing,” he said. “I wanted a softer approach.”

Easier said than done at the time. “There was very little information and very few tools on organic,” Fuller said. “I was bugging the guys here at the (WSU Tree Fruit Research and Extension) Center all the time.”

He credits scientists like Jay Brunner, director of the TFREC, with helping address some of the most pressing issues. Brunner developed a way to use pheromones to disrupt the mating cycle of codling moth, one of the most pervasive and destructive pests of tree fruit. “Before Jay’s work, it was ‘That block has more codling moth; it’s the first to go.’”

Since the 1980s, the organic tree fruit market has grown tremendously. In Washington, more than 10,000 acres of tree fruit orchards are certified organic, and that number continues to rapidly grow. The state of Washington produces more than half of the organic apples grown in the U.S.

“Tree fruit has been the hottest crop in the organic market,” said David Granatstein, WSU Extension educator with the Center for Sustaining Agriculture and Natural Resources and a former organic farmer himself. “There are more and more markets and more and more tools for organic growers to use.”

Granatstein calls organic farming “a blend of tradition and science.” Because organic growers are prohibited from using most farm chemicals, they have to find alternatives for fighting weeds and insects as well as fertilizing.

Responding to this need, Granatstein’s current research focuses on orchard mulch to discourage weeds. He is testing a variety of substances—everything from wood chips to “living” mulches such as thyme and sweet woodruff.

“We’re not there yet, by any means, but we’re learning and making progress,” he said.

But is it safe?

E. coli in spinach, contaminated wheat gluten in pet food, bird flu—these are just a few of the recent headlines that have consumers worried about the safety of our food supply. Farmers have parallel concerns from pathogens that continually threaten the most basic components of the industry, the seeds and rootstock upon which grow the fruits of the field.

Counteracting such food safety fears is a nation-wide initiative that helps make Washington one of the most reliable sources of safe, high-quality food.

Funded by contributions from growers and grants from USDA, the National Clean Plant Network strives to supply growers with plant stock that is free of viruses and other diseases. As a regional partner, WSU works to keep the state’s agricultural industry competitive, economically viable and environmentally sustainable.

“This project is a very high priority for the university,” said Ralph Cavalieri, associate dean and director of the WSU Agricultural Research Center. “It’s one of the most important things we do for the tree fruit industry.”

Unlike fungal and bacterial infections, viral diseases can’t be controlled using chemicals. And there’s no way to stop infection once it’s gained a foothold in an orchard. Keeping viruses out of the nation’s agricultural production chain thus depends on prevention and vigilant testing of plant DNA to detect pathogens.

It’s estimated that the Network’s efforts annually contribute $27 million to the U.S. economy by reducing loss and improving the availability of fresh produce.

— Brian Clark
shortage mostly means we may not be getting the fruit picked at the optimum time or we can’t get apples and pears thinned because we’re competing with the cherry harvest.”

WSU researchers are working with growers to tackle the issue.

“We just hired a project manager to help us project how much labor we’ll need in the future, where we’ll get it, and how much housing we’ll need,” said Milne.

An evolving consideration on this front is the changing dynamics of the workforce. What used to be either an all-male or family occupation for migrant workers is now primarily held by second generation migrant females whose spouses are working at higher paying jobs.

Growers are also concerned about harsh working conditions. “We’re trying to make the orchard work easier on the body,” Milne said.

For example, the “fruiting wall” type of orchard planting system results in trees so close together and uniformly shaped that orchard workers can pick much more efficiently. In many cases, two feet separate individual trees rather than the traditional 10 to 12 feet, and a row is just two feet deep. The area between rows has been reduced from 18 to 10 feet. Pickers no longer have to climb tall ladders or reach deep into the canopy for a piece of fruit. The result is less stress on workers’ bodies and a shorter, more cost-effective harvest.

Growers hope that the lowered stress on workers and increased efficiency will encourage them to think about expanding their job skills. “In the future with the advent of more robotic technology, an orchard worker will really become a skilled technician who can operate machinery and repair it in the field,” Milne said.

Both Fuller and Milne agreed there are significant barriers to complete mechanization of tree fruit harvest.

“Our products are fragile,” Fuller said. Especially when compared to rough-and-tumble citrus, apples, cherries and pears have to be picked with a minimum amount of force and can’t be dropped without damage.

“We’re facing more competition in the marketplace,” Fuller said. “We have to have higher quality. That means training orchard workers to be more selective with what they pick, more careful about how they pick—all of that.”

“We’re looking for the quantum leap” in labor management, said Milne.

That’s why, Fuller and Milne said together, the “working partnership” with WSU is “invaluable.”

CONTROLLING POST-HARVEST FRUIT ROT

Chang-Lin Xiao (above), a plant pathologist at the WSU Wenatchee Tree Fruit Research and Extension Center, has discovered three previously unidentified pathogens responsible for causing post-harvest rot in apples and pears in the U.S. Two of his findings were the first in the world at describing a new fungal species. Post-harvest rot in stored apples and pears is a multi-million dollar problem for Washington growers.

Read more at cahnrsalumni.wsu.edu/connections.

Read more about the history of Washington’s tree fruit industry at cahnrsalumni.wsu.edu/connections.
A team of WSU architecture, landscape architecture and interior design faculty and undergraduate and graduate students headed to China and Tibet last May to get a rare look at how people there design, furnish and occupy their homes.

Led by Professor Nancy Blossom, director of the Interdisciplinary Design Institute at WSU Spokane, and architecture Professor David Wang, the group spent three weeks working with their counterparts from Xi’an University in China and Tibet. The goal of the trip was to promote research that crosses academic disciplines as well as national boundaries. Specific objectives focused on understanding how the local population uses local materials and customs in its architecture, landscaping and home interiors to respond to the natural environment.

“There is great potential for new research in this field,” Blossom said. “There has been very little research in terms of materials used within the home, kinds and use of furniture—basically on how Tibetans are using their homes. Our first job is to document exactly what the actual model of ‘Tibetan living’ is.”

The other major challenge Blossom described was how best to intervene in the influence of westernization on China’s history and culture. With the influx of globalization byproducts such as strip malls and McDonald’s on every corner, “there is much more to be lost,” she said.

**Trip results from long-term collaborative relationship**

The WSU Design Institute and Honors College have nurtured a collegial relationship with the Xi’an University of Architecture and Technology and its Green Architecture Research Center since 1997.

Most recently, Professor Liu Jiaping of Xi’an University was invited to participate in the Design Institute’s third annual Design Research Focus Week in Spokane. That presentation featured Jiaping’s work in China on sustainable architecture and the use of local materials. Specifically, he studied the “yaodong,” a regionally specific type of home that has evolved from cave dwellings.

While in Spokane, Jiaping invited the WSU team to partner with him to record and develop designs for sustainable, vernacular housing in the Tibetan countryside. The following students participated:

- **Warren Cent**, a fourth-year architecture student from Seattle
- **Aaron Pasquale**, a fourth-year architecture student from Tacoma
- **Stacy DeKoekkoek**, an undergraduate in interior design from Bothell
- **Lynne Gearheart**, a graduate student in landscape architecture from Palouse
- **Susan Hall**, a graduate student in interior design from Nashville, Tenn.
- **Ami Keiffer**, a graduate student in interior design from Keizer, Ore.
- **Jacklin Kingen**, a fourth-year architecture student from Yuma, Ariz.
- **Andrea Read**, a fourth-year architecture student from Chino Hills, Calif.

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What have you done recently? Share your news with classmates by filling out the form below and mailing it to: Connections, CAHNRS Alumni & Development Office, Washington State University, PO Box 646228, Pullman, WA 99164-6228. Or, e-mail your information to: nitcy@wsu.edu. Please type or print clearly.

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J E A N I N E  S T I C E  thought she wanted a career in the hotel business. Until she took Nutrition 101, that is. Then she quickly changed her major to Home Economics. When she graduated in 1987, she was one of the first recipients of a B.S. in Food Science and Human Nutrition. Living now in Salem, Ore. with her husband and three sons, Stice recently wrote in her Statesman Journal column, “I was in the first class to graduate from Washington State University with a degree in Food Science and Human Nutrition rather than Home Economics. Another senior and I lobbied the dean to make this change, as we both felt it was a disservice to dole out a degree that would be difficult to market in a world that valued the home less and science more. We made our point. He agreed to change the degree’s name.”

The degree in FSHN has served Stice well. She’s worked as a dietician in a wide variety of settings. Her degree in FSHN led to an internship at Massachusetts General Hospital in Boston, where she was able to participate in a dietetics program that had preserved its original brick ovens and made all their food from scratch every day.

Major transitions: Hurricane Hugo, family and career

A year later Stice earned a Master’s in public health from the University of North Carolina at Chapel Hill, which led to a position as a clinician at a hospital in Charleston, S.C. She arrived just in time for Hurricane Hugo’s 1989 destruction of the Ben Sawyer Bridge, tossing of the roof off City Hall, and battering of the populous coastline.

Knowing the storm was on its way, Stice packed everything of importance she could fit in her Honda Civic and set out to evacuate along with almost everyone else in the city. But duty called: she was needed at the hospital.

After working all night moving supplies to upper floors and protected interior spaces, Stice said that coming outside the next morning was “kind of Wizard of Oz—the town looked nothing like it did the previous day.”

Shortly before Hurricane Hugo, Stice met her future husband through a common friend from Chapel Hill. While he was earning his medical degree, Stice worked as a nutritionist, doing home visits and collecting data on high-risk, low birth weight infants in order to better calibrate nutrition care after hospital discharge.

After her sons were born, Stice continued working part-time as a pediatric dietitian and later in adult weight management. She also developed an internship program for South Carolina that enabled home economists to become registered dieticians. The program is still in use because it “allows people with families to move up in their careers,” she said. A lot of the work Stice did to get the program running involved bridge building between partners to ensure interns would have willing and nearby preceptors. “So many home economists could never have gone to Boston or wherever to do an internship,” Stice said.

Extending the field of dietetics in the real world

“What’s been so great about dietetics is the range of work you can do—it’s amazing. And I never realized that when I was an undergraduate. I thought dieticians just worked in hospitals.”

Although she pressed for a degree in Food Science and Human Nutrition rather than Home Economics, Stice has come full circle. Working with low-income and high-risk families has taught her that “people living in poverty don’t always have what dieticians recommend,” she said. “So I’ve learned to ask people to make lists of their favorite foods and the foods they actually have on hand.

“The weakness of dietetics is trying to teach people everything we know. But the message is simple,” she continued. “Half your plate should be vegetables.” She drives this thought home by pointing out that “Whole foods don’t have the marketing dollars behind them that packaged foods do. Your banana does not have Shrek on it!”

So how do you compete with processed foods endorsed by cartoon characters?

“We need gardens. Kids who plant their own gardens are more likely to eat vegetables. Gardens counter TV ads and build community.”

“Back to the Garden”

BY BRIAN CLARK • MARKETING AND NEWS SERVICES

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So how do you compete with processed foods endorsed by cartoon characters?

“We need gardens. Kids who plant their own gardens are more likely to eat vegetables. Gardens counter TV ads and build community.”

Now a columnist and blogger for Salem’s Statesman Journal, Stice regularly writes opinions about nutrition, the importance of growing food and the skills families need to stay healthy in an increasingly processed world.
COUGAR FLOUR POWER
A Model of Sustainable Agriculture

STORY AND PHOTOS BY BRIAN CLARK • MARKETING AND NEWS SERVICES

More than 80 percent of the wheat grown in eastern Washington is consumed in Asia, but a resurgence in “food patriotism” vows to lower that statistic. Thanks to a growing business partnership between WSU Dining Services and Columbia Plateau Producers, producers of Shepherd’s Grain flour, more and more of the crop is being milled and consumed locally.

All of the 38,000 pounds of flour per school year that WSU Dining Services uses comes from Shepherd’s Grain. The whole wheat baking flour is milled at the Old Centennial Mill, now owned and operated by Archer Daniels Midland, in Spokane.

“That goes into nearly a half-million slices of pizza, more than 12,000 pieces of banana and zucchini bread, over 200,000 cookies and thousands of other baked goods,” said Doug Murray, Dining Services executive chef and associate director.

The volume of flour used in baked goods will jump dramatically in the 2007-08 school year when Dining Services takes over sporting event concessions. Cougar fans typically consume 12,000 hotdogs and hamburgers per football game, said Murray, which translates into about 600 pounds of flour to make the accompanying buns.

Almost all of the growers affiliated with Columbia Plateau Producers are WSU alumni. Murray calls the relationship “symbiotic,” and a model of economic and environmental sustainability.

Jeff Wold, general manager of the Hillside Café on the Pullman campus, agrees with Murray. “Basically, we’re changing the ecosystem with food,” he said.

Furthering the application of WSU innovation

Farmers in the Columbia Plateau Producers consortium raise Tara, a hard red wheat variety developed by WSU scientist Kim Kidwell and marketed by WSU alums Karl Kupers and Fred Fleming as Shepherd’s Grain. Most types of flour require adjustments to the way it is used in recipes, but not so for Shepherd’s Grain, according to Wold. It “drops straight into our existing recipes,” he said.

Certified by the Food Alliance as a sustainable and socially responsible producer, the consortium uses direct-seed or no-till farming practices that reduce plowing, which in turn preserves topsoils, lowers fuel costs and protects the microorganisms and worms that contribute to soil health. In addition, crop residue is left standing to reduce soil erosion and improve moisture retention. Less erosion means less runoff of pesticides into local water systems. Direct-seeded fields also sequester carbon.

“Direct seeding can be part of the solution to prevent global warming,” said Kupers. Fleming estimates that using the direct seeding method reduces diesel consumption on his farm by 38 to 42 percent. By milling and consuming locally, Shepherd’s Grain and WSU Dining Services are also reducing the number of miles the product has to travel to get from the farm to the consumer.

The WSU-Shepherd’s Grain partnership began in 2001, spurring the production of wheat from 2,000 to 220,000 bushels. Altogether, Columbia Plateau Producers has more than 70,000 acres under direct seed production. Other Shepherd’s Grain customers include the University of Idaho, Whitworth College, Gonzaga University, the Coeur d’Alene Resort, Spokane’s Luna restaurant and the Davenport Hotel.

Top: Combine harvesting wheat in eastern Washington—one of the most productive wheat-growing regions in the world.

Center: Leslie Sorenson, baker, and Bruce Williams, pastry chef, appreciate working with low-mileage food.

Bottom: One of their tasty creations.
Front Row, L to R: Sherrill (Ruehlman) Albershardt, Lois (Ellingsen) Ladderrud, Joanne (Pratt) Abey, Sandy (York) Russell
Second Row, L to R: Ralph Quaas, Gene Wirth, Mary (Darland) Guilford, Barbara (Wanamaker) Maddux, Joanne (Shoemaker) Cosgrove
Third Row, L to R: Keith Callison, Nils Ladderud (in tan jacket), Rena (Toll) Wagner, Jaclin (Lilenthal) Heywood (in polka dot blouse), Jan (Macquarrie) Preedy, Clarke Brown (in grey jacket), Sally (Senn) Hooper (in green sweater)
Fourth Row, L to R: Alvin Frick, Don Albershardt, Irvin Sobek, John Henry, Ernie Preedy, Chris Larsen
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WSU at Benaroya Hall: *In Concert with Communities*

**Thursday, Sept. 6, 6:30 to 8:30 p.m.**
Samuel and Althea Stroum Grand Lobby
Benaroya Hall
200 University Street
Seattle

Join us for this showcase of the partnerships between WSU faculty and the community members—farmers, ranchers, fishers, business owners and non-profit leaders—who work side by side with their land grant university. Together, these partners steward our environment; create jobs and businesses; raise fresh, healthy, local food; and offer lifelong educational opportunities to the citizens of Washington state. Enjoy hearty appetizers prepared by some of Seattle’s top chefs using Washington-grown ingredients supplied by farmers and ranchers attending the event. A dozen of Seattle’s hottest restaurants will be preparing menu items for your enjoyment. You’ll also have a chance to sample Washington wines, beers and ciders, and learn the story behind the great tastes of our state.

**Tickets:** $40 in advance/$50 at the door; youth 5–18: $15 in advance/$20 at the door; children under 5: free
For more information, visit cahnrsalumni.wsu.edu/events.

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Wagyu Cattle Breed Research Fund

GERALD PITTENGER established the Wagyu Cattle Breed Research Fund to further investigation into this Japanese-style cattle cross-bred from the stock of eight other breeds, including Holstein, Angus and Simmental. Gerry bought his ranch near Ellensburg in 1966 and named it Blue Rock Cattle Company. He donated one-quarter interest of a Simmental bull (named Polled Creator) to WSU’s Department of Animal Sciences in 1978, which started a long working relationship. In 1989 when WSU became interested in doing research on Wagyu cattle, Gerry acquired seven head to assist in that research and now has the largest herd of registered Wagyu cattle in the U.S.

Gerry was born in 1932 and grew up in Scobey, Mont. He graduated from Minot State Teacher’s College in 1954. Gerry and his wife Jane both taught in the Montana public school system. In the summer of 1957, the Pittengers moved to Seattle so Gerry could get an advanced degree in accounting at the University of Washington. After graduating, Gerry went to work as an accountant for Price Waterhouse. In 1967, Gerry began a 26-year tenure as CEO of Great Western Savings Bank. For 20 years he also chaired Exchange Systems, Inc., which developed the first automated cash machine in the nation that was set up in Bellevue.


James E. Hoffman Memorial Scholarship Fund

BENT AND INGER JENSEN created the James E. Hoffman Memorial Scholarship Fund to honor the memory of one of their dearest friends and Bent, worked in manufacturing. When Bent decided he wanted to go to WSU to study animal science, he and Inger moved to Seattle for a couple of years to establish Washington state residency. While in Seattle, Bent worked for Boeing, and Inger had an office job. When it was time to move to Pullman, she wrote to WSU and applied for a job in the Controller’s office based on her training in accounting while still in Denmark. The Controller promptly replied that he had business in Seattle and wanted to schedule an interview; the day he met Inger, he offered her the job. She held several positions as an accountant at WSU between 1959 and 1969, during which Bent completed his two bachelor’s degrees.

Inger remembers working in student accounts and preparing the university’s budget according to its allocation from the state Legislature, which she found challenging but enjoyable. Bent had drafting skills, so while a student, various WSU schools and colleges hired him to produce scientific and technical illustrations for professors and students.

After completing his second bachelor’s degree, Bent was hired as Pullman’s first planning director, a position he held until 1978. At this time, Inger stopped working outside the home. (According to Bent, she had done enough supporting him through his college years.) Since her retirement, Inger has been active as a volunteer with a number of organizations, including Children’s Hospital. The couple made many friends in Pullman and speak fondly of campus life and the opportunities to participate in Pullman’s art scene. In 1978, the couple moved back to the west side of the state where Bent again pioneered the planning directorship for the fledgling city of Oak Harbor, which he continued until his retirement.

The Jensens have treasured their life in the Pacific Northwest, and believe it is the most beautiful place in the world. Avid hikers, some of their favorite places to visit are Deception Pass and Joseph, Ore. They credit their good fortune to the kindness of the WSU community and the opportunities that America offered to them as immigrants.

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HIS FUND was developed to honor Rod Bertramson’s three decades of service to WSU and local agronomy. Fittingly, Rod was born on a livestock and grain farm, to James W. and Gladys Nelson Bertramson, near Potter, Neb., on Jan. 25, 1914. He earned his B.S. in agronomy and M.S. in soils at the University of Nebraska at Lincoln in 1933 and 1937, respectively, and his doctorate in soils at Oregon State University in 1941. In 1938, he married Eleanor Maloney of Omaha, Neb.

After working with the Soil Conservation Service in Rapid City, S.D., and teaching at Colorado State University for a short time, Rod was drafted in 1942 as a first lieutenant. He served in the Rhineland and Gross Hessen regions of Germany where he set up an administrative organization for food and general agriculture. After his discharge in 1946, he worked at the University of Wisconsin as an assistant soils scientist, but later that year moved to Purdue University as an associate soils chemist and assistant soils scientist.

Rod was hired as chair of the WSU agronomy department in 1949 and served in that capacity for 18 years. He was appointed director of resident instruction of the College of Agriculture in 1967, which he continued until his retirement in 1979.

During his 30 years at WSU, Rod worked closely with a number of agriculture associations within the region. His administration is identified with several historically significant events, including the release of high-yielding Gaines wheat developed by Orville A. Vogel.

Rod authored or co-authored numerous articles for various trade magazines and actively participated in many professional and honorary agricultural organizations. In 1960, he was elected vice president of the American Society of Agronomy, the following year as president, and later as a fellow. Rod also served as president of the Agronomic Science Foundation and editor of the Journal of Agronomic Education. In 1978, the University of Nebraska at Lincoln awarded him an honorary doctorate.

Rod was active in Pullman civic affairs, serving in the Kiwanis Club, president of the Chamber of Commerce, resident of the Community Hospital Corporation and member of the City Council. In 2003, he received the Pullman Chamber of Commerce Modern Hall of Fame award for his service to the community.
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MARGARET NELSON MCLEOD attended Washington State College from 1934 through 1936 before moving to Seattle where she finished her education at the University of Washington. Shortly thereafter Mrs. McLeod became associated with a pioneer southwestern Michigan family whose members ultimately settled in Kalamazoo. She was involved in their business affairs for over 50 years, including serving as secretary to their private charitable foundation.
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James C. Nofziger Graduate Fellowship in Animal Sciences

THE JAMES C. NOFZIGER Graduate Fellowship in Animal Sciences was created with contributions from 78 family members, friends and colleagues, who gave generously to honor his memory, which is intimately intertwined with WSU and the field of animal nutrition.

Jim was born in Bakersfield, Calif., on Feb. 1, 1923. He grew up in southern California and graduated from Canoga Park High School in 1940. He later attended UCLA where he excelled in science and was a member of the wrestling team.

Jim’s education was interrupted in 1943 when his ROTC unit was inducted into the U.S. Army. He served as an infantry officer in World War II and was badly wounded in the Battle of the Bulge in 1945 while leading his platoon.

Jim retired from the military as a First Lieutenant and was awarded the Purple Heart. His close brush with death taught him to consider each day a gift and lead his life with the cheerful optimism that was treasured by all who knew him.

After nearly three years in a Veterans Administration hospital, Jim resumed his studies at UCLA and, with the help of the GI Bill, obtained his B.S. in zoology in 1948. He earned both his M.S. (1952) and Ph.D. (1961) in animal sciences from Washington State College and Washington State University, respectively. Jim was very proud of the education he received at WSU, and felt that what he learned in the Department of Animal Sciences (Animal Husbandry at that time) served him well throughout his career.

Jim started his own consulting business in 1961, specializing in the feeding and management of large livestock. He went on to become one of the nation’s leading animal nutritionists, and is best known for introducing high-protein components to feeds. He consulted with clients primarily in the western U.S., but also in Canada, Japan, South Korea, Taiwan, South Africa, the Republic of Botswana, Scotland and Australia.

In 1981, President Reagan appointed Jim chair of the Marine Mammal Commission, whose charge was to uphold the Marine Mammal Protection Act. During his three-year term, Jim conducted extensive research on both California sea otters and Hawaiian monk seals. He met with fellow scientists, flew small planes through the mammals’ entire range and studied their habitat by boat.

Jim helped found the American Society of Agricultural Consultants in 1963 to increase the level of professionalism, ethical standards, and networking opportunities for professional agricultural consultants. He became the ASAC’s second president in 1964, served on the board of directors and bylaws committee, and was instrumental in writing the ethics course used as a key component of the educational curriculum required for CAC (Certified Agricultural Consultant) certification. Jim received the ASAC’s Distinguished Service Award in 1998 and their Mentor Award in 1999 and 2000. He remained active with ASAC and his career until he was felled by cancer on Feb. 18, 2001, at the age of 78.

Jim was married for 51 years to Elizabeth (Bettie) Nofziger and had three children and nine grandchildren. As his brother Lyn said, “Jimmie was one of those fortunate people who liked almost everyone and almost everyone liked him. He was good-humored and easy to like. He was loyal to his family and friends. He was respected by his clients and the members of his profession.”

In his own words, put together to inspire the graduating class of 1990 from Raft River High School in Malta, Idaho, Jim demonstrated his unwavering principles and wise counsel: “I truly believe that there is something at which everyone can be successful. Each of you has a talent, an aptitude, a thing you do better than most others. Look for that talent in yourself and exploit it. Success will follow and life will be worth living.”
Private Giving

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Roel Langendoen ’96
Marvin ’64 & Judy Lapp
James ’71 & Christine Larsen
Joseph & Anne (Taylor) ’73 Larsen
Brian ’89 & Kathleen (Hennings) ’89 Larson
David ’88 & Deanne (Andrews) ’90 Larson
Hazel Lasley
James ’79 & Elaine (Arnett) ’80 Lawler
Bill & Katherine Lawrence
Erin Lawrence ’97
Wendell Leander ’65
Warren ’49 & Doris (Bauer) ’49 Lee
Mary Legry
Bernt Lehn ’80
Ronald ’69 & Dona (Buck) ’71 Lehr
Marjorie Leidy ’49
Michael ’90 & Megan ’90 Leifson
Richard ’82 & Elizabeth Leitz
Joseph ’79 & Denise (Richardson) ’80 Lemieux
Albert ’54 & Pauline Leonard
Leonetti Cellar
Larry & Karen (Baker) ’65 Lesmeister
Henry ’63 & Camilla Levien
Lawrence ’66 & Elizabeth Levien
Darrell ’61 & Carolyn Lewis
Nancy Lindley ’51
Joseph ’68 & Beverly Lineweaver
Edward ’67 & Misako Linse
Timothy ’73 & Bessie Lintz
James Lippincott
Alan & Kimberley ’81 Lippman
Lisa Dupar Catering
William Little & Margaret Sundstrom ’69
Randy ’89 & Elizabeth (Shipley) ’89 Lobe
David ’85 & Ann (Coulter) ’84 Lohman
Harold ’58 & Barbara (Peck) ’54 Lokovsek
August ’68 & Catharina Loman
Kevin ’86 & Kelly Loney
Richard Lorz ’76
Blair Losvar ’80
Connie Love ’86
Pete & Millie Lucarelli
Todd ’92 & Dawn Lupkes
Kevin ’81 & Debora Lyle
William ’64 & Linda Lyman
Marty ’74 & Mila (Potuzak) ’74 Lyon
John ’56 & Kathryn (Miller) Macan
Robert ’94 & Cynthia
MacDougall
Bruce ’73 & Christine Mackey
Keith ’84 & Nancy Macy
Wayne ’67 & Sandy Madson
Linda Mael ’92
John ’60 & Carol Mahre
Bryan ’90 & Tyran (Perreira) ’88 Mains
Joseph Majka ’80
Roger ’66 & Barbara (Wainwright) ’67 Major
Bryan Maletis & Abby Richardson
David Margolius
Ruth Martin
Maryhill Winery
Bruce ’80 & Bridget (Dougherty) ’84 Mathison
David ’52 & Georgia Matlock
Rodney ’76 & Sandra Matye
David Maughan ’64 & Cathleen Gleeson ’86
Carl ’80 & Judy ’80 Maxwell
Richard & Corinne Maxwell
Charles & Rae (Martin) ’41 McCain
Bruce ’50 & Carmen McCaw
Neil ’80 & Leslie McClure
Matthew & Jill McCluskey
Donald McCool
Carl ’66 & Patty McCrary
Jeryn McDonald ’97
Paul & Amy McDonald
James McEwen ’82 & Sharol Bailey
Alan ’59 & Jacqueline McKay
Connie McKay ’82
Paul McKay ’59
Scott ’80 & Debbie McKinlay
John & Mary Jane McLaughlin
Thomas ’82 & Cherie (Fine) ’82 McNabb
Kenneth ’74 & Agnes McPherson
Ken McWade & Molly Jones-McWade
Edward Meier ’67 & Jeanne Gallo ’75
Laurence ’64 & Michele Meggiren
Menasha Forest Products Corp.
Richard ’68 & Rosie Meyer
Micro-Chem Laboratories, Inc.
Prudence Miles ’77
Kenneth Milholland ’58
Maryann Milholland
David & Gretchen ’97 Millard
Allen Miller ’78
Brad ’98 & Michelle (Stanton) ’00 Miller
Maxine Miller ’42
Rollin ’46 & Eileen Miller
Timothy Miller
Mac & Karen Mills
Michael & Christine (Larsen) ’71 Milodragovich
John Minkiewitz ’91
David & Mandy Minnick
Margaret Mishasek ’69
Mission Mountain Market
Yasuho & Julia (Mayeda) ’67 Miyakawa
Harold & Celesta Moffitt
Monsanto Fund
Bruce ’87 & Patti Montgomery
Dan Montgomery ’49
Richard & Natalyn Moore
Pete ’77 & Julie Moramarco
Ronald Morris & Sarah Brieihi ’76
Steve & Sheila Morrison
James Morrow & Cecile Babich
Morrow ’82
Robert ’68 & Gail Morton
Frank ’59 & Janet Mosebar
Brian ’95 & Andrea (Howard) ’93 Moser
Victor & Mary Moses
Gary Moss ’78 & Brenda Alexander
Moijan Mousavi-Hesary ’02
Albert & Judith ’81 Mousseau
Joseph ’70 & Patricia Muller
Kenneth Muller ’97
Virgil ’59 & Susan ( Larson) ’61 Myers
Sheila Myhre
Donald ’84 & Teresa Myott
National Center for Appropriate Technology
Jaime & Joie (Millay) ’88
Nevareerte
Joseph & Holly (Schmidt) ’84 Neibergs
Nell Thorn Restaurant
Bruce Nelson ’85 & Carolyn Matthews
Donel ’67 & Cynthia (Busch) ’69 Nelson
Herbert ’55 & Marilyn Nelson
Ray & Virginia ’60 Nelson
Steven & Deborah (Slessman) ’79 Nelson
Peter & Annette (Kertis) ’79 Nesse
Nestle R & D Center Ohio, Inc.
Torrance ’72 & Terry Nett
Verne ’56 & Joyce Newhouse
Jason Newman ’97
Moi ’83 & Mui Nguyen
Nicholas Cole Cellars
Clifford ’83 & Patricia Nichols
Rebecca Nichols ’86
Timothy Nichols ’86 & Laurie Stenberg-Nichols
Wesley & Barbara Nickum
James & Judith Nielsen
Doris Niemann ’45
Joseph Niemann ’86
Randall & Gretchen (Noerenberg) ’79 Niemi
Kenneth Norikane ’82
North Pine AG Equipment, Inc.
Casey North ’05
Northwest Turf Maintenance
Nu Chem Limited
Randy & Erin ’83 Nuxoll
Wesley & Mary Nuxoll
Gwenyth O’Bryan ’58
Michael ’94 & Lizbeth Odren
Okanagan Estate & Vineyards
OKI Golf
Kyle Okumura ’05
David ’57 & Amelia Oldenburg
Richard Oliver ’52
David ’92 & Kelli (Wigen) ’94 Olsen
Robert ’51 & Marian Olsen
Donald ’58 & Delores Olson
Louis Olson
Marvin ’70 & Jeannie Omdal
Organic Seed Alliance
A. Desmond & Sheila O’Rourke
Kathleen Ostrowski ’05
Jeffrey ’78 & Paula Oswald
Richard & Ellen (Rogan) ’66
Overby
Robert ’58 & Myrna (Pierson) ’58 Overstreet
Pacific Northwest Ballet
Pacific NW Direct Seed Assn.
Frank Padilla ’54
R. Rodney ’68 & Charlotte (Ziem) ’66 Pakonen
Daro Palmer ’03
Palouse Welding & Machine, Inc.
Donald Park ’85 & Monica Baumgartner Park ’88
Young Park ’66
Randall & Sue (Bailiff) ’78 Parker
Rick ’99 & Carrie (Peterson) ’00 Parker
Katrine Parmley-Gates ’93
Michael Paterson ’04
Maxine Patterson ’41
Robert ’55 & Carol Patton
Kevin Pazonen ’86
David ’82 & Clara (Ladwig) ’84 Pearson
Monte ’72 & Laura Pearson
Jennifer Peary ’89
JoanPelto ’50
Anthony ’74 & Marie (Miller) ’75 Pennella
Pepper Bridge Winery
Earl ’78 & M. Eileen Perkins
Roger & Lynelle (Simmons) ’79 Perrin
Jerry & Dianna (Lengel) ’63 Perine
George ’70 & Kathy (Morasch) ’69 Perry
Roderic Perry ’74
Stephen ’81 & Karen (Neighbors) ’81 Perry
Dee ’80 & Leslie Peterschick
Miyouki Peterson ’82
Scott Peterson
C. Alan Pettibone ’54
George ’76 & Nancy Pfeiffer
Rod Pfeifle ’84
Sean Phinney ’96
Gary ’73 & Geraldine (Stout) ’75 Picha
Pike Brewing Company
Pink Door
Wamon ’70 & Norma (Snider) ’71 Pittman
Point B
Elbridge Pond ’62
Karen Poulsen ’75
Ronald ’60 & Mary Power
Peter Powers ’79
Thomas ’88 & Tanya Pratt
Jerry & Kathy (Wilbourn) ’77 Prout
Bradley Pugh ’86 & Laurie Larson-Pugh
Jack ’74 & Vickie Puyear
Richard ’64 & Sharon (Dreger) ’63 Quirk
Raconteurs Press
Kenneth ’81 & Anne Raffa
Robert ’49 & Barbara (Sanders) ’49 Rankin
Jon Rauch ’81
John ’62 & Kay Raupp
Douglas Redford ’73
Michael Reding ’00 AGB
Glen ’87 & Monica (Harrison) ’87 Rees
Margaret Rehberg
Dennis ’80 & Vickie Reid
Robert & Joan (Gammie) ’77 Reid
Nancy Reisen ’06
Michael Retter ’84
Rick Burnstead Construction Co.
Dixie ’55 & Carol Riddle
Kathleen Rightmire ’69
Rikki USA, Inc.
Gerald ’77 & Karen (Loftis) ’78 Ringwood
W. J. Ringwood
Francis ’39 & Naomi Roberts
Steve Roberts & Kathleen Von Reumont
Dwain ’39 & Virginia Rockie
Peter ’84 & Priscilla (Floyd) ’84 Rodgers
Toby Rodgers ’00
Dennis ’66 & Eileen Roe
Walter ’48 & Alice Rohde
Glen Rollman ’56
Marinus & Jill (Reese) ’67 Rouw
Homer ’65 & Karla (Beck) ’66 Rowley
Wayne ’65 & Annette (Mcarthur) Rowley
Mark ’78 & Deborah (Jaspers) ’82 Roy
James ’61 & Nancy Ruarl
Mark Ruarl ’90 & Robyn Picht-Ruarl
Lisa Ruff ’91
Cynthia Russell
John Ruthford ’76
Sidney ’73 & Debbie Sackmann
Saint Laurent Winery
Michel Salmon ’70
Salty’s on Alki
Keith ’49 & Margaret Sarkesian
Patricia Sauer ’74
Ann Saunderson ’68
Leo ’55 & Patricia Sax
Howard ’59 & Ruth (Armstrong) ’59 Scarlett
Robert Schaffner ’82
Roger ’79 & Deborah Schatzel
J. Kathleen Schmick ’51
Richard & Louann Schmidt
Mark ’79 & Diane Schmitt
Ray Schmitt ’99
Dean ’78 & Laurie Schoknecht
Robert Scholes ’00 & Sarah Lewis ’99
Brad Schu ’81
Allan Schultz & Andrea Lubov ’77
Beverly Schultz ’59
Gary ’76 & Kathy Schulz
Doug ’87 & D. Suzanne Schuster
Schwartz Brothers Restaurants
Stanley ’70 & Jill (Irving) ’71 Schwartz
Kyle & Beth (Bryce) ’87 Schwenk
Delroy ’61 & Carol (Powell) ’62 Schwisow
Gary & Teresa (Shewey) ’83
Schwisow
Seastar Restaurant and Raw Bar
Seattle Gourmet Foods
Shu ’44 & Mary Seike
Gregory & Zari Semerdjian
Pradip ’67 & Susan Shah
Patricia Shanahan ’49
Richard ’78 & Eileen Shane
Sharp Landscape
Andrew Sharp ’02
Norm Shatz
Barbara Shaw ’65
Jonathan ’72 & Elizabeth (Vhay) ’72 Shaw
Robert & Elizabeth (Gallagher) ’49 Shea
David ’72 & Angelina Shen
Shoalwater Restaurant at Shelburne Inn
C. Richard & Janet Shumway
Francis Shumway
Sonda Sibole ’88
Weymouth ’50 & Jean Simpson
Steven ’97 & Michelle ’97
Skidmore
Richard ’69 & Marilyn Smiley
Joseph & Doris Smith
Kyle Smith
Maurice ’50 & Patsy Smith
Skip Smith & Gayle Hampton-Smith
Smith-Western Company
E. Rex & Linda Smyth
John ’50 & M. Louise Snell
Snipes Canyon Ranch
Nancy Solberg ’75
Douglas & Karen (Beck) ’69 Sonneborn
Sorrento Hotel
Sparrow Farms, Inc.
Paul ’83 & Liz Sparrow
Dick & Susan (Kneedler)
’71 Speros
Spirit of Washington Dinner Train
Spragg Farms, Inc.
Norman ’69 & Mary Spragg
Clayton ’79 & Mary Sprague
Fred ’53 & Carole (Watson)
’55 Sprenger
Charles ’56 & Shirley (Ensor)
’57 Staib
James Standaert ’79
Ronald ’64 & Sheryl (Fred)
’64 Stanek
Roger ’66 & Catherine Stark
Steele Wines, Inc.
Steffen Farms
Donald & Elma Steffen
Audrey Stehr ’52
Charles ’60 & Betty Steiner
Patrick ’92 & Tammy Stevens
DeVeren ’42 & Lois Stevenson
Kurt & Jolene (Phillips)
’82 Stiles
Mindy Stillner ’85
Stimson Lane Wine & Spirits, Ltd.
Stinas Cellars
Ralph & Harriet (Smith)
Stockbridge
Charles ’73 & MaraLee Stoffers
Dave ’68 & Kathleen Stolp
Jan Stone
David Stout ’71
Robert Stout ’55
David & Suzanne Strausz
Chunming Su ’92 & Wenjian Gong
Scott ’79 & Susan Summers
Who: CAHNRS President’s Associates
What: CAHNRS and WSU Extension Deans’ Pre-game Receptions
Where: Orville A. Vogel Plant Biosciences Building
(across from Martin Stadium)
When: September 15, October 27 and November 17, 2007
Time: Three hours prior to kickoff

Fall football weekends are better in Pullman. No wonder it’s been called
the best game-day atmosphere in the Pac-10. Come join in the Cougar
spirit by attending our pre-game receptions.

To attend these special events for CAHNRS President’s Associates, RSVP
to Dory Straight, CAHNRS Alumni and Development Office, 509-335-
2243 or dstraight@wsu.edu. GO COUGS!

Thank you Cahnrs President’s Associates

Richard ’50 & Irene (Jensvold)
’52 Sund
Curtis ’74 & Mary Sundquist
Michael ’74 & Gail (Winters)
’74 Swan
Frank ’58 & Betty Swanson
Greg & Gretchen Swanson
Guy Swanson
Swedish Medical Center
Wayne ’79 & Gertrude Sylling
Sylvester Orchards
Gordon ’51 & Dee Sylvester
Stephen ’66 & Joanne (Cook)
’66 Syre
Michael ’64 & Cathryn (Angus)
Szymczak
T. J. Hayes Ranch, Inc.
Mel & Alice (Summers) ’84 Takehara
Jim ’80 & Mina Talbot
Mildred Tamaki
Timothy ’72 & Shelly Taplin
Arthur Taylor ’82
Gerald ’69 & Verna Teeter
Michael Temple ’97
Terry’s Berries
Texas Smokehouse BBQ
Chris Theisen ’84
Dan ’83 & Genevieve (Smith)
’83 Thompson
Richard Thompson ’79
James Thomson ’73
Scott ’79 & Keren (Boyko)
’79 Thomson
Mike Thoren
Three Rivers Winery
John Thulen ’91 & Debra Kylie
Thulen ’91
Tillicum Village & Tours, Inc.
Timothy ’71 & Marlene Tippett
Todd Tippett ’94
Mark Tisler ’87
Robert ’51 & Beverly Tokarczyk
Tom Douglas Restaurants
Thomas Toyama
Michael ’81 & Elizabeth (Brown)
’83 Treiber
R. Perry ’60 & Diane (Solberg)
’60 Triplett
Craig & Teresa (Rehfeld) ’89
Trulock
Charles Tucker ’86
Donald Tucker ’57
Patrick Tucker ’72
Two Mountain Winery
Ty Ullman ’94
Union Elevator & Warehouse
United Way of Benton County
John ’79 & Judy (Kieffer) ’87 Unruh
Arlie ’49 & Aurora Updegrawe
Mark & Kristi (Michael)
’96 Urich
Julie Van Reenen ’72
Steven ’71 & Lucinda Van
Valkenburg
Dan ’80 & Gayle Vance
Don ’59 & Paula Vance
David & Christina Vandenbosch
Stephen Vanvleet
R. Charles & Freda (Teitzel)
’62 Vars
Mark & Mary (Brannon) ’86
Vasbinder
Albert & Karin (Strege) ’74
Vincent
Vino Aquino
Wallace Vog ’60
Dave Vogel ’78 & Carla
Rasmussen
Mark & Kathryn (Morasch)
’74 Vogler
Voice Sausage
Nanneke Wiikley ’82
Walla Walla Vintners
Dennis ’76 & Carol Wallace
Nichole Wallstrom
Warren ’73 & Linda (Pratt) ’73
Walz
Tom ’69 & Elaine (Chang) ’71
Wang
Aaron Ward ’05
Ronald & Margaret (Sewell)
’72 Ward
Walter ’62 & Joy (McMurray)
’66 Ward
Carl Washington ’59
Thomas Washington & Sarah
Lingle ’82
Waterfront Seafood Grill
Michael ’75 & Barbara Watkins
LeRoy ’67 & Valborg Watson
Jacoby ’58 & Alice Weber
Richard Wedderburn ’92
Winton Wefer ’53
Duane Welborn ’80 & Lynne
Bozlee-Welborn
Gilbert ’62 & Shirley Wells
Western Farm Service, Inc.
WestFarm Foods
Michael ’89 & Suzanna (Fitts)
’90 Whalen
Jeff & Diana White
Robert ’58 & Glennna White
Whitman Cellars, LLC
Paul & Erica (Guhlke) ’01
Whitmore
Elizabeth Wick ’62
Izaak ’02 & Kynda (Curits) ’03
Wierman
Randy ’77 & Rise Wiggins
Tim ’82 & Karen Wiggins
Karrin-Lynn Wilkel ’90
Wilbur-Elis Company
Lawrence William
Janet Williams ’74
Willow Crest Winery
Willows Lodge
Craig ’74 & Lisa Wilson
Norman & Joan Wilson
Elizabeth Wilson ’50
Ollie Wilson ’49
Brett ’86 & Sue Winterowd
Todd ’83 & Susan Winters
Todd ’87 & Karen Wood
Woodmark Hotel on Lake
Washington
Duane ’77 & Ruth Woodruff
J. M. Woodworth
Larry & Wynona (Town) ’79 Woolf
Alan & Janice (Weber) ’66 Wright
Robert Wright ’76 & Lorene
Rogeness
WSU Athletics Department
Yousling ’89 & Aihua (Liu)
’88 Xiong
Shihe Xu ’88 & Yang Ying
Jonathan Yoder & Holly White
David ’77 & Pamela (Langfeldt)
’77 Yorozu
Esther Yoshioka ’66
Helen Young
Hudson Youngblood
Young Yun ’61
Richard Zack ’82
Almer ’60 & Leona (Emerson)
’57 Zander
Gerald ’57 & Virginia Zellmer
Steven Zeutenhorst ’90
Allan ’77 & Faye Zimmer
Patricia Zimmerman
Robert Zimmerman ’80
Zino Society, LLC
Peter & Mary (Bonsall) ’49
Zmitrovich
Zoe Restaurant
James & Carol ’99 Zuiches
Robert & Carolyn Zuparko
Glenna Zwainz
Perry & Rachelle (Eid) ’75 Zylstra

CONNECTIONS—Fall 2007
work. Sitting on the search committee that advised the regents about their next choice for president, I was excited about the wealth of experience that Dr. Floyd offered WSU. He understands the university’s educational and land-grant missions to make our scientific research useful and accessible to Washington’s agricultural, food, fiber and natural resource industries. He is truly dedicated to assuring that WSU is one of the most prominent economic development engines within the state. For a college built on the values of the land-grant system, Dr. Floyd’s focus on assuring our research impacts the lives of our citizens is a perfect fit.

Refocusing on human sciences

This issue of Connections reflects the renewed vigor within WSU as we report on the renaissance of our programs in the human sciences. CAHNRS is often thought of as “the ag college,” but its scope includes serving every aspect of our communities, from the food we eat and the resources needed to grow it, to the way our food is transported, processed and prepared, to the fiber that makes up the clothes on our backs and the environment of the buildings and landscapes in which we live. The human sciences are key strands in the web of life we strive to make better.

Growth in student enrollment and new faculty in the Department of Human Development has facilitated research in a wide range of topics that will help us understand how children interact with their peers, parents and elders, as well as how they learn. Preventing domestic violence, assessing child care needs and improving educational practices are just some of the ways in which students and faculty are contributing to the health and well-being of families and communities.

The Department of Apparel, Merchandising, Design and Textiles has long been acclaimed for its robust design program, its emphasis on study tours to the world’s great fashion centers, and its ability to see its graduates through to positions in the industry. Now, with new faculty coming on board, students will also be prepared to analyze retail and corporate decision-making by learning to use mathematical “data mining” tools and contribute to quality of life by using chemistry and physics to improve the protectiveness and breathability of textiles.

Interior design, too, has a large and robust undergraduate program, with many firms hiring graduates. Students and faculty in ID have made many notable contributions to the livability of the built environment—resulting in numerous awards, licensing of designs and invitations from colleagues in China to come study building style there and in Tibet.

Perhaps the most dramatic changes are occurring within food science and human nutrition. The human nutrition and dietetics programs and faculty are moving, both physically and administratively, to the recently formed Division of Health Sciences at WSU. This integration will put nutrition faculty and students, already doing great work in the areas of health and nutrition, and especially obesity, in direct contact with their colleagues in the health sciences.

Meanwhile, our renowned program in food science is set to become a national powerhouse as it combines forces with the University of Idaho to create the nation’s first bi-institutional, co-located academic department. The food processing industry serves regions that span states and countries, so this makes sense in an increasingly global marketplace of not just goods and services, but of ideas as well.

The School of Economics is also thriving. In the past two years, we’ve hired eight new faculty members, and the school is now home to 150 undergraduates, 75 graduate students and more than 30 faculty. Research topics include the economics of sports, health, labor, the environment and natural resources, as well as international trade, markets and development.

In short, we’ve got an inspiring and diverse team at work both within the college, and with you, our alumni, outside the college as well. As Dr. Rawlins’ most famous saying reminds us, “If you see a tortoise on a fence post, you know he did not get there by himself.” So we thank our wonderful alumni and friends of the college for their support in continuing our path toward success. Until next time, Go Cougs!

IRVING BERLIN once said that the toughest thing about success is that you’ve got to keep on being successful. We’ve had a lot of successes in the past year, and the next year is shaping up to be even better. Working with world-class students, faculty, alumni and staff, it’s clear to me that there’s no secret to our success. Talent, after all, creates its own opportunities.

With the retirement of WSU President V. Lane Rawlins, we can look back at many years of success. Our undergraduate education experience remains excellent, with strong emphasis on research with impacts, hands-on learning, study abroad and interdisciplinary collaborations. Our reputation for world-class research is gaining new momentum thanks to WSU’s official recognition as a top-tier research university. To give just two CAHNRS-related examples, our plant biosciences faculty were recently ranked among the five most productive in the world, while interior design was cited as one of the nation’s top ten programs.

I’m certain incoming president Elson Floyd will build on Dr. Rawlins’ excellent Looking Forward
Order an award winner...Today!

Choose from eight great cheese flavors, including award-winning Cougar Gold.

www.wsu.edu/creamery
800-457-5442

The WSU Creamery can ship Cougar Cheese to you or as a gift to someone special.

While in Pullman, visit Ferdinand’s Ice Cream Shoppe on the WSU campus for delicious ice cream and cheese treats.

WSU Creamery Manager Russ Salvadalena holds the GOLD Award certificate that Cougar Gold received at the 2006 World Cheese Awards.