

# College of Agricultural Sciences

*Oregon State University*

*August 2005*

## 2004-2005 Highlights

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### ***Programmatic achievements***

#### **Initiatives in support of teaching and learning**

Curricular changes or additions in the College of Agricultural Sciences have helped assure that timely, relevant coursework and programs are available to students. To stimulate and support further improvement of teaching, learning, and the curriculum, the College allocated approximately \$100,000 to its academic departments on a competitive basis. Coupled with about \$50,000 added by departments, these funds helped enhance more than 20 different courses or educational programs, and contributed to the professional development of faculty. In addition, faculty in the College developed new courses and degree programs, and revised and expanded others.

Faculty in the departments of **Food Science and Technology**, and **Horticulture** undertook **major revisions of their undergraduate curricula**, updating the organization of content, and designing their programs to attract a broader range of students.

The Department of **Horticulture** also initiated **four new options** for its students. They are:

Integrated Horticulture Production	Horticulture Research
Viticulture and Enology	Horticulture Communication.

In an **interesting inter-departmental collaboration**, while the Department of Horticulture offers its option in Viticulture and Enology, the Department of Food Science and Technology offers a companion option in Enology and Viticulture. These parallel options allow students to focus on viticulture *or* enology while developing expertise in both areas and actively **learning as a part of a cohort** of similarly focused students in the two departments.

The College offered course-support funds competitively as a way to encourage faculty to develop **new baccalaureate core courses**. As a result, the departments of **Agricultural and Resource Economics** and **Crop and Soil Science** now are attracting hundreds of undergraduates from across campus to their two new courses, Evolution of U.S. Environmental and Natural Resources Law (AREc 253), and World Food Crops (CSS 330).

Faculty in three departments, **Animal Sciences**, **Bioengineering**, and **Crop and Soil Science** developed and are now offering (in 2004-05 for the first time) **six new distance education courses**. They are:

Feedstuffs and Ration Formulations (ANS 312)	Forage Production (CSS 310)
Irrigation Principles and Practices (BRE 439)	World Soil Resources (CSS 395)
Physical Hydrology (BRE 512)	Special Topics: Bioproducts (CSS 499)

With concerted effort by the departments involved and by the OSU College of Agricultural Sciences faculty at Eastern Oregon University, the **interdisciplinary Natural Resources degree is now available through the OSU Agriculture Program** there. This enables students to pursue their degrees in a unique northeast Oregon location.

**Six new interdisciplinary graduate degree programs** were approved this year. They are masters and doctoral degrees in each of three water-related areas of study: Water Resource Engineering, Water Resource Science, and Water Resource Policy and Management. Large numbers of applications are early indicators of the attractiveness of these programs.

## **Major research and scholarship initiatives**

Among the six strategic initiatives approved by the University, faculty in the College of Agricultural Sciences are active participants in four of them. The College has committed significant support for those initiatives. For example, in addition to recurring faculty support as the initiatives progress, the College has provided more than \$200,000 in non-recurring funds to help initiatives get started and gain momentum.

### ***University strategic initiative: Computational and Genome Biology***

The Computational and Genome Biology initiative will attract and employ new faculty. If the College of Agricultural Sciences is the appropriate college with which the new faculty should be affiliated, we have told leaders of the initiative that we will to pursue all reasonable and productive avenues to **find academic homes and to fund long-term FTE commitments** for them. The cost to Agricultural Sciences will depend on how many of the new hires select a department in our College as their academic home. Given the disciplinary and research focus of Agricultural Sciences departments, it is likely that one or two of the faculty members will find academic homes among our units.

### ***University strategic initiative: Subsurface Biosphere Education and Research***

The College of Agricultural Sciences has committed to investing **at least 0.75 FTE in long-term support for a new 12-month, tenure-track assistant professor position in the area of rhizosphere biology or soil organic biogeochemistry**. This is one of up to three new faculty positions that will be created and funded initially by funds from the Initiative, and subsequently by academic colleges.

### ***University strategic initiative: Sustainable Rural Communities***

The College of Agricultural Sciences is **contributing to three positions** associated with this initiative. The Extension Agriculture Program and the Department of Agricultural and Resource Economics are jointly funding a 0.75 FTE, 12-month, fixed-term **Extension community economist** position for three years (two years funded by Extension Agriculture Program and one year funded by the department). A decision regarding a recurring commitment beyond the three years of initial funding will be considered in a future round of the College's Priority Staffing<sup>1</sup> process. In addition, beginning in year 6 of the initiative, the College of Agricultural Sciences will assume funding responsibility on a recurring basis for a 0.75 FTE, 12-month, tenure-track, assistant professor position in **economics of rural areas**. More immediately, the College will provide non-recurring funds in the first two years of the initiative to assist with **start-up costs** when the faculty member is hired with University-level funding. **In-kind match** is provided from the College and the Extension Agriculture Program with 0.5 FTE for the **initiative coordinator, Bruce Weber**.

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<sup>1</sup> For further information, see subsequent section "Priority Staffing: identifying positions to be filled" beginning on page 9.

### ***University strategic initiative: Water and Watersheds***

Included in the College of Agricultural Sciences commitment to the Water and Watersheds initiative are:

- A **technician** position directed by John Selker, one of the principal collaborators in the initiative.
- In partnership with other colleges, a **non-recurring commitment of \$20,000 to support development of a proposal** to the National Science Foundation for a Long-Term Hydrologic Observatory.
- **Non-recurring support for the start-up of the Institute for Water and Watersheds (IWW)** in its first two years of operation.
- The College is on record as being **willing to consider guaranteeing a portion of the director's salary** for the Institute. This is provisional in the event that IWW revenue does not cover the salary and provided that the person hired has credentials and programs consistent with the College's direction and strategic plan.

### **Major outreach and engagement initiatives**

Of course, the College of Agricultural Sciences has a long history of outreach and engagement, and many on-going programs and activities. This section highlights five examples of innovative programs.

#### **Community Seafood Initiative**

**Pacific Northwest coastal communities are the intended beneficiaries of a partnership that supports innovative practices and new product development related to seafood.** Called the Community Seafood Initiative, this project delivers help with market and industry information, research, product development, and financial services and capital. The initiative has created a market-focused network of researchers, community-level innovators, financial service providers, and professional market, product, and industry practitioners. Together, they are bringing research-based information to coastal communities that are economically dependent on—and frequently distressed by—the rise and fall in the welfare of the fishing industry. This project helps the locally-owned, small and midsize firms that make up the rural coastal economy to become active participants in research. Such participation builds on the firms' own rational self-interest, as they decide to commit resources to the effort. As a result there is now about \$20 million in construction going on in Astoria related to the seafood industry.

OSU is a partner in the Community Seafood Initiative through its **Sea Grant College and the College of Agricultural Sciences' OSU Seafood Laboratory and Coastal Oregon Marine Experiment Station.** Other partners are ShoreBank Enterprise Pacific and the Astoria-based Seafood Consumer Center. Initial funding from the Kellogg Foundation and USDA Funds for Rural America were instrumental in helping to form this partnership.

#### **Regional pest and disease network**

Growers who make up the Willamette Valley's processed vegetable industry now have a tool to help them **combat damaging pest infestations.** A regional pest and disease monitoring and reporting network called VEGNET is serving these growers, helping them respond efficiently as pest populations cycle from years of severe outbreaks to years of slight pest damage. VEGNET is sponsored by the OSU Integrated Plant Protection Center and the Processed Vegetable Commission. VEGNET's timely, accurate pest reporting helps growers make better informed

decisions about applying pesticides, providing major annual savings in production costs. (<http://extension.oregonstate.edu/linn/content1/Commercial%20vegetables.php>)

### **Sustainable Rural Communities**

The Sustainable Rural Communities Initiative, mentioned above in a different context, is creating a **unique center of excellence at OSU** for a coordinated teaching, research, and outreach focused on rural community sustainability. The object is to develop new educational opportunities, applied and basic research, and outreach addressing the needs and challenges of rural Oregon communities. The initiative will involve place-based education, working directly with communities and taking OSU expertise directly to targeted rural Oregon communities. **The overall goal is to improve environmental, economic, social and cultural well-being in Oregon's rural communities.**

### **Potato Irrigation System Trial**

The Malheur Experiment Station has engaged with an unusual partner to put sophisticated technology to practical use, to help assure Oregon potato producers deliver a high quality product. The **Jet Propulsion Laboratory** of the National Aeronautics and Space Administration (NASA) **is providing “sensor pods” for real-time monitoring of environmental conditions** that affect potatoes. Scientists at the Malheur Experiment Station are employing sensor pods to monitor quality loss in potatoes from heat stress and water stress and to discover whether changes in irrigation system management, potato bed configuration, and other cultural changes may reduce heat and water stress. Webs of the sensors record and integrate data about soil water potential and temperature at 10 and 20 cm depths, air temperature and relative humidity at the potato canopy, and global solar radiation. Information on NASA/JPL sensor webs may be found at the NASA Web site: <http://sensorwebs.jpl.nasa.gov/> Malheur data may be viewed at <http://www.malag.aes.oregonstate.edu/sensorwebs/> Support for the current work has come from NASA/JPL and the OSU Agricultural Research Foundation.

### **Drought in Oregon**

When drought appeared to be a big threat to Oregon because of an uncommonly dry winter, outreach personnel from Oregon State University were ready. Water is a critical natural resource. The anticipated drought in Oregon was forecast to put extra pressure on this critical, and limited, water resources. In anticipation, the OSU Extension Agriculture Program compiled **publications and information to help Oregonians cope with water shortages** at home, in the garden, and on farms and ranches—and put it on the Web. (<http://extension.oregonstate.edu/emergency/drought.php>)

In addition, emergency drought funding, combined with additional Natural Resources Conservation Service funding enabled rapid deployment of an **on-line irrigation advisory program** (<http://biosys.bre.orst.edu/RealtimeIrrigationSchedule>). The program—still highly useful even in more-normal water years—allows Oregon irrigators to log on to a web page, enter basic information about their irrigated fields and receive information about current and past soil moisture conditions, recommended dates for upcoming irrigations, and projections for water requirements to the end of the season. New options will assist irrigators with evaluation of partial irrigation strategies for allocating limited water to multiple fields when water supplies are insufficient for full irrigation.

## National and international impact of programs and initiatives

The College's faculty are involved in numerous programs and activities with national and international dimensions. These are three examples of programs with strong international involvement and consequence.

### Surimi School

Surimi is a product made from white-fleshed fish that is an inexpensive rich protein source suitable for making various kinds of processed foods. Jae Park, at the OSU Seafood Laboratory in Astoria, attracts participants from around the globe to an annual three-day Surimi School. The event is designed for practicing surimi technicians, technologists, operators, and marketers seeking a **pragmatic knowledge of surimi technology and its utilization in food product development**. The main Surimi School is offered in Astoria in conjunction with the Surimi Industry Forum, attracting about 120 to 130 people. Surimi School is also offered in three other locations: Bangkok (since 1996); Paris (since 1999); and South America (Peru or Chile) (since 2004). Including the surimi schools overseas, 200-230 people from more than 30 countries are trained each year.

### Food production in Africa

Faculty in the Department of Horticulture are participants in a long-standing USAID Collaborative Research Support Program (CRSP) that supports genetic improvement of beans and cowpeas, development of value-added products for East African local economies, sustainable production practices, and **improvement of nutrition of malnourished children in the area**. OSU research is focused on East Africa, one of three geographical areas where the project is being carried out. In Africa, OSU partners include Bunda College of Agriculture in Malawi, Eduardo Mondlane University in Mozambique, Sokoine University of Agriculture in Tanzania, and University of Free State and University of Pretoria in South Africa. Partners in the United States include Purdue University, Michigan State University, Texas A&M University, University of Minnesota, Washington State University, and the U.S. Department of Agriculture.

### Marketing blueberries to People's Republic of China

The impact of China on global agriculture is of concern to many who produce and process agricultural commodities in the United States. Blueberry growers in the Northwest were attentive to potential competition from China. To learn more about the blueberry industry in China, Wei Yang of the North Willamette Research and Extension Center **organized and led a group of berry growers, processors, and marketing experts from Oregon and Washington to tour the berry industry in China**. All three Oregon berry commissions supported the trip. Participants concluded that China's blueberry industry is still in its infancy and will not be able to compete with the blueberry industry in the Northwest for quite some time.

The booming Chinese economy actually creates a huge market potential for exporting domestic blueberries to China. **OSU's Yang has been a leader in introducing blueberries to the Chinese food and beverage sector**. As a result of these marketing and promotion activities in China, that nation for the first time purchased more than 50,000 pounds of fresh blueberries. Frozen blueberry export to China also jumped eight times what it had been. It is anticipated that the fresh and frozen blueberry exports from the United States to China will continue to grow in the years to come.

## **Faculty recognition and awards**

College of Agricultural Sciences faculty and staff have earned **recognition from many sources**, departmental, College, University, professional associations, government agencies, and others. For example, the American Society of Animal Science recognized **David Bohnert**, of the Eastern Oregon Agricultural Research Center in Burns, with its “Young Scientist Award.” The U.S. Environmental Protection Agency recognized **Robert Lackey** of the Department of Fisheries and Wildlife with its Science Communication Award, and the Entomological Society of America presented its Team Integrated Pest Management Award to **Richard Hilton** and **Philip VanBuskirk** of the Southern Oregon Research and Extension Center.

**Journal editorships** held by faculty in the College of Agricultural Sciences include **Robert Lackey** who is associate editor for science, American Fisheries Society; **Michael Morrissey**, head of the OSU Seafood Laboratory, as editor of the *Journal of Aquatic Food Product Technology*; and **Chris Mundt**, of the Department of Botany and Plant Pathology, as editor-in-chief of *Phytopathology*, the American Phytopathology society.

**Book authors or editors** include **Peter Cheeke**, of the Department of Animal Sciences, for the third edition of *Contemporary Issues in Animal Agriculture* (Prentice Hall); **James Kennedy and Andrew Waterhouse**, of Food Science and Technology, for *Red Wine Color: Revealing the Mysteries* (American Chemical Society); **Jay Pscheidt and Cynthia Ocamb**, of Botany and Plant Pathology, for the *Pacific Northwest Plant Disease Management Handbook* (OSU Press); and **Janine Trempy and Nancy Trun**, of Microbiology, for *Fundamental Bacterial Genetics* (Blackwell).

Faculty in Agricultural Sciences were awarded **four patents**, and also **plant variety protection** for two varieties of wheat.

While acknowledging the outstanding work of so many of our colleagues who have been recognized, we call particular attention to those who this year received the College’s **James and Mildred Oldfield E.R. Jackman Team Award**. Established a number of years ago, the award has helped encourage, support, and recognize interdisciplinary team efforts, a long-standing value for the College. This year’s award went to a team that was a model of the very behavior the College seeks to stimulate. **The Klamath Project team drew together 31 participants**, not only from OSU but also from two other university campuses and a state agency. Team members were from the OSU departments of Agricultural and Resource Economics, Fisheries and Wildlife, and Crop and Soil Science, the College of Health and Human Sciences, the OSU Center for Water and Environmental Sustainability, Klamath Experiment Station, the Klamath County office of the OSU Extension Service, the Oregon Water Resources Board, and the University of California, Davis and Berkeley campuses. Together, they sought a **balanced, objective path to help diverse, sometimes adversarial groups in the Klamath Basin** understand the problems associated with the basin’s water management, and contribute to better decision-making. The team identified and articulated elements of the problems, presented information and analysis, and offered alternative strategies and solutions.

## **Student recognition and awards**

The College honored four high achieving undergraduates with The Burlingham Student of Excellence, Capital Press Outstanding Senior in Agriculture, Savery Outstanding Master's Student, and Savery Outstanding Doctoral Student awards.

In addition, a number of CAS students received University-level awards:

- **Jee Lee**, bioresource research, received Student Involvement's S.E.E.D.S. Risk-Taker of the Year Award.
- **Krista Eucken**, Fisheries and Wildlife, received a Drucilla Shepard Smith Scholastic Award.
- **Houston Bruck**, Agricultural and Resource Economics, and Kim Marshall, Animal Sciences, received Student Alumni Association Legacy Merit Scholar Awards.
- **Eight College of Agricultural Sciences students received OSU Waldo Cummings Outstanding Student Awards** and six received honorable mentions.

## Strategic Plan Implementation

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### *University Focus areas for 2004-2005*

#### Enhancing student success

The College of Agricultural Sciences made a concerted effort this year to reach out to students from under-represented groups, including those who already have enrolled and those who may be prospective students. A number of activities helped to advance this effort. Among them:

- We completed a **market analysis** that informed us about how prospective students see us, and identified some areas of potential opportunity that will increase the effectiveness of our recruiting message. This study was not limited to minority students.
- We formed and trained a **minority recruitment team** made up of currently enrolled students.
- We **began collaboration** with organizations that support under-represented K-12 students.
- We employed **Spanish-language translators**, and we created a Spanish-language student section of the College's Web site, and also developed Spanish-language recruitment fliers.
- We implemented a **scholarships program** aimed at entering students from SMILE or MESA.
- We **added resources** to assist the student minority organization, Minorities in Agriculture, Natural Resources, and Related Sciences (MANNRS).
- We **provided large group tours and activities** for several organizations serving under-represented students.
- We **made recruitment visits** to several organizations and clubs serving under-represented students, and attended several tribal college fairs.

We do not anticipate immediate measurable outcomes from these efforts, however, but we are hopeful that establishing long-term relationships with minority communities will foster enhanced diversity in the College student body and will further enhance the learning experience for our students. Increased outreach activity, however, has raised awareness of diversity issues and opportunities among the faculty and staff within the College.

We allocated almost \$45,000 to support development of two new baccalaureate core courses and \$36,000 for six new distance education courses. We also negotiated a memorandum of understanding with Ecampus that is a template for on-going collaborative distance education programming. An estimated 300 students have been impacted annually.

The College of Agricultural Sciences has initiated a partnership with Alabama A&M University, an 1890 Land Grant university with strong programs in agriculture, food science, and natural resources that parallel strengths at OSU. Future faculty and student exchanges are anticipated.

## Increasing research and outreach

The single greatest set-back to the College's research and outreach capacity over the past few years comes down to a single word: budget. Resource constraints resulted in a faculty vacancy pool of 80 FTE in the period beginning July 2001. As an important step toward rebuilding capacity, the College has approved filling positions totaling more than 30 FTE. Several new faculty in core disciplinary areas will *participate* in interdisciplinary teams relating to the College's Goals 1-4<sup>2</sup>, while nine positions will *focus primarily* on them. (For further about this cohort of new faculty, please see the later section on major unit activities that promote one or more thematic areas.)

Other progress that advances research and outreach includes:

- **The College of Agricultural Sciences is the designated leader of the nation's Western Sun Grant Center.** In fulfilling these responsibilities, we conducted two regional planning workshops to design key elements of the Center. Workshop participants were university partners from throughout the West and the Pacific Islands. Sun Grant work at OSU includes developing a directory of OSU faculty who have relevant expertise, and of projects related to bio-based products.
- Representatives of the College are **engaging stakeholders to help design a sustainability initiative** that will embrace ecosystem services, one of the College's four major programmatic goals. In addition, we have partnered with The Oregon Garden to establish what is called the Sustainable Plant Research and Outreach (SPROUT) initiative.
- We have advanced the **College's food, nutrition, and health initiative** with significant support for Center for Gene Research and Biotechnology, Environmental Health Sciences Center, and Marine Freshwater Biomedical Sciences Center. A faculty hire directly related to this will employ a scientist with expertise in cancer prevention. Other faculty are active collaborators in major interdisciplinary grant proposals.
- As noted elsewhere in this report, several College faculty members collaborated in developing University **strategic initiative on water and watersheds**, and are designated participants in the Institute for Water and Watersheds and in new graduate degrees in water sciences. Agricultural Sciences has committed matching funds for this initiative.
- To help encourage the capacity of faculty—especially junior faculty—to be competitive for grants, the College provides support for those who enroll in **grantsmanship workshops**. This is an on-going practice.

## Enhancing diversity and community

The College has been deliberate in its attention this year to diversity and community. This attention has taken many forms. As prompted by the University, we completed a College-level **Diversity Action Plan**, and have requested academic departments within the College to do so as

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<sup>2</sup> The College's four strategic emphases are: (1) Emphasize research, technology development, and technology transfer that will establish and support a **biobased Oregon industry** that produces energy and other products. (2) Apply scholarship and technology to enhance the capacity of managed landscapes and their biota to optimize the production of **ecosystem services**, such as: carbon sequestration, wastewater treatment, bioremediation, maintenance of biodiversity, and others. (3) Advance basic bioscience research and apply knowledge to create enhanced **foods and food products, nutrition, and health**. (4) Advance understanding and effective management of **water, watersheds, and other water-related resources**.



well. Around the state, branch experiment stations and county offices of the OSU Extension Service are at work on **regional diversity action plans**. Progress beyond the planning includes:

- Anticipating considerable activity by search and screening committees seeking faculty members for more than 40 positions approved in two recent rounds of a Priority Staffing process, the College established a policy requiring that **at least two members of each search committee will have completed diversity training**. The large number of upcoming new hires presented a unique opportunity to take significant action in shaping the character of the College. Therefore, with the Office of Affirmative Action and Equal Opportunity, the College co-sponsored a series of five half-day diversity workshops. More than 140 people attended, most of whom were search committee members. After completing the workshop, many attendees complimented the quality and the content of their training. Anecdotal information suggests that some units not only learned new ideas and skills for the search process, but also may have influenced the hiring of some excellent faculty from underrepresented groups. A formal assessment of the workshops will be conducted this coming year.
- Also in anticipation of the tenure-track faculty hiring mentioned above, the College asked its units to submit **explicit plans for enhancing diversity**. Additional specific steps to seek diversity were required with each NAPO request for the more than 40 approved positions. As part of pre-interview approval, associate deans monitored progress.
- The College committed financial support for a request to the **Tenured Faculty Diversity Initiative** program.
- The College conducted a national search and recruited an outstanding person as its first **director of external relations and marketing**. This individual will have among her early priorities the deliberate inclusion of individuals and groups who can bring new and diverse perspectives.
- In collaboration with faculty in the College of Liberal Arts, **initiated a conversation with Burns-Paiute tribe** to assess educational and research needs that OSU might help address. We expect this conversation to continue.

**Observations and learning:** Building community and diversity and making a strong commitment to do so requires cultural change, something that does not happen overnight. Still, there are few regular meetings of the College's leadership where there is *not* discussion of some aspect of community and diversity, and related actions and events. The matter is in people's consciousness. In faculty hiring, we continue to face the "pipeline issues" whereby even with aggressive scouting there often are relatively few qualified candidates (or none) from among underrepresented groups. Even when there are, OSU salaries frequently are inadequate to compete for them. We do not let this discourage us, even if that means we build diversity in our community one individual at a time.

## ***Summary: Promoting the thematic areas***

### **Priority Staffing: identifying positions to be filled**

In two successive rounds of a process mentioned earlier, called Priority Staffing, we invited operating units of the College to propose positions that would address priority needs they and their stakeholders had identified and that reflected directions set forth in the University strategic plan, the College strategic plan, and their own unit-level strategic plans. We especially encouraged joint proposals from two or more units. Based on their proposals and our review of

them, the College administration approved filling more than 40, including positions funded from each of the College's budgets: teaching, research, and the Extension agriculture program.

At the center of this process were our academic department heads, Extension agriculture program personnel, branch Experiment Station superintendents, and other unit heads. Their proposals reflected creativity and ingenuity in combining resources to address important needs. This included proposing positions at less than 1.0 FTE on state funds and making up the difference from other sources such as grants, federal funding, earnings from endowed professorships, assistance from industry, and joint funding with another state or federal agency. Almost all campus positions will be filled at 0.75 FTE or less, enabling us to authorize the units to **fill more positions than otherwise would have been possible**. This practice is consistent with what many advisory committees have told us, that the units should be aggressive in seeking more grant funding, and that we should expect greater support from private sources and from certain sectors of the industry.

After so many years of a hiring "freeze" the filling of many of these positions will have significant benefits to our students. Instead of temporary teachers in a number of courses, we once again will be able to assure that more courses are taught by professorial-level faculty members. A second dimension of this round of priority staffing is that each proposed position was **coordinated with our counterparts in the College of Forestry**. At least three of the positions authorized for filling are also high priority for their college. Such cross-college links help increase the likelihood of attracting the best young faculty.

#### **Positions approved in Priority Staffing:**

##### **Agricultural and Resource Economics**

1. Agricultural Business Management
2. Markets and Trade

##### **Animal Sciences**

3. Physiological Genomics: Reproductive Physiology
4. Beef Cattle Systems
5. Extension Beef Specialist
6. Livestock and Range Extension, Baker County

##### **Bioengineering**

7. River EcoEngineer
8. Bioproducts Engineer

##### **Botany and Plant Pathology**

9. Microbial Genomics
10. Bioinformaticist (Plant Clinic)

##### **Crop and Soil Science**

10. Potato Breeding and Genetics
11. Cereals Specialist
12. Soil Nutrient Management
13. Field Crops/Watershed Extension, Malheur County
14. Field Crops Extension, Marion County

##### **Environmental and Molecular Toxicology**

15. Cancer Biologist
16. Extension Pesticide Education and Agricultural Health

##### **Extension and Experiment Station Communications**

17. Accountability Communications Specialist

##### **Fisheries and Wildlife**

18. Hatchery Research Center Leader
19. Wildlife Ecologist–Agricultural Ecosystems

##### **Food Science and Technology**

20. Enologist

##### **Horticulture**

21. Ecologist
22. Urban and Community Horticulturist
23. Horticulturist, Umatilla County
24. Ecological Landscape Horticulturist
25. Extension Horticulturist, Coos and Curry counties

##### **Microbiology**

26. Pathogenic Microbiologist

##### **Rangeland Resources**

27. Rangeland Ecologist

##### **Statistics**

28. Statistics

##### **Central Oregon Agricultural Research Center**

29. Crop Physiologist and New Crops

**Coastal Oregon Marine Experiment****Station**

- 30. Marine Fisheries Ecologist
- 31. Cetacean Biologist
- 32. Pinniped Biologist

**Eastern Oregon Agricultural Research Center**

- 33. Sustainable Beef Production Systems

**North Willamette Research and Extension Center**

- 34. Integrated Nursery Crop Production

**Multi-unit positions**

- 35. Extension Small Farms, North Willamette Valley
- 36. Extension Dairy, Willamette Valley
- 37. Extension Veterinarian, Statewide

- 38. Extension Well-water Protection and Water Quality, Statewide
- 39. Natural Resource Management (and staff chair), Lincoln County
- 41. Extension Small Farms, South Willamette Valley
- 42. Extension Small Farms, Jackson, Josephine, Douglas counties
- 43. Extension Entomologist, Hermiston
- 44. Extension Pesticide and Farm Safety Education, Statewide
- 45. Extension Livestock and Rangelands, Malheur County
- 46. Extension Small Farms (and administration) (AES and ES), Central Oregon
- 47. Extension Sustainable Production Systems, Statewide

## **Other initiatives: Professional development**

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The College has a history of strong support for professional development and in its *Agenda*<sup>3</sup> has stressed the importance of a continuing investment in developmental programs for faculty and staff. This year is no exception and, in fact, has presented some new opportunities for **professional development uniquely tailored for where participants are in their careers.**

### **LEAD-21 Leadership Development Program**

The primary national-level leadership development program serving the needs of Land Grant universities' colleges of agricultural, environmental, and human sciences and the Cooperative State Research, Education, and Extension Service (CSREES) of the U. S. Department of Agriculture (USDA) is called LEAD-21<sup>4</sup>. The primary purpose of LEAD-21 is to develop leaders in Land Grant institutions and strategic partners who link research, academics, and extension in order to **lead more effectively in an increasingly complex environment.** Core leadership competencies include developing staff and others, valuing diversity, communicating effectively, managing change, resolving conflict, developing and managing resources, leading with integrity and values, and developing a deeper knowledge and appreciation of higher education. LEAD-21 involves three on-site sessions and an independent learning experience over a period of a year. Participants from the College of Agricultural Sciences are **Bill Braunworth**, leader, Extension Agriculture Program; **Jan Auyong**, assistant director, Oregon Agricultural Experiment Station; **Mary Corp**, Umatilla County Extension; and **Richard Roseberg**, Klamath Experiment Station. Another OSU Extension Agriculture Program faculty member, **Derek Godwin** (Marion County), also is participating, supported by OSU Extension.

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<sup>3</sup> *The Agenda for the College of Agricultural Sciences*, pamphlet available from the Office of the Dean.

<sup>4</sup> LEAD-21 is the acronym for Leadership Development for the 21st Century: Linking Research, Academics, and Extension.

### Food Systems Leadership Institute

For even more experienced leaders, the Food Systems Leadership Institute (FSLI), a partnership between the National Association of State Universities and Land Grant Colleges (NASULGC) and the W. K. Kellogg Foundation, this year selected two participants from the College of Agricultural Sciences for its inaugural leadership institute. The FSLI is designed for experienced professionals who are motivated to further advance their knowledge and skills in leadership and food systems. A rigorous curriculum develops their individual leadership, their ability to act as agents of change within their organizations, and their appreciation for broad and holistic perspectives on food systems. From OSU, the 2005 FSLI scholars are **Anita Azarenko**, head, Department of Horticulture, and **Bill Boggess**, head, Department of Agricultural and Resource Economics.

## Scorecard

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### *Performance on college-level metrics*

In terms of enrollment, 2004-05 was a successful year for the College of Agricultural Sciences.

- We have had an 11 percent increase in *new* undergraduate student enrollment from fall 2003 to fall 2004. (The University's new student enrollment has decreased by 1.5 percent.)
- We have had a 3 percent increase in *total* undergraduate enrollment (and no change in graduate enrollment) from fall 2003 to fall 2004. (The University's undergraduate enrollment has increased by 0.7 percent and graduate enrollment has increased by 0.4 percent.)
- We have *reversed downward trends* in undergraduate enrollments for Agricultural Business Management, Crop and Soil Science, Food Science and Technology, Horticulture, Rangeland Resources, and the OSU Agriculture Program at Eastern Oregon University in La Grande. Enrollments are up in all of these programs, and many quite substantially.
- The undergraduate enrollments of previous “gainers” have *decreased* this year. They are Natural Resources and Environmental Economics, Policy, and Management (Agricultural and Resource Economics), as well as Fisheries and Wildlife
- Undergraduate enrollments in General Agriculture and Bioresources Research have *remained stable*, and Animal Sciences enrollment has *continued to rise*.

The College of Agricultural Sciences is able to report favorable changes in retention and graduation rate data:

- Our first-year retention rate for the 2003 cohort was greater for “same college” (74.1 percent) than it had been for the 2002 cohort (71.4 percent). We maintained an outstanding retention rate for “all” (84.4 percent in 2002 and 2003 cohorts).
- The six-year graduation rate for 2003-04 was 51.3 percent (70.7 percent within the University), a significant increase from 2002-03 when it was 43.1 percent within the College (61.8 for the University).
- The College’s graduation rate for the 1998 cohort was greater for “same college” than it had been for the 1997 cohort and saw little change for “all”:  
 Same college: 58.2 percent for the 1998 cohort; 51.3 percent for the 1997 cohort.  
 All: 69.7 percent for the 1998 cohort; 70.7 percent for the 1997 cohort.

## **Number of degrees awarded**

The number of degrees awarded has remained approximately the same.

### **Baccalaureate degrees**

- AY 2002-03, 284
- AY 2003-04, 293
- AY 2004-05, 293

### **Graduate degrees**

- AY 2002-03, 105
- AY 2003-04, 90
- AY 2004-05, 110

## ***Leveraging resources***

### **Initiatives to leverage state resources**

#### **A measure of research competitiveness**

Among Land Grant university colleges of agricultural, environmental, and human sciences, Oregon State University faculty in the Oregon Agricultural Experiment Station (most are in the College of Agricultural Sciences) are among the top three groups nationally in competitiveness for grants from the U.S. Department of Agriculture National Research Initiative Competitive Grants Program (NRICGP). The program is administered through the Cooperative State Research, Education, and Extension Service of USDA. The other institution and system with OSU in the top three nationally are the University of Wisconsin and the University of California System (Davis, Berkeley, and Riverside). Competitiveness for National Research Initiative funds was measured using the ratio of NRICGP funds received by a university in relation to the amount of federal Hatch Act funds received. (Hatch funds are allocated to all Land Grant universities on a formula basis; the formula has the same components in it for each state.)

#### **Leveraging earnings to generate further income**

During the past six terms, departments and faculty in the College have been allocated more than \$500,000 through E-Campus revenues. The College continues to redistribute these funds as an incentive for development of additional distance education courses.

#### **More information to be provided**

The College will revise this report to provide additional financial information after it has been prepared and reviewed.

### **Initiatives to improve administrative efficiencies**

The College is undertaking a remodeling of administrative office space in 2005 in order to co-locate (in contiguous space in Strand Agriculture Hall) and make more efficient the activities of three associate deans, the assistant director of the Oregon Agricultural Experiment Station, the leader of the Extension Agriculture Program, and the College's fiscal and personnel officers.

## **Proposed goals for 2005-2006**

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The College will continue work on its previously identified goals, including those in the OSU Strategic Plan and those in the College's own plan. These include the goals of enhancing student success, increasing research, scholarship, and outreach, and enhancing diversity and community. As noted earlier, all involve cultural change and persistence, arguing for "staying the course" as articulated in current plans, and adjusting our strategies as we continue to learn. We have indicators of progress in each of these areas.

Major diversity enhancement efforts in 2005-06 will focus on the completion of a diversity appraisal to assess work place and learning environments within the College, the development of diversity action plans within each College of Agricultural Sciences department, and the completion of joint regional Diversity Action Plans by Extension offices, branch experiment stations, and other off-campus units.

The College will revise this report to provide additional specific information regarding goals for 2005-2006 after the College administration has discussed and articulated them.