Academic report of the dean, 2009-2010

College of Agricultural Sciences

Oregon State University
September 2010

Note: *Throughout this report footnotes are provided that include a URL for locating additional information about a particular topic. Most such URLs will be "live" and "clickable" but, should such direct links fail, please copy the link and paste it into your web browser.*

Introduction

In meeting Oregonians across the state during my first year as dean of the College of Agricultural Sciences, I have emphasized Oregon State University's history, tradition, and continuing vital role as Oregon's Land Grant institution and its missions of providing education for those to whom it might otherwise not be available, and as a source research-based knowledge and information. I point out that our College is a major source of knowledge across a broad range of disciplines and studies, including agricultural and food systems, environmental quality, natural resources, life sciences, and rural economies and communities worldwide. Our College offers education leading to baccalaureate and graduate degrees, and extended education programs throughout Oregon and beyond. Our research programs seek to solve problems and to build a knowledge base for future sustainable development. Benefits of the College's education, research, and outreach are manifested in domestic and international settings alike. The three-part mission of research, Extension, and teaching is part of our DNA as a Land Grant university. This mission guides our contributions to society and gives our work a sense of purpose. We strive for an unimpeded flow between the outcomes of our research efforts and their direct relevance to our outreach efforts.

Before turning to a report of achievements, it is essential to acknowledge the unusual character of the 2009-2010 academic year. If asked, almost every student, staff, or faculty member of the College of Agricultural Sciences (and, probably, the University) would be able to recount one or more dimensions of this past academic year that were out of the ordinary—and that affected their work or studies. They likely would identify such matters as budget reductions and tuition increases; changed funding models for branch experiment stations, stricter University guidelines for administrative structures, department size and faculty numbers, class size, number of academic majors, and the like; completing a move to business centers; creation of a new level of University administration called "divisions," and strategic planning and transformation for the College of Agricultural Sciences. Our scientists would surely identify significant change in federal granting agencies that now routinely expect successful grant proposals to articulate specifically the inter-institutional collaboration, the outreach activities and their outcomes, and specific applicability of what will be learned.

Organizational and programmatic change in a university—especially a Land Grant university—necessarily must be an inclusive process as there are stakeholders for everything we do. Consequently, in both structured and informal settings, I spoke with and listened to internal and external stakeholders, explaining the parameters within which we must work, describing potential strategic directions, and proposing changes. Internal stakeholders—students, staff, and faculty—likewise were so engaged in these conversations and in in-depth strategic planning. For those who are part of departments or other units identified for major change, the alterations in structure, program, and leadership constituted significant disruptions to their on-going support of the College's missions. Despite these several distractions during the year, we did indeed continue to excel. We maintained enrollment, educated and

graduated students; we designed a staffing plan to continue Agricultural Sciences and Natural Resources Extension programming with what will be declining numbers of faculty so engaged, and we logged more than $55 million in external grants and contracts: a record, and unmatched by any other college at OSU.

Programmatic achievements

Student engagement and success

As society has stepped away from investments in education and placed a greater and greater share of the cost of education on students and their families, fulfilling our Land Grant responsibilities for undergraduate education has become progressively more challenging.[1] At this time, 70 percent of the College's students require some level of financial aid. Despite such challenges, students apply themselves and excel. For example, students participating in Minorities in Agriculture, Natural Resources and Related Sciences (MANNRS)[2] and Bioresource Research[3] programs achieve 90 percent graduation rates. Based on the most recent 2003 cohort, the College's 6-year graduation rate is 69 percent (OSU's overall rate is 60 percent), but our goal is to reach the 80 to 90 percent graduation rates of our aspirational peers. Key factors in retention and graduation rates include advising and experiential learning opportunities. Undergraduates benefit from a wide variety of experiential learning and internships such as those provided through an Organic Growers' Club;[4] through a Research Experience for Undergraduates in Pollination Biology program;[5] and through a BugZoo Program that engages students in extending knowledge of entomology and related subjects.[6] The College's Ecological Engineering major—one of a kind in the nation—invokes a systems approach to traditional engineering problems. Students graduate prepared to approach problems holistically rather than being closely tied to specific disciplines. . The opportunity to define the depth and breadth of the field stimulates creative cognition. (See also *International-Level Activities and Accomplishments* and *Student Awards*, later in this report, for more on student engagement and success.)

Research, outreach and engagement

The College values its culture of responsiveness as part of the mission of the Land Grant institution. Responsive action is frequently expressed through collaborative action with other institutions, agencies, private concerns, and involved stakeholders. For example, *Drosophila suzukii*, the spotted wing Drosophila (SWD), is an introduced pest, first observed in Oregon in 2009, that is potentially threatening to the state's horticultural industry. The pest damages multiple fresh fruits and could pose a significant danger to the Oregon's fruit crops, which have a $407.2 million annual farm gate sales of. Loss to the economy as a whole through distribution and processing would be far greater. Growers and researchers are collaboratively seeking to identify effective, agronomically acceptable management strategies. OSU researchers Vaughn Walton and Amy Dreves established Oregon State University as the lead on a $5.8

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[1] Advisory Committee on Student Financial Assistance (2010). *The Rising Price of Inequality: How inadequate grant aid limits college access and persistence.* Washington, D.C.: http://www2.ed.gov/about/bdscomm/list/acsfa/acsfarpijune2010.pdf

[2] http://agsci.oregonstate.edu/manrrs/awards

[3] http://agsci.oregonstate.edu/brr/

[4] http://cropandsoil.oregonstate.edu/organic_grower/internships

[5] http://cropandsoil.oregonstate.edu/REU

[6] http://cropandsoil.oregonstate.edu/bugzoo/

million, four-and-a-half-year USDA National Institute of Food and Agriculture (NIFA) Specialty Crop Research Initiative grant. Collaborators on this important research include Washington State University; University of California, Davis; University of California, Berkley; University of California Division of Agriculture and Natural Resources; USDA Agricultural Research Service; Oregon Department of Agriculture; and consultants Peerbolt Crop Management. From an OSU web site, researchers, growers, and others have access to current scientific knowledge of spotted wing Drosophila fruit fly biology, management, and effects on Pacific Northwest berry crops.[7]

Other notable partnerships include collaboration with Oregon Tilth, a nonprofit research and education membership organization dedicated to biologically sound and socially equitable agriculture. Through this partnership, the College is providing services and research results to Oregon's small farms population to promote sustainability of this traditionally underserved sector.[8] This College-Tilth collaboration successfully competed for a USDA-NIFA Beginning Farmers and Ranchers grant that will support innovative comprehensive instruction to these geographically distributed farmers. The grant management team is in itself a collaboration that includes several non-governmental organizations.

Other examples of the many collaborations in which our faculty are engaged include OSU Department of Fisheries and Wildlife and the Oregon Department of Fish and Wildlife research aimed at promoting quality salmon breeding stocks through the Oregon Hatchery Research Center at Alsea, Oregon.[9] Another collaborative venture with Indie Hops, an Oregon-based hop merchant, promises to revitalize the College's hops research program in the Department of Crop and Soil Science.[10]

Thematic areas

The College's faculty includes leaders in agriculture and food systems, natural resource management, life sciences and rural economic development research and their work contributes in many ways to the economic and environmental sustainability of Oregon and the Pacific Northwest. We focus on five thematic areas:

- Sustainable food and agricultural systems;
- Stewardship of natural resources;
- Bio-products, bio-materials, and bio-energy;
- Environmental and human well being; and
- High-quality fundamental sciences.

Sustainable food and agricultural systems

We are among the world's leading scientific and educational institutions addressing the food, fiber, and fuel challenges of burgeoning global populations. Notable collaborative breakthroughs include documentation of the potato genome and related pathogens, promising to lead to greater pest

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[7] http://swd.hort.oregonstate.edu/
http://www.oregonlive.com/business/index.ssf/2010/03/oregon_scientists_seek_defense.html
http://oregonprogress.oregonstate.edu/

[8] http://extension.oregonstate.edu/news/story.php?S_No=715&storyType=news

[9] http://www.dfw.state.or.us/OHRC/

[10] http://extension.oregonstate.edu/news/story.php?S_No=714&storyType=news

resistance and increased nutrition in one of the Earth's leading food sources.[11] When questions were raised about protection of world seed production resources located in the Pacific Northwest, College of Agricultural Sciences faculty helped inform policy makers of possible consequences of canola production in the Willamette Valley.[12] A new research and Extension position in the College is responding to perplexing circumstances of colony collapse disorder of honeybees and their health and nutrition requirements so critical to the production of fruits, berries, and other crops.[13]

Stewardship of natural resources

Oregon is an important producer of quality agricultural products, but this productivity must harmonize with stewardship of natural resources so valued by our citizenry. Thus, such stewardship is another focus for College faculty. The Oregon Department of Agriculture recognized OSU Extension's Agricultural Sciences and Natural Resources program for its years of work helping dairy farmers protect ground and surface water quality.[14] For beef cattle production, Department of Animal Science field faculty continue to refine the resources with which they guide producers toward economically sustainable, high-quality beef production with minimal environmental impacts.[15] Historical management of fragile ecosystems may threaten key indicator species with loss of habitat; College researchers collaborate with colleagues in other states and in other agencies to reverse these trends, as in the case of the sage grouse.[16] Flooding was once considered an agronomic disaster but, today, some farmers are including flooded rotations to promote migratory shorebird habitat and enhance soil quality. One College researcher is considering the extent to which external incentives are necessary to stimulate adoption of the practice.[17] Still other faculty members focus their attention on environments downstream from Oregon's major population centers, as typified by work in promoting the quality of urban storm water and runoff quality.[18] Development of technology, or its creative adaptation, permits College researchers to monitor systems' ecological parameters and track likely consequences of climate change,[19] and enables communities to explore strategies for managing growth and assessing ecological health, landscape services, and social and economic impacts of alternative development strategies. [20]

Bio-products, bio-materials, and bio-energy

Low-impact bio-products and bio-energy sources is another focus of College efforts, consistent with our leadership of the Western Sun Grant Center. Among many projects is one to explore oil seed potentials, a collaborative effort between the College and Oregon Department of Agriculture;[21] another aimed at

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[11] http://www.huffingtonpost.com/2009/09/28/potato-genome-cracked-by-_n_301697.html
[12] http://www.capitalpress.com/oregon/ml-canola-research-020510
[13] http://www.oregonlive.com/environment/index.ssf/2010/07/oregon_state_university_entemo.html
[14] http://www.gazettetimes.com/news/local/article_b929c010-4ef9-11df-a2a1-001cc4c03286.html
[15] http://extension.oregonstate.edu/crook/agriculture-livestock-natural-resources
[16] http://oregonstate.edu/ua/ncs/archives/2010/mar/despite-lack-endangered-species-listing-sage-grouse-remains-decline
[17] http://www.businessweek.com/ap/financialnews/D9FOJNNO0.htm
[18] http://extension.oregonstate.edu/watershed/
[19] See "Space Tools" at http://oregonprogress.oregonstate.edu/winter-2009
[20] http://rivers.bee.oregonstate.edu/research.html and http://envision.bioe.orst.edu/
[21] http://cropandsoil.oregonstate.edu/bioenergy/

deriving energy from waste water;[22] and yet another for sequencing of a wild grass genome that will serve as a model for improving plants of agronomic importance such as cereals and switchgrass for cellulosic ethanol.[23]

Environmental and human well being

Environmental and human well being is a fourth focus of College activities that are diverse and varied. For example, the still-young field of nanomaterials with their unusual and often unique properties offers great promise for human advancement but, in the face of increasing development and adoption, many questions remain regarding the safety of such materials. Working with international colleagues, College faculty are among the leaders seeking answers to questions about basic safety of nanomaterials.[24]

The National Institutes of Environmental Health Sciences Superfund Research Program (SRP) is a network of university grants designed to address complex health and environmental issues associated with hazardous waste. Through a highly competitive process, OSU won a $12 million grant that established the program in 2009 under the direction of David Williams, professor in the Department of Environmental and Molecular Toxicology. The program draws together a multi-disciplinary team whose work emphasizes basic and applied research to better understand polycyclic aromatic hydrocarbons (PAH) and their impacts on human and ecological health. PAHs, found at Superfund sites and urban settings, are formed in the burning of carbon-based energy sources, e.g., diesel, gasoline, coal, petroleum and in cooking or tobacco smoke. Since the 2010 Gulf of Mexico oil spill, OSU Superfund Research Program has an additional focus on petrogenic forms of PAHs found within crude oil.[25]

The College's Integrated Plant Protection Center[26] has developed a Pesticide Risk Calculator; this precision integrated decision-support tool permits growers to meet yield and quality goals with minimum impact on human health and the environment.[27] Dioxins are toxic, but they also can help fight diseases that attack the body's autoimmune system. With support of a $1.5 million grant from the National Institutes of Health, OSU researchers in the Department of Environmental and Molecular Toxicology have initiated a search for a molecule that will function positively in the human autoimmune system as dioxin can but without triggering toxic responses or new diseases.[28]

The emphasis of agricultural production in the United States, even within the recent past, has been low-cost calories. Over time, this policy has resulted in a general deterioration of human health through increased prevalence of diabetes and other diet-related illnesses. Our College's current emphasis takes the view that it is not only about making available low-cost calories, but that we must ensure healthy

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[22] http://dsc.discovery.com/news/2009/08/25/bacteria-water.html and http://www.nanowerk.com/news/newsid=17293.php

[23] http://oregonstate.edu/ua/ncs/archives/2010/feb/new-genome-sequence-will-aid-study-important-food-fuel-crops

[24] http://www.environmentalhealthnews.org/ehs/Members/sharper and http://emsus.com/nanotechconf/abstracts_g-m.htm

[25] http://oregonstate.edu/superfund/

[26] http://www.ipmnet.org/IPPC_Snapshot_Sept_22nd_2009-1.pdf

[27] http://www.stewardshipindex.org/article/15/Pesticide_Risk_Calculator_Debuts_in_Wines_and_Vines_July_2010.html

[28] http://oregonprogress.oregonstate.edu/summer-2010/update

outcomes for consumers. Our faculty are engaging in research and outreach activities to support human health and well being through enhanced nutrition, for example:

- Undertaking such efforts as the breeding of a purple tomato with increased levels of anti-oxidant compounds,[29] and examining the impact of production systems on the anti-oxidant content of berries;
- Collaborating with Extension Family Community Health faculty to provide a Garden Enhanced Nutrition Education Program, which has a presence in each of Oregon's counties. Curriculum materials have been adopted by a number of other states;[30] and
- Intensifying research into the role in long-term cancer protection conferred prenatally from plant-based phytochemicals in the maternal diet to offspring.[31]

High-quality fundamental sciences

Top-notch basic social, natural, chemical, physical, and engineering science underpins the College's promise to be part of meeting domestic and international food, fiber, and fuel needs; this is the fifth focus of College of Agricultural Sciences efforts. For example, OSU researchers have discovered that trade-friendly nations are best positioned to weather crop yield variability induced by climate change.[32] Other outputs of fundamental science efforts in the College include:

- Zebra fish, once limited outside the tropics to hobby aquaria, now are known to model the effects on humans of exposure to a common class of combustion by-products, many of which threaten human and environmental health.[33] Researchers in the area of environmental and human health can more accurately predict the human and environmental health impacts of known and new products that may be used in the environment. Nanomaterials are an example of such new material.
- Faculty, students, and staff working in the Brian Sidlauskas lab in the Department of Fisheries and Wildlife use diverse methods to determine relationships among world fish species, which have changed over time or across geographic locations, and to investigate how fish vary with the characteristics of their habitats. The aim of this work is to reveal, and ultimately protect, the tremendous biodiversity of the world's fishes.[34]
- Through inter- and intra-institutional collaboration researchers working under the direction of Pankaj Jaiswal in Botany and Plant Pathology continue to develop the richness of the Gramene open source database, which focuses on grasses, for comparative plant genomics. Gramineae is the family name for grasses. This database permits flexible research approaches, and allows researchers to compare genetic information between mapped species.[35]
- RNA interference is a process with which plants, animals and some microbes control gene expression, stabilize genomes, and inhibit viruses. In the James Carrington lab in the Center for Genome Research and Biocomputing, these mechanisms are studied to better understand how plants grow, develop, and defend against pathogens. This work group has also determined how RNA interference spreads through plants to amplify and maintain immunity against viruses.

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[29] http://hort.oregonstate.edu/purple_tomato_faq
[30] http://extension.oregonstate.edu/nep/garden_nutrition/
[31] http://lpi.oregonstate.edu/ss10/epigenetics.html
[32] http://www.sciencedaily.com/releases/2009/11/091123132637.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3A+Latest+Science+News%29
[33] http://oregonstate.edu/superfund/project3
[34] http://people.oregonstate.edu/~sidlausb/research.html
[35] http://www.science.oregonstate.edu/bpp/faculty/jaiswal/

Barriers to progress

As is the case with colleges of agriculture and life sciences nationally, the College of Agricultural Sciences faces the continuing challenge of facilities maintenance and upgrades. As I speak with stakeholders, I often point out that our faculty undertake 21st century research efforts in 19th and 20th century infrastructure. This reality challenges our ability to compete globally. Many branch experiment station facilities, College greenhouses, and research laboratories are notable examples of our lack of capacity to make continuing investments and, therefore, result in the limitations on technological adoption and improvements in infrastructure. Faculty face significant challenges in grant submission, and in commercializing and patenting technology. Reduced support staffing levels require faculty to complete routine tasks such as inventorying incoming supplies, photocopying, and the like, thus diverting time and attention from research, teaching, and Extension activities. These barriers, if not remediated, could significantly jeopardize faculty competitiveness. In order to deal with a significant additional budget shortfall, the College is restructuring its footprint, including development of strategies to obtain 25 percent of base operating funds for branch experiment stations from local sources.

Community and diversity

At its inception, the Land Grant system's promise to the public was "wide access, excellent curricula, [and] research of value to people and communities."[36] As an integral element in the University's Land Grant identity, the College should reflect the community it serves. Demographers project that by 2025, a majority of students in institutions of higher education nationally will be of Hispanic origin; Oregon can expect some 25 percent of its students from this ethnic group.[37] College leadership is considering the feasibility of preemptively helping address needs of minority students at the K-12 level, while some faculty have begun such outreach without directives. Consider also strides made on behalf of post-secondary students by one visionary researcher, Robert Tanguay, working of his own volition.[38]

Barriers to progress

The transition and transformation process noted in the introduction to this report has demanded time and effort thus unavailable for the advancement of community and diversity issues. Although notable work is done by individual faculty with a commitment to diversity and parity, other faculty and administrators are limited in their availability to do great things. We seek to empower others to amplify the successes of the few. We continue to support the egalitarian basis of the Land Grant institution: public education is fundamental to the nation's economic development. The summer issue of the College's quarterly magazine featured a review of the Land Grant mission "as fundamental to a strong nation and to its economic development," during this, the centennial of that part of OSU with an outstanding history embodying the Land Grant tradition: the OSU Extension Service.[39]

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[36] Kellogg Commission on the Future of the State and Land-Grant Universities (2000). *Renewing the Covenant: Learning, Discovery, and Engagement in a New Age and a Different World.* Washington, D.C.: http://www.aplu.org/NetCommunity then select "Library" "Kellogg Commission" and "Renewing the Covenant"

[37] http://www.edweek.org/ew/articles/2010/07/22/37guidance_ep.h29.html?tkn=YPXFMud42vCyn%2BVum27OObGBpfAXk3aiD2DB&cmp=clp-edweek, see also http://extension.oregonstate.edu/news/story.php?S_No=717&storyType=news

[38] http://tanguaylab.com/

[39] http://oregonprogress.oregonstate.edu/summer-2010/legacy-land-grant

International-level activities and accomplishments

Food, water, energy, the environment, disease, population: all are the concerns of everyone, everywhere, in all sectors and economies. These topics are, like so many others, embraced by the missions of our Land Grant institution. Though we lack an organized emphasis on international work, examples of research, teaching, and Extension efforts overseas abound.

- Strategies for socially sensitive solutions to soil management have recently begun in Chile;[40]
- Watershed scale non-point source pollution work in Africa is ongoing;[41]
- The Oregon State University China Working Group maintains a record of their projects past, present, and future.[42]

In December 2009, I commissioned a College-level task force on international programs. In April 2010, the six task force members submitted a comprehensive report articulating a vision for the developing an effective international program in the College.

Explicit goals provided guidance to the group when considering undergraduate opportunities. Those goals are:

- That 25 percent of College of Agricultural Sciences students participate in an international experience;
- That undergraduate internships, scholarships, and fellowships for international experiences be more broadly funded;
- That, at the division level, we become more involved with International Programs, and that the College is directly linked with INTO students. INTO is a campus-based English language immersion program;
- That an experiential international summer curriculum addressing broad interests is developed to engage United States-born faculty and students with their international counterparts; and
- That we make better use on campus of the experiences of faculty with international experience through topically organized lunch-time seminars and similar events.

Currently, only one percent of undergraduates in the College of Agricultural Sciences participate in study abroad programs. Sadly, that figure is an improvement over prior years. Probable causes for this lackluster response are tight program requirements lacking accommodation for study abroad, a lack of awareness of such programs, and a lack of funds to participate in them.

At the heart of their report were recommendations[43] for purposeful international programming, greater definition of College focus in this area, and the types of services, resources, and staffing that would make such an endeavor effective. The task force recommended a collaborative model that would not require significant funds or infrastructure to initiate improved international efforts. Because, at the University-level, international programming focuses on student opportunities, the task force recommended that the College link more closely with the University on undergraduate international opportunities. Undergraduate education is the "low-hanging fruit" in College efforts to integrate diverse international efforts into a single vision. During the interim, international research and outreach will

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[40] http://mingaonline.uach.cl/scielo.php?pid=S0718-27912003000200002&script=sci_arttext; see also http://ctemps.org/training/index.html.

[41] http://ipmnet.org/

[42] http://oregonstate.edu/international/CWG/projects.php

[43] For greater detail of the task force's recommendation, request the CAS International Programs Task Force Report from the Office of the Dean, College of Agricultural Sciences, Oregon State University.

remain the College's principal international activities. These outreach efforts may be characterized by the longstanding commitments of highly engaged researchers with gifts for outreach education.

This concludes the narrative Report to the Provost, 2009-2010, for the College of Agricultural Sciences.

Respectfully submitted,
Sonny Ramaswamy, Dean, College of Agricultural Sciences

Appendices

Appendix 1
2009-2010 results and outcomes

Performance metrics will be supplied at a later date by the Office of Institutional Research.

Appendix 2
Leveraging base resources and improving administrative efficiency

Principal base resources for the College of Agricultural Sciences are those state and federal funds directed to the Oregon Agricultural Experiment Station for its research mission and to Agricultural Sciences and Natural Resources Extension Program through the OSU Extension Service. The greatest leveraging of state and federal funds achieved in the 2009-2010 period was in the area of research where $33 million state and federal formula funds were leveraged by faculty to generate more than $55 million in grant and contract support.

In an effort to further improve efficiencies, coordinate activities, and share equipment and other resources, the College has initiated planning for its Corvallis-area research farms to be overseen and managed in a unified manner rather than through individual academic departments. Planning is continuing, with implementation expected during the 2010-2011 academic year.

Planning continued also during the 2009-2010 academic year for establishing an Agricultural Sciences and Marine Sciences Business Center that would integrate business affairs and human resources support functions for the College of Agricultural Sciences and the OSU Hatfield Marine Science Center at Newport. Preparing for this integrated operation touched every operating unit of the College as well as the Marine Science Center as the units prepared for changes in where certain of their support staff would be housed and where support functions would be performed. The Center was launched successfully on August 1, 2010, although not all staff were immediately co-located in the new Center at Hovland Hall.

Appendix 3. Major awards to faculty, College of Agricultural Sciences, Oregon State University

Faculty in the College of Agricultural Sciences are regularly and consistently recognized at local, state, regional, national, and international levels. This is a partial list of major awards drawn from a much larger, more comprehensive list. Award listings are compiled annually each fall.

Recipient(s)	***Awarding Organization***	***Award***
Agricultural Education and General Agriculture		
Greg Thompson	American Association for Agricultural Education	Fellow
Jonathan Velez	American Association for Agricultural Education	National Outstanding Research Paper Presentation
Agricultural and Resource Economics		
Starr McMullen	Oregon Transportation and Research Consortium	Researcher of the Year Award
Clark Seavert	Agricultural and Applied Economics Association	Distinguished Extension Outreach Program
JunJie Wu	Resources for the Future	Fellow
Animal Sciences		
Jim Thompson	American Society of Animal Science, Western Section	Extension Award
Fred Stormshak	Society for the Study of Reproduction	Distinguished Service Award
Botany and Plant Pathology		
Jim Carrington	Alexander von Humboldt Foundation	Humboldt Research Award
Crop and Soil Science		
Carol Mallory-Smith	Western Society of Weed Science	Outstanding Weed Scientist
Jim Peterson	U.S. Secretary of Agriculture	Honor Award
Phil Hamm	Potato Association of America	Researcher of the Year
Sandra DeBano, George Clough Phil Hamm, Dan Hane Silvia Rondon, Isabel Vales	Potato Association of America	Outstanding Extension Project Award
Dan Hane, Steven James	Potato Association of America	Lifetime Achievement Award
Darin Walenta, Sujaya Rao George Hoffman	USDA Animal and Plant Health Inspection Service	Deputy Administrator's Safeguarding Award
Fisheries and Wildlife		
Joe Ebersole	U.S. Environmental Protection Agency	Scientific and Technological Achievement Award
Alan Herlihy	U.S. Environmental Protection Agency	Scientific and Technological Achievement Award
Carl Schreck	American Fisheries Society	Award of Excellence
Food Science and Technology		
Lizbeth Goddick	American Dairy Science Association	Milk Industry Foundation Teaching Award
Jae Park	Japanese Society of Fisheries Sciences	Award of Excellence for Scientific Paper

Horticulture		
Dan McGrath	USDA CSREES	Partnership Award for Multi-state Efforts
Patty Skinkis	Western Region Land Grants/Extension Mid-managers	Program of Distinction

Major College awards to Agricultural Sciences students, Oregon State University

Recipient	***Academic major***	***Source of award***	***Award***
Anna Rose Adams	Bioresource Research	College of Agricultural Sciences	Burlingham Undergraduate Student of Excellence Award
Julie Neuschwander	General Agriculture	Capital Press	Capital Press Outstanding Senior in Agriculture
Shivonne Nesbit	Fisheries Science	Agricultural Research Foundation	Savery Outstanding Masters Student Award
Tracey Johnson	Wildlife Science	Agricultural Research Foundation	Savery Outstanding Doctoral Student Award

Also celebrating a century of contributions

Following by just a year the centennial celebration of establishment of the Hermiston Agricultural Research and Extension Center, this year's 100th anniversary marked the founding of the **Sherman Station at Moro**. The Station is part of the **Columbia Basin Agricultural Research Center** with headquarters in Pendleton. The June 2010 event at Moro included telling of the history of dryland farming in the Pacific Northwest, insights into wheat and barley variety development, sampling of baked goods from flour milled from heritage wheat varieties, insights into early mechanized farming, and visits to a museum of wheat farming.