

CA&ES OUTLOOK

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S U S T A I N A B L E
a g r i c u l t u r e



CA&ES OUTLOOK

3

Message from the Dean

4

**Sustainable Agriculture:
New Term, Old Concept**

7

Awards and College Celebration

10

Development

11

Outreach

12

Students

14

Faculty

17

Research

19

In Memoriam

20

Alumni

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Message from the Dean

By Neal K. Van Alfen

Sustainability is an issue that weighs heavily on the minds of many these days -- particularly the subject of economic sustainability. We know that many businesses and individuals have been challenged economically during the past few years. The cuts targeted for our Agricultural Experiment Station and Cooperative Extension budgets that our college has endured during the past two budget years are of historic size and are sufficient in scope to bring sustainability into mind during our planning process.

To meet these budget cuts, the college currently is in the process of downsizing our Agricultural Experiment Station and Cooperative Extension faculty ranks by about 70 faculty positions. The downsizing will be through attrition, but this means that it will be some time in the future before we will be able to start replacing faculty positions that become open by retirements and resignations.

Such economic woes always bring into question whether or not all of our programs are sustainable. It is obvious that we cannot continue to do everything in the future that we once did in the past. Difficult programmatic decisions must be made to reduce the scope of our activities so that the programs that we choose to retain can be not only sustainable but will be in a position to retain their international excellence. In response to this economic challenge, much reorganization and planning is underway and will be the subject of a future *CA&ES Outlook* issue.

Just as our immediate concern revolves around the sustainability of our college, we also are concerned about the long-term sustainability of the closed system in which life exists on this planet. Everything necessary to sustain life must be extracted from this closed system.

We are aware that humans have developed a density and lifestyle on earth that is not sustainable in the long run and that we are relying on current and future research to remedy this situation. Just as our college is currently surviving on our "rainy day fund" until our actual number of faculty members is reduced to meet our budgeted number, humans are dependent upon mining non-renewable resources to maintain our cultures until we reach that sustainable state.

One of the primary roles of our college is to provide the research and education that will help us reach the necessary level of sustainability in extracting food, materials and energy from our planet's natural resources while providing a desirable landscape in which to live. Obviously, economic sustainability and social adoption are fundamental to any change. Changes that will be assisted by sound, scientific research will be introduced to make long-term sustainability possible.

Our college has been a national leader in research in agricultural and environmental sustainability. Our Long-Term Research in Agricultural Systems (LTRAS) program is an example of the college's commitment to funding research on the sustainability of different farming systems. This study is planned to last 100 years in order to assure that the long-term consequences of our current practices are understood. This is just one example of the various programs that our college and the UC Division of Agriculture and Natural Resources sponsors to address long-term sustainability.

The scope and diversity of our programs related to sustainability issues has reached a point where many faculty and our external stakeholders are unaware of all that we are doing in this important area. My office felt that it was time for the college to take inventory of its activities and develop a plan for coordi-

nation of these activities. It was also felt that we should develop a plan for how we might address sustainability issues in the future.

To this end, a committee chaired by Professor Emeritus Eric Bradford prepared a report of our activities and made a number of recommendations. This report was widely circulated both on and off campus and stakeholder input regarding the recommendations was solicited (<http://www.aes.ucdavis.edu/AcadProg/SustAgCmte.htm>).

Based on committee recommendations, the college is establishing a Center for Agricultural and Natural Resource Sustainability to coordinate its activities in this area. During the committee's inventory process, over 150 faculty members were identified whose research activities are in support of the vision of the proposed center. This center will cross all three of our college's disciplinary divisions and be an important center for outreach from the college to our stakeholders.

The faculty also identified the need for a new undergraduate curriculum in the area of sustainability and is actively developing this new curriculum. Although the college is investing heavily in the area of sustainability already, we recognize that more, not less, attention must be paid to this important area in the future. Thus, even though our college's budget is currently not in a state of sustainability, we have made the decision to lay the foundation now for this important investment in all of our futures.



Neal K. Van Alfen
(Ph.D., '72, Plant Pathology)
Dean, College of
Agricultural and
Environmental
Sciences

Sustainable Agriculture: New Term, Old Concept

By Dorothy Ross

In ancient times, farmers learned through trial and error that they needed to devise methods to keep their land viable, lest they deplete the soil and lose their capacity to grow food. Over time they developed common-sense approaches, such as crop and grazing rotation, the use of cover crops, and allowing fields to lie fallow every seven years.

Farmers gradually assimilated discoveries in biology and chemistry to these time-tested methods with resulting increases in crop production and efficiency. Selective crop breeding techniques date to the monk in the garden, of course, but biotechnology offers researchers opportunities for genetically improved, high-yielding crop varieties.

The benefits of modern agricultural approaches are obvious: more food can be grown on less acreage in a shorter time with far greater reliability. But is it sustainable?

Admittedly, sustainable agriculture can mean different things to different people. Some equate it closely with organic farming.

Sustainable agriculture in its broader interpretation can be regarded as a farming system that serves societal needs in both the short and long term, one that is economically viable and environmentally sound and that promotes healthy communities. By this definition, sustainability has long been the goal of many CA&ES programs, whether involving organic, conventional or biotech-based approaches.

Researchers within the college have addressed the challenge of continually improving the nutritional quality of food, fiber and floriculture crops by focusing on every phase of production and harvest systems, postharvest storage and handling, and the economics that support or limit each step. CA&ES researchers and extension specialists are justly proud of the contributions the

college has made towards solving the world's hunger problems by developing nutritious and high-yielding fruit and vegetable varieties.

Special Committee

Determined to place CA&ES at the forefront of research, teaching and outreach programs to enhance sustainability, Dean Neal Van Alfen appointed a special committee to review sustainable agriculture activities throughout the college. It is chaired by Eric Bradford, professor emeritus in the Department of Animal Science.

The committee's report recognizes that concerns about sustainability of agricultural and natural resource use in California and elsewhere relate to many issues, including increased salinity of irrigated soils, low agricultural prices due to global competition, diversion of irrigation water to non-agricultural uses, and pollution from livestock operations and agricultural chemicals.

The report also addresses population growth in California and its impacts: the urbanization of prime crop-producing lands, stress on range and forest systems, and threats to the economic and social well-being of rural communities.

Two committee suggestions may be enacted in the areas of research and curriculum. A new center will coordinate and support more than 35 college programs and projects related to sustainable agriculture and will generate funding and publicity for these and future efforts towards sustainability.

In addition, a new undergraduate academic major may be offered soon to bring CA&ES expertise related to agricultural and natural resource sustainability to students in a comprehensive and organized curricular program. This can ensure a workforce well trained in all facets of the field -- from biotechnology and ecology to agricultural economics and community development.

History

The college has supported agricultural viability since its inception almost 100 years ago, but several programs aimed directly at increased agricultural sustainability also have a lengthy track record.

IPM

Established at UC Davis in 1980, with the State Legislature's support and encouragement, the UC Statewide Integrated Pest Management (IPM) Program develops and promotes the use of integrated, ecologically sound pest management programs. IPM is an ecosystem-based strategy that focuses on long-term prevention of pests.

LTRAS

Begun in 1993, the Long-Term Research on Agricultural Systems project (LTRAS), which bills itself as "The World's Youngest 100-Year Experiment," hosts a variety of experiments focused on improving the sustainability and reducing the environmental impact of agriculture. The 100-year experiment was inspired by results from other locations, showing that short-term trends can be poor predictors of long-term sustainability.

SAFS

The Sustainable Agriculture Farming Systems team recently relocated to the LTRAS site for research on how reduced tillage practices might be incorporated into conventional, organic and low-input approaches.

SAREP

Since 1986, the Davis campus has been home to the UC Sustainable Agriculture Research and Education Program (SAREP), a statewide special program to support environmental health, economic profitability, and social and economic equity within the farming community through research and education. It is the first such venture to be established at any

land grant institution in the country and is the model for the USDA's own SARE program.

SAREP associate director Jenny Broome proudly points to California's Biologically Integrated Farming Systems (BIFS) program as a successful collaboration among the university, the Legislature and farmers.

According to Broome, "The adoption of biologically integrated farming systems has generated benefits such as reduced pesticide use, improved soil fertility, decreased erosion and nitrogen leaching and may have increased wildlife populations."

Seminar Series

The college joined with SAREP and other partners to sponsor a two-quarter seminar series titled "The Science of Sustainable Agriculture: Measuring the Immeasurable."

Nineteen experts from around the world were invited to campus to address key issues and topics relevant to agricultural sustainability in California and elsewhere. William Lacy, UC Davis vice provost for University Outreach and International Programs, kicked off the spring sessions with an overview of what sustainable agriculture is and how the university provides a challenging context within which to address it, in light of disciplinary boundaries and reduced public funding.

Presenters spoke about global food access and poverty alleviation efforts, and the role of the intensification of production in addressing world hunger. Other lecturers discussed globalization and its impact on food production, and how specific public policy tools impact sustainability.

The fall series explored the interaction of agriculture and natural resources, as well as the social impacts of agricultural systems.

The Future

Even in these times of severe financial cutbacks, the college and its stakeholders are investing in innovative initiatives to meet the burgeoning requirements of our students

and faculty, farmers and landowners, industry and government, and the public in regard to issues of sustainability.

Each new plant science facility will focus on areas of viability within the agricultural community. The D. Gould and Virginia Bowley Plant Science Teaching Center; the Core Greenhouse Complex; the Plant Reproductive Biology building; and the Ralph M. Parsons Foundation Transformation Facility are all dedicated to the sustainability of their constituencies.

Seed Biotechnology

The Parsons Seed Biotechnology Center, which recently moved into the new Plant Reproductive Biology building on campus, is a model of collaborative effort. In cooperation with the UC Davis Biotechnology Program, the Seed Biotechnology Center (SBC) offers programs on genetic markers, bioinformatics and molecular techniques, plus intensive short courses on seed biology, production and technology.

SBC works to enhance public awareness of seed industry issues and joins with Cooperative Extension to keep growers informed about the latest scientific advances.

Seed biotechnology researchers are working to develop varieties that will be disease resistant, fungicide resistant and/or drought resistant, depending upon grower demands.

According to Kent Bradford, SBC director and professor in the Department of Vegetable Crops, "Crops that are genetically engineered to be herbicide resistant could result in low-tillage farming, thereby saving vital topsoil."

In this area of breeding for resistance to troublesome conditions, Professor Eduardo Blumwald, Department of Pomology, is enjoying the fruits of his scientific labors. Recently awarded the prestigious Alexander Von Humboldt Award for agricultural research, he is internationally recognized as a leader in the development of salt-tolerant plants. The ability of a plant to survive in a high-saline envi-

ronment is particularly important for crops grown in arid areas where successive seasons of irrigation result in increased soil salinity.

"In order for California agriculture to remain viable," Blumwald stresses, "it must meet several key requirements. First of all, agriculture must remain profitable for farmers. In order to do so, it must make the best use of a declining water supply and a constantly shrinking land base. We must strive to grow more and better crops on even less acreage. If we can accomplish this in California, with the help of science, the resulting technologies can be applied toward the problems of feeding the hungry throughout the world."

By Blumwald's definition, better crops mean nutritionally enhanced varieties. Researchers soon will have the ability to modify seeds genetically to assure high quality, nutritious vegetables and fruits.

Food for Health and Wellness Approach

Professor Bruce Hammock, Department of Entomology, and Professor Bruce German, Department of Food Science and Technology, advocate a Food for Health and Wellness approach to the sustainability of communities. They maintain that UC Davis has the capability to integrate agricultural advances with nutritional data and medical science to provide information to health practitioners and the public about how and what to eat to improve and maintain health.

Hammock further emphasizes that what sustainability really means is "decreasing the human footprint on the earth." We have the responsibility to see that our usage does not deplete nature's bounty.

Food and Agricultural Practices

Richard Micheltore, professor in the Department of Vegetable Crops, suggests that the answer may be a category of food and agricultural practices, intermediate between conventional and organic farming,

which could minimize the use of chemical inputs while utilizing the potential of technological advances.

Estimates of the importance of agriculture to California's economy vary, but they range as high as 10 percent of the state's gross product. No discussion of sustainability in agriculture would be complete without input from an agricultural economist.

The Treadmill Effect

Steven Blank, a farm financial management specialist in the Department of Agricultural and Resource Economics, has been tracking the 'treadmill' effect on agriculture throughout his career.

As Blank puts it, competition pushes towards greater productivity;

increased productivity has the effect of lowering prices, which steps up the demand for even greater productivity; new technologies result in substantially improved productivity -- and the treadmill grinds on.

Because many technological advances in agriculture are relatively easy to replicate, producers worldwide are quick to update their methods based on discoveries and applications developed at universities such as UC Davis. The increased productivity of farmers in other countries, coupled with reasonable and reliable transportation, results in a global market for commodities.

The result, says Blank, is that "today, commodity prices are global, but production costs are local."

Conclusion

Consumers naturally purchase the cheapest available produce, and the California farmer, caught in an inevitable profit squeeze, brings more pressure to bear on researchers to develop technologies to raise yields and expand outputs.

The challenge for all facets of the agricultural community is to meet the ever-growing demand for increased productivity while maintaining an agricultural system that is viable, both economically and environmentally. The College of Agricultural and Environmental Sciences is dedicated to the long-term sustainability of California's agriculture and will support the research required to fulfill the promise of a continued bountiful harvest.

UC Davis programs related to sustainable agriculture

CA&ES Informatics Center

<http://ic.ucdavis.edu>

California Institute of Food and Agricultural Research

<http://www.cifar.ucdavis.edu>

Center for Aquatic Biology and Aquaculture

<http://caba.ucdavis.edu>

Center for Biosystematics

<http://cbshome.ucdavis.edu>

FoodSafe Program

<http://foodsafedavis.ucdavis.edu/homepage.html>

Fruit and Nut Research and Information Center

<http://fruitsandnuts.ucdavis.edu>

Long-Term Research in Agricultural Systems (LTRAS)

<http://ltras.ucdavis.edu>

Seed Biotechnology Center

<http://sbc.ucdavis.edu>

Plant Science Teaching Center and Student Farm

<http://studentfarm.ucdavis.edu>

Sustainable Agriculture Farming Systems (SAFS)

<http://agronomy.ucdavis.edu/safs/home.htm>

Vegetable Research and Information Center

<http://vric.ucdavis.edu>

Weed Research and Information Center

<http://wric.ucdavis.edu>

UC Division of Agriculture and Natural Resources (ANR) programs located at UC Davis

Agricultural Issues Center

<http://aic.ucdavis.edu>

Center for Cooperatives

<http://cooperatives.ucdavis.edu>

Genetic Resources Conservation Program (GRCP)

<http://www.grcp.ucdavis.edu>

Integrated Pest Management (IPM)

<http://www.ipm.ucdavis.edu>

Small Farm Center

<http://www.sfc.ucdavis.edu>

Sustainable Agriculture Research & Education Program (SAREP)

<http://sarep.ucdavis.edu>

Research and Extension Centers

<http://danrrec.ucdavis.edu>

Related UC Davis programs

Biotechnology Program

<http://www.biotech.ucdavis.edu>

Center for History, Society and Culture

<http://chsc.ucdavis.edu>

John Muir Institute of the Environment

<http://johnmuir.ucdavis.edu/links.html>

Center for Ecological Health Research

<http://ice.ucdavis.edu/cenr/>

Center for Integrated Watershed Science and Management

<http://watershed.ucdavis.edu>

Center for Natural Resource Policy Analysis

<http://johnmuir.ucdavis.edu/affiliates.html#cnrpa>

Information Center for the Environment

<http://ice.ucdavis.edu>

Regional and national programs located at UC Davis

Global Livestock CRSP (USAID)

<http://glcrsp.ucdavis.edu/index.html>

USDA/ARS Exotic Pests and Diseases Research Program

<http://www.ipm.ucdavis.edu/EXOTIC/aboutexotic.html>

USDA/ARS National Clonal

Germplasm Repository

<http://www.ars-grin.gov/cor>

Western Center for Agricultural Health and Safety

<http://agcenter.ucdavis.edu>

Western Region Integrated Pest Management Center

<http://www.wrpmc.ucdavis.edu>

National Institute for Global Environmental Change

Western Region, (NIGEC)

<http://nigec.ucdavis.edu>

Excellence in Education Award

Professor **Thomas Famula**, geneticist in the Department of Animal Science, was named the college's recipient of the 2003 Excellence in Education Award, presented by the Associated Students of UC Davis. The newly established award recognizes one outstanding faculty member from each undergraduate college on campus.



"My goal is to help students understand how animals have been used by humans for the past 10,000 years," Famula said. "I am thrilled for this recognition, particularly because it comes from the

Seeing Eye and Canine Companions for Independence. His work in canine disease genetics includes projects on epilepsy, Addison's disease and heart disease in several breeds of dog.

students. It gives me some hope that even though the class I teach is large, I am making it 'feel' small."

Famula has been working in dog genetics for the past seven years. He is a breeding consultant to Guide Dogs for the Blind in San Rafael, as well as working with other non-profit service dog groups including

College Celebration

The College of Agricultural and Environmental Sciences held its 15th annual College Celebration on Friday, November 14, 2003, to recognize the accomplishments of alumni, faculty, staff and friends.

Once each year at College Celebration, individuals are honored whose contributions and achievements have enriched the college's image and reputation and enhanced its ability to serve the public.

Awards recognize individuals, families or organizations for excellence in leadership, achievement, support and/or meritorious service to the college or for bringing distinction to the college through their careers. Selection categories for 2003 include Alumni; Family or Friends of the College; Young Alumni; Faculty; and Staff.

A list of this year's award recipients is at <http://www.aes.ucdavis.edu/Events/Celebration/Default.htm>.

Outstanding Faculty and Staff Advisers

For more than two decades, students have coordinated an award program each year to recognize the "care, commitment, dedication and outstanding service exhibited by one staff and one faculty adviser on the UC Davis campus." The student coordinator of the UC Davis Academic Peer Advising Program organized the 2002-03 program. Awards were presented in a ceremony at the International House.



JoAnn Espitallier, Department of Human and Community Development undergraduate adviser, was named Outstanding Staff

Adviser for 2002-03. She came to campus 16 years ago, starting in a part-time position with Student Special Services. After seven years, she became an undergraduate staff adviser in the college.

Espitallier advises students in

human development, community and regional development, and international agricultural development majors. She explains that many pursue careers in the 'helping professions.'

"I meet students every day who have jobs, participate in internships and campus activities and contribute many hours of volunteer work," she said. "They are amazing!"

"I was very surprised and honored to get this award," Espitallier said. "I'm blessed to have three incredible peer advisers, a great advising assistant and dedicated staff. We all work together, and I feel strongly that this award is to be shared by our team."



Professor **J. Edward Taylor**, Department of Agricultural and Resource Economics, was named Outstanding Faculty Adviser.

A graduate of UC Riverside and UC Berkeley, Taylor focuses his research on economic development, population and resources; labor economics; economy-wide modeling; and applied micro-econometrics. He joined the department in 1987.

Taylor is director of the Center on Rural Economies of the Americas and the Pacific Rim, co-director of the Program for the Study of Economic Change and Sustainability in Rural Mexico, chair of the UC Institute on Mexico and the United States (UC Mexus) Advisory Committee and co-editor of *Rural Migration News*.

When presented his award, Taylor commented, "My goal always has been to blur the lines among teaching, research and advising -- taking students out into the field and including them in research and outreach projects. The opportunity to do this is one of the great advantages of being at an outstanding teaching and research institution like UC Davis."

Commencement!



Marlies Nagl

Commencement 2003 reflected past accomplishments of our graduates and passage into a time of new beginnings and future achievements.

Charley Soderquist (M.S., '73; Ph.D., '78, Agricultural Chemistry), consultant and president of the Technology Development Center, was keynote speaker. He is chairman of the board of the UC Davis CONNECT Program, which links entrepreneurs with the UC system.

Soderquist was an adjunct professor for the UC Davis Graduate School of Management, a UC Board of Regents member and president of the UC Davis Alumni Association.

AWARD RECIPIENTS

8

College Medal

Marlies Nagl

Landscape Architecture

Charles Hess Community Service Award

(Female)

Poppy Major

Nutrition

(Male)

David Amir Zarghami

Managerial Economics

Mary Regan Meyer Prize

Celia Lau

Managerial Economics

Mami Shindo

Cell Biology

Ashley Waddington

Animal Biology

Knowles A. Ryerson Award in Agriculture

Mami Shindo

Cell Biology

2003 Citation for Excellence Awards

Congratulations to the many College of Agricultural and Environmental Sciences staff members who received Citation for Excellence awards. Honorees were recognized at a reception at the chancellor's residence and also at the TGFS BBQ hosted by the UC Davis Staff Assembly in conjunction with Thank Goodness for Staff festivities.

INDIVIDUAL AWARDS

General Contributions

Elaine Bose

Agronomy and Range Science

Robert DeBarge

CA&ES Dean's Office

Elizabeth Grassi

Environmental Science and Policy

Judith Howard

Food Science and Technology

Elizabeth Lorenzen

Land, Air and Water Resources

Yuri Rodriguez

Human and Community Development

Daniel Sehnert

Animal Science

Karen Strack

Food Science and Technology

Kelly Wade

Animal Science

Dawn Whitaker

Food Science and Technology

General Contributions/ Campus Service

Karen Hunter

Food Science and Technology

Supervision

Pat Conners

Human and Community Development

TEAM AWARDS

General Contributions

Della Nunes and Linda Wiegand

Viticulture and Enology

Bart Wilsey and Cory Simerson

UC Hopland Research and

Extension Center

2003 Walker Award



Staff research assistant and lecturer **Joan Chandler** (B.S., '75, Home Economics; M.S., '77, Consumer Science), Division of Textiles and Clothing, was presented the 2003 Walker Award at a ceremony/reception held in Mrak Hall. The award, named for lecturer emeritus Harry Walker, Department of Land, Air and Water Resources, recognizes the college's outstanding academic staff adviser.

Chandler said that she is deeply honored to receive the award "because my students nominated me and the honor represents how much the college values advising. I am thrilled to continue Dr. Walker's focus on advising."

Chandler teaches several courses and works with apparel industry representatives to develop internships for undergraduate students. She is site director of the National Textiles Center program, connecting with industry representatives and academics from other universities.

Chandler and Professor Susan Kaiser are studying people's perceptions of their appearances and clothing. They are interested in the meanings people attach to their favorite clothes. Some of their research focuses on sensory evaluation of fabrics and garments.

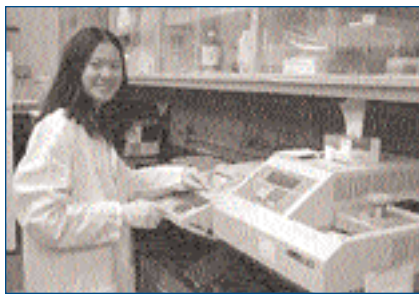
Biotech Begins in High School

The three-year-old Biotechnology Program at Davis Senior High School, funded by the Yolo County Regional Occupation Program, has expanded from a single-semester course to a full-year course. In addition to their classwork, students are encouraged to complete a 90-hour internship in a local research laboratory during the spring semester.

In a collaborative effort between the high school and the university, many UC Davis professors have donated their time and resources to the program.

Last spring, nine of the students who were involved in the internship portion of the course worked in CA&ES labs.

High school junior Sarah Crumley



Winnie Kuo



Bobby Medina



Stephanie Droker

interned in **Richard Michelmore's** lab in the Department of Vegetable Crops. She said, "I enjoyed being an intern because not only did I learn a lot about how research works, but I also met an amazing group of people. It is fun, educational and a great way to get graduate work experience!"

Professor Michelmore shares her enthusiasm. "This is a good program in terms of outreach and the opportunity to excite young scientists," he commented. His lab has been involved in the program for several years and often employs the high school students as summer research assistants so that they can gain more experience and observe the outcomes of their experiments.

Eduardo Blumwald, the professor in pomology who recently was awarded the prestigious von Humboldt Prize for Agricultural Research, stated that he was glad to fulfill the college's outreach mission as a land grant institution by giving something back to the community.

"It is important that young people be exposed to 21st century science as a point of reference when they make college and career decisions," Blumwald said.

Bobby Medina, who interned in Blumwald's lab, said, "I had the experience of working in a genetics lab. This was the greatest experience, and I would like to thank all my teachers for their time."

Alexandra Sanchez, a former intern with associate professor **Jorge Dubcovsky** in agronomy and range science, is now an undergraduate in the college, majoring in animal science and working as a student assistant in Dubcovsky's lab. When asked to comment on the program, Dubcovsky echoed his colleagues' commitment to the outreach component of the CA&ES mission.

Other student interns and their lab hosts: Winnie Kuo – **Trevor Suslow**, Department of Vegetable Crops; Stephanie Droker – **Doug Cook**, Department of Plant

Pathology; David Leu – **Thea Wilkins**, Department of Agronomy and Range Science; Margaret Pettygrove – **Pam Ronald**, Department of Plant Pathology. The laboratories of **Gale McGranahan**, Department of Pomology, and **Dina St. Clair**, Department of Vegetable Crops, also participated in the program.

The course developer, Davis high school biology teacher Ann Moriarty, has 10 years of research experience in both academics and industry and has taught school for five years.

"My long-term goal has been to combine my skills into a program such as this. It was worth the wait and has been a pleasure for me to teach," Moriarty says.



Margaret Pettygrove



David Leu



Sarah Crumley

When development folks think sustainable . . .

they mean endowments and dedicated facilities -- things that last. Leaving a legacy is a sustainable concept. An endowed chair or a facility named for someone will be a part of this college indefinitely. That's sustainable.

John B. Orr was raised in West Texas. At age 17, with his parents' permission, he enlisted in the U. S. Navy and became a signalman assigned to the U.S. Marine Corps. On his 18th birthday, he was involved in the Battle of Iwo Jima, and he spent the balance of World War II in the Pacific Theater. Orr subsequently served in the Korean War.

After studying entomology for two years at Texas Tech, Orr moved to California. He worked as a glazier in the UC Davis Maintenance Shop for more than 20 years. His co-workers describe him as a good, hard worker, liked and respected by all, and a classic loner who had a wonderful way with animals and plants. He was involved in cross-country

horse racing as a support team member and owned Appaloosas.

Before buying his home in Rio Linda, Orr lived in rental apartments. He took pride in the fact that he always left the grounds in better condition than he found them.

Orr so enjoyed his career at UC Davis that he bequeathed 85 percent of his estate to the UC Davis Foundation to establish the John B. Orr Endowed Fund. His gift is dedicated to the following purposes: "Approximately one-half (1/2) is to be used annually in the area of plant sciences, and approximately one-half (1/2) is to be used annually in the area of environmental studies."

In his will, he states, "In making this gift, it is my intention to serve UC Davis and its students, and it is my desire that the foregoing statement of purpose be liberally construed so that this objective may be fully accomplished."

The total distribution from John Orr's estate to the UC Davis Foundation was \$370,259.39. Since this is more than enough to fund an endowed faculty position, we are establishing the John B. Orr Endowed Chair in Environmental Plant Sciences.

Dean Neal Van Alfen will appoint a committee to recruit a tenured campus faculty member to serve as the first John B. Orr chair holder.

Plant Sciences Facilities

This fall, the college celebrated the opening of our new plant sciences facilities: the Plant Reproductive Biology Building, the Core Greenhouses, The Ralph M. Parsons Plant Transformation Facility, and the D. Gould and Virginia Bowley Plant Sciences Teaching Center.

The Plant Reproductive Biology facility, which houses the Seed Biotechnology Center and support related research in the plant sciences, was funded through a partnership between the seed industry and the campus.

Funding for the Core Greenhouse complex was a joint effort of the campus, the college, the Division of Biological Sciences, the Office of the Vice Chancellor for Research, UC Agriculture and Natural Resources, and a grant from the National Science Foundation.

The Ralph M. Parsons Plant Transformation Facility, located in Robbins Hall, was made possible by a grant from the Ralph M. Parsons Foundation.

The D. Gould and Virginia Bowley Plant Sciences Teaching Center that forms the nucleus of the plant sciences complex was financed by a generous gift of \$1.3 million from Virginia Bowley.

The close proximity of the new facilities serves to further encourage collaborative, cross-disciplinary research and teaching in plant and seed research, addressing the broad range of challenges to California's agricultural community.



Can you locate the Student Farm Field House -- originally known as the Truck Crops Bulb House -- among the new plant sciences facilities?



Rick Swantz
Director of
Development
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ucdavis.edu

The Global Reach of a UC Davis Education

Exchange programs have long been part educational systems in many countries. The opportunity to live in a foreign country for a year, or host a student from another nation, is a common occurrence in many high school and college programs.

The benefits of students traveling abroad are numerous. Exchange programs are an excellent way of enhancing the academic foundation of an educational experience, from making new friends and establishing future career connections to better understanding and celebrating our world's diversity.

Today's exchange programs allow students to choose from an array of programs that can provide information on specific technical areas or remain very broad to establish a basic understanding of various issues and cultures. While some stu-

dents are able to take an entire academic year for study abroad programs, others prefer to travel for only the summer or a single quarter.

UC Davis offers several opportunities for off-campus study, both nationally and internationally, to meet the needs of interested students. Here are two of the many programs available to students, faculty and staff in the College of Agricultural and Environmental Sciences.

FIPSE (Fund to the Improvement for Post-Secondary Education)

The U.S. Departments of Education and several European nations collaborated to develop a grant program to promote trans-Atlantic mobility. The college is one of six partners in a grant funded by FIPSE titled The Food and Society Nexus. The program enables students to explore the similarities and differences in agricultural policy, production and food culture between the U.S. and Europe.

Iowa State University, UC Davis and the University of Nebraska, Lincoln, are linked to the Institute Superior Agricole de Beauvais in France, Dalum agricultural college

in Denmark and the University College Cork in Ireland.

This past summer, UC Davis sent five CA&ES Aggie Ambassadors to France, two students to Denmark and two to Ireland. In return, our campus hosted seven students from France and two from Denmark. The FIPSE program is completing the second year of a three-year grant.

For more information on study abroad programs specific to the agricultural and environmental sciences, contact Fabrice De Clerck at (530) 752-9480 or fadeclerck@ucdavis.edu.

UC Davis Washington Center

The UC Davis Washington Center began operations in the 1990-91 academic year. It provides students and faculty new and expanded opportunities in the nation's capital to enrich their education and research.

The center offers undergraduate academic internships, fellowships and internships for graduate students and fellowships and research grants for faculty. The center is located in a new, 11-story, state-of-the-art facility in downtown Washington, D.C.

Internships are open to undergraduate students from all majors who have completed 89.9 units toward graduation. Students will earn 15 units of academic credit and continue to receive full-time registered student status during the internship.

For more information, contact the UC Davis Washington Center office at the Internship and Career Center, (530) 754-5718.



FIPSE students, including five Aggie Ambassadors, enjoy a break in Paris.



*Richard Engel
Director of Student
Services and Outreach
(530) 754-6249
rrengel@ucdavis.edu*

UC Links to Dixon Migrant Center

Lynn Fowler-Huneke of advising services is coordinator of the Leading Roles Program funded by a grant from the W. K. Kellogg Foundation. "The

grant is aimed at helping students be catalysts for change," she explains.

An important aspect of the program is the Summer Leadership Institute, an eight-week course she teaches. The institute partners with UC Links program, directed locally by James Grieshop, Cooperative Extension specialist, Department of Human and Community Development, to bring computer education to rural and migrant communities.

Part of the summer program is an internship, supervised by postgraduate researcher **Esther Prins** and graduate student **Alyssa Nelson** at the Dixon Migrant Center. Interns work with the farm workers' children in the daytime and offer classes for high school students and adults in the evening -- in computer literacy and in skills such as handcrafts, cooking and team-building.

Grace (Wai Kwan) Yeung, a senior majoring in economics, says, "The immigrant kids are just like the American kids; they are very curious about this world and want to know everything. Even though I have some language barriers since I don't speak Spanish, I try to use more gesture and body language to communicate. It sounds funny, but it works."

The UC Links program is headquartered in the Graduate School of Education on the UC Berkeley campus.

Esther Prins, far right rear, Alyssa Nelson, second from right rear, and intern Peter Villareal, far left rear, a CRD major, pose with Dixon Migrant Center computer students of all ages.



12

Student Profile: Donielle Robinson



How do you get the most out of your college experience? **Donielle Robinson** knows. This year she is student assistant to the chancellor.

She previously worked at the Cross-Cultural Center and served as a peer advising counselor. While she has been involved in campus organizations since her freshman year, it was not until this past spring that Robinson thought about participating in student activities off campus, or even outside Davis or California.

In March, Robinson attended the 18th annual Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) conference in Atlanta, Georgia. The organization

helps connect students with the USDA, EPA and other organizations and schools through internships and job opportunities.

"I went to the conference with the goal of attending graduate school to receive my master's degree in social work. I learned about the Summer Undergraduate Research Program, an eight-week program at the University of Georgia in Athens where participants can experience life as a graduate student. I applied and was accepted," she writes in an essay submitted after she returned to Davis.

Program participants completed research papers, posters and gave oral presentations. Robinson worked at the Center for Family Research on two studies focusing on adolescents in Georgia. Her paper is titled, "Parenting Practices That Lead to Positive Racial

Identity in Rural African-American Adolescents."

Robinson lives one hour away from her parents and had never traveled out-of-state prior to the MANRRS conference and SURP experience.

"I would never have left California if I was not a part of MANRRS," she explained. "In fact, the first time I left California was to attend the MANRRS conference in Oregon. Erlinda Gonzales [MANRRS program coordinator] was the first person I met at Davis. She introduced me to programs, organizations and clubs that have changed my life. I encourage others to leave [their] comfort zones and experience life."

For more information about MANRRS, contact Erlinda Gonzales at (530) 752-0109; etgonzales@ucdavis.edu.

Three Receive National Fellowships

Three students in the Transportation Technology and Policy Graduate



Group are recipients of prestigious national honors.

Belinda Chen received two awards that provide full funding

for multiple years: the Dwight David Eisenhower Fellowship from the U.S. Department of Transportation, for which she ranked third in the nation; and the Environmental Protection Agency's STAR (Science to Achieve Results) Program fellowship. Chen is studying advanced



vehicle technology and greenhouse gases.

Deborah Salon, a Ph.D. candidate in the Department of Agricultural and

Resource Economics, received a Dwight David Eisenhower Transportation Fellowship travel award, which will enable her to attend several meetings in her field.

Salon is studying transport and residential choice patterns among urban residents. She is analyzing survey data from New York City in an attempt to discover the determinants of car own-

ership in a dense urban environment with public transit options.

First-year graduate student **Thomas Barron**, not pictured, won the National Park Scholars Fellowship and will spend a year working in Yellowstone Park and Puerto Rico -- after completing a summer internship at Toyota in Ann Arbor, Mich.

Student Reports Findings

Ph.D. candidate **Jonathon Gelbard** recently published two articles on his research. With Professor Susan Harrison, of the Department of Environmental Science and Policy, he wrote in the journal *Ecological Applications* about the effects of road-building on inland California foothill grasslands. They found that native plants were more plentiful at about a half-mile from developed roads than they were at locations quite close to roads.

In *Conservation Biology*, Gelbard and U.S. Geological Survey research ecologist Jayne Belnap, reported similar findings from their study of plant diversity near roads in and around Canyonlands National Park in Utah. The Utah study showed that the more improved the roadbed, the more invasive non-native weed plants became.

13

Opportunity Fund Excellence Awards



Left to right, Sabrina Litton, Dylan Beaudette, Jafet Andersson and Ariel Rivers

The Department of Land, Air and Water Resources presented Undergraduate Opportunity Fund Excellence awards of \$1,000 each to four students.

Jafet Andersson was honored for outstanding scholarship and dedication to the field of hydrology and for interest in "real-world problems" on several continents.

Sabrina Litton was recognized for broad experience beyond the classroom while maintaining a GPA above 3.0, citing her work experience with two LAWR pro-

fessors and a state agency.

Ariel Rivers' award was given for outstanding contributions to the department and campus through leadership and work activities.

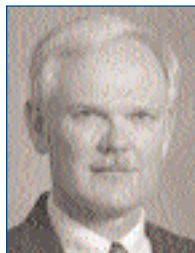
Dylan Beaudette was recognized for outstanding scholarship and for contributions to the Communycorhizal Network project, for computer work on the Web site and laboratory work on the project. Several animal science graduate students were chosen for top campus honors.

Animal Science Students Recognized

Master's student **Wendy Ward** received an Outstanding Graduate Student Teaching Award. Ward was nominated by an appreciative undergraduate student and a co-teaching assistant in her Animal Genetics 107 course.

Jeff Mason, recipient of last year's Outstanding Graduate Student Teaching Award, was selected to receive the 2003-2004 Chancellor's Teaching Fellowship.

Graduate student **Cindy Batchelder** was chosen as a fellow in the Professors for the Future program.



James Oltjen, management systems specialist in the Department of Animal Science, is the 2003 recipient of the American Society of Animal

Science Extension Award, sponsored by Pfizer Animal Health. He was recognized for his international reputation as an authority on systems analysis for animal production.

Oltjen's efforts are focused on animal enterprise management, natural resource monitoring and modeling and livestock quality assurance programs, with simultaneous computer decision aid development.

The Desert Research Institute announced that this year's Nevada Medal award was presented to **Charles R. Goldman**, professor of environmental science and policy, in recognition of his long career studying water clarity and quality at Lake Tahoe and many other places around the globe. This is the first time a UC Davis scientist has won this award, which is the institute's most prestigious and includes a \$10,000 prize.

Husein Ajwa, extension specialist in the Department of Vegetable Crops, was among scientists on the USDA/ARS Water Management Research Laboratory/Methyl Bromide Alternatives Research Team recognized for work on Preservation of Stratospheric Ozone through New Technologies for Crop Fumigation. The team received the prestigious White House Closing-the-Circle Award for environmental stewardship.

In addition, the team received the 2003 Secretary's Honor Award from the Department of Agriculture in the category Expanding Economic and Trade Opportunities for United States Agricultural Producers.

Susan Handy, associate professor of environmental science and policy, was recently appointed to the Institutes of Medicine Committee on the Prevention of Obesity in Children and Youth and to the National Advisory Committee for the Robert Wood Johnson Foundation's Active Living by Design program.

Both appointments are the result of Handy's research on the connection between the physical design of communities and people's choices about modes of travel -- private auto use versus walking and bicycling, in particular -- and the potential contributions from the field of urban planning toward the exploration of the relationship between the built environment and physical activity.



The 2003 Alexander Von Humboldt Award for agriculture was awarded to plant biologist **Eduardo Blumwald**, Department of

Pomology, for his research on salt-tolerant crops. The award is presented annually to one individual considered to have made the most significant contribution to American agriculture during the previous five years.

Blumwald's research has focused on how plants respond and adapt to harsh environmental conditions such as drought, cold and salty soils or water. He is continuing research announced in 2001 of a genetically engineered tomato plant that thrives in salty irrigation water. He hopes to develop other salt-tolerant crops that will be useful for agricultural production in other areas of the world.

Professor **Bruce Hammock** of the Department of Entomology received the award in 1995; the late **Charles Rick** of the Department of Vegetable Crops received the award in 1993.

At the same ceremony, graduate student Tyler Thomas, Department of Viticulture and Enology, received the Alfred Toepfer Scholarship Award which enables him to study agriculture in Europe.

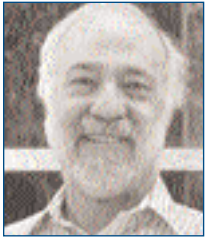
Clyde Elmore, extension specialist for the weed science program in the Department of Vegetable Crops, has been inducted into the California Floriculture Hall of Fame. Elmore has worked extensively on finding a viable alternative to methyl bromide as a biocide in ornamental crops.

Pomology professor **Ted DeJong's** career work on peaches has been recognized by the National Peach Council, which presented him with the Carroll R. Miller Outstanding Peach Researcher Award. DeJong is known internationally for his research on crop responses to environmental stresses, and he was instrumental in organizing the International Peach Symposium held at UC Davis in 2001.

Alex McCalla, professor emeritus in the Department of Agricultural and Resource Economics, was honored by the Inter-American Institute for Cooperation on Agriculture (IICA) as one of "60 at 60" at its recent 60th anniversary celebration held in Washington, D.C. The event honored 60 individuals who contributed to rural prosperity and food security in the Americas over the past 60 years.

The institute cited McCalla's service as study director of the first review of International Agricultural Research Centers of the Consultative Group in International Agricultural Research; his chairmanship of the Group's Technical Advisory Committee; his five-year directorship of the World Bank's Agricultural and Natural Resources Department; and his many publications addressing agricultural policies and the world markets.

Sharon Shoemaker, director of the California Institute of Food and Agricultural Research (CIFAR) and academic administrator in the Department of Food Science and Technology, was appointed by USDA Secretary Ann Veneman as the public member of the Cranberry Marketing Committee. Shoemaker also serves on the Cranberry Scientific Advisory Board of the Cranberry Institute.



Daniel Sperling, professor of Environmental Science and Policy and Civil Engineering and director of the Institute of

Transportation Studies in Environmental Science and Policy, was awarded the 2002 Carl Moyer Memorial Award for Scientific Leadership and Technical Excellence by the California Coalition for Clean Air.

Martina Newell-McGloughlin, adjunct professor in the Department of Plant Pathology, was named one of the Faces of Innovation by the Council of Biotechnology Innovation, whose membership represents biotechnology companies and trade associations. She is director of the UC Systemwide Biotechnology Research and Education Program. She serves on the World Trade Organization Panel on Technology, the International Food Information Council Expert Panel, and the United Nations Technology

Discussion Panel on Sustainable Agriculture.

Architect **Richard Berteaux**, associate professor in environmental design, received a 2003 Honorable Mention Award from the California Council of the Society of American Registered Architects for his design of the Tan Orthodontics office in Woodland, Calif. The project required updating a turn-of-the-century building, working within the city's preservation guidelines.

Two of the *Journal of Irrigation and Drainage Engineering's* four annual national awards went to scientists associated with the Department of Land, Air and Water Resources. Professor **Wes Wallender**, with co-author Dursan Buyuktas, received the award for the best research paper -- "Enhanced Subsurface Irrigation Hydrologic Model."

Francesca Ventura, Ben A. Faber and Khaled M. Bali, along with four other co-authors, received the award for the best practical paper -- "Model for Estimating Evaporation and

Transpiration from Row Crops." Ventura was a visiting scientist in LAWR when she worked on the paper, and Faber and Bali are LAWR graduates.

Adel Kader, professor, Department of Pomology, received the Academic Senate's Distinguished Graduate Mentoring Award for 2003, recognizing his career-long commitment to graduate students and postdoctoral scholars. Over the past 25 years, Kader has mentored 75 graduate students, postdoctoral fellows and visiting researchers from 21 countries.



The Comparative Nutrition Society voted **Kirk Klasing** as president-elect at its annual meeting in Antwerp, Belgium. Klasing is a profes-

sor in animal science and chair of the Avian Sciences Graduate Group. His research examines the nutritional cost of immunity in birds.

The Comparative Nutrition Society is an international organization of scientists studying nutrition as it relates to the biological sciences.

Klasing also was appointed chair of the National Academy of Sciences committee on Toxic Nutrients in Diets and Water for Animals.

Cooperative Extension's *Eatfit* program, which works to change the eating and fitness habits of middle school students, is the 2003 university recipient of the Dannon Institute's Award for Excellence in Community Nutrition.

The UC Davis Center for Advanced Studies in Nutrition and Social Marketing, the UC Davis School Partnership Program, and the Expanded Food and Nutrition Education Program and the Food Stamp Nutrition Education Program are all involved in the *Eatfit* program. **Marilyn Townsend**, a CE associate specialist in nutrition, is project director.

The Soil Science Society of America



Wildlife, fish and conservation biology professor **Joseph J. Cech** recently was named director for the Center for Aquatic Biology and Aquaculture (CABA). CABA was established to provide leadership, focus and support to UC Davis researchers addressing problems associated with California's wild and cultured aquatic biological resources. Cech's research focuses on physiological adaptations and adjustments of fishes to their environments.

elected **Randal Southard**, divisional associate dean for environmental sciences and professor in the Department of Land, Air and Water Resources, one of its 2003 fellows. His most recent research focuses on the mineralogy and health effects of agricultural dust, and on soil genesis and mineral alteration processes in Hawaii and Iceland as possible model systems for mineral alteration on Mars.

The American Heart Association and the Council on Nutrition, Physical Activity and Metabolism named professor in nutrition and internal medicine **Judith Stern** a fellow. An expert on diet and nutrition, Stern has published extensively on nutrition, obesity and the effect of exercise on appetite and metabolism.

Biological and agricultural engineering professors **David Slaughter**, **Michael Delwiche** and **Paul Chen** (emeritus) have received the 2003 USDA Secretary's Honor Award in the category of Promoting Health by Providing Access to Safe, Affordable and Nutritious Food. Their multi-state research project is titled "Technology and Principles for Assessing and Retaining Postharvest Quality of Fruits and Vegetables." According to a USDA spokesperson, the secretary's awards "are the most significant recognition the department can bestow to acknowledge outstanding contributions to agriculture."

Carl Winter, extension food toxicologist in the Department of Food Science and Technology and director of the FoodSafe Program, was appointed to the United Nations' Food and Agricultural Organization/World Health Organization Joint Expert Committee on Food Additives. He will serve until 2006.

Winter also received the 2003 Hod Ogden Award from the U.S. Centers for Disease Control and the Association of State and Territorial Directors of Health Promotion and Public Health Education. The award honors

imaginative and creative efforts promoting good health.



Professor **Victoria Rivers**, Department of Environmental Design, has been selected as an American Artist Abroad in the Artists in U.S. Embassies program through the U.S. Department of State. Currently, she has three pieces in an exhibition at the U.S. Embassy in Ghana, and will visit that country to lecture, teach and interact with Ghanaian artists.

Rivers' work in "endangered" ethnographic textiles has taken her around the world -- including India, Indonesia, Thailand, Borneo and Turkey. She authored *The Shining Cloth: Dress and Adornment That Glitters*.

Graham E. Fogg, professor of hydrogeology in the Department of Land, Air and Water Resources and Agricultural Experiment Station hydrogeologist, was elected fellow of the Geological Society of America. Much of his research centers on the health of California's groundwater resources.

Professor **Andrew Waterhouse**, Department of Viticulture and Enology, was named the John E. Kinsella Chair in Food, Nutrition and Health. The chair was established to support research and teaching, focusing on the interrelationships among food, nutrition and health. Waterhouse was recognized for his research expertise in the chemistry of secondary plant compounds.

Barbara Shawcroft, professor, Department of Environmental Design, has completed a sculpture installation, "Spirit of Materials," at the Silkeborg Art Museum in Jutland, Denmark, where she was invited to represent the U.S. in creating site-specific works. She was also interviewed by the Danish Broadcasting Corporation on the

methodology of her structural process and particular use of materials. Exhibiting with Shawcroft are artists from Holland, Iceland and Finland.

Professor emeritus **Kenneth Tanji**, hydrology program, Department of Land, Air and Water Resources, participated in two major activities of the Third World Water Forum (WWF3) in Japan. He attended the Pre-Symposium for WWF3 that focused on the multi-functional roles of paddy field irrigation in the Asian monsoon region. He served as editor of a background document for WWF3 titled "A Message from Japan and Asia to the World Water Discussion."

At the WWF3, Tanji was a panelist on the session on Agriculture, Food and Water and served as reporter on the Diversity and Multi-Functional Roles of Irrigation session.



Christopher Calvert, professor and vice chair, Department of Animal Science, is a recipient of the UC Davis 2003

Distinguished Teaching Award, which is presented annually by the Academic Senate. In addition to classroom teaching, Calvert advises 35 to 40 undergraduates in the animal science major each year. A former student, **Phillip Miller**, who is now an associate professor in the department, traces his desire to become a teacher back to his former instructor.

Established in 1973, the award is presented to as many as four faculty members annually. Calvert, who uses systems analysis and modeling in support of his research in biochemistry and metabolism, is the fifth person in his department to receive this honor in the past six years.

The Senate also recognized Professor **Adel Kader**, Department of Pomology, with the Distinguished Graduate Mentoring Award.

Sustaining Nutrients

A new study by a food science and technology group including assistant professor **Alyson Mitchell**, CE specialist **Diane Barrett**, graduate students Danny Asami and Yun-Jeong Hong, shows much higher levels of phenolic metabolites in fruits and corn grown using organic or “sustainable” farming systems as compared to conventionally grown foods. Additionally, higher levels of these nutrients were retained in produce that was freeze-dried rather than air-dried or frozen.

These phenolic metabolites are of special interest due to their potent antioxidant activity and wide range of pharmacological properties.

Re-Leafing Oakland

Gregory McPherson, research scientist with the Center for Urban Forest Research, Department of Environmental Horticulture, helped Oakland Re-Leaf land a two-year research award for planting 1,800 street trees in west Oakland.

An additional research award was secured by **Qingfu Xiao**, professor in the Department of Land, Air and Water Resources, to monitor the new trees and record data about their interception of precipitation so that a model can be created that will predict how tree canopies reduce storm water run-off volume and modify groundwater chemistry.

Part of Xiao’s grant will be used to train underserved young people to do the monitoring.

Watersaving Innovations

The Department of Pomology is running several projects involving water-use efficiency in tree crop production.

Professor **Kenneth Shackel** designed and commercialized a hand-operated device for measuring plant water status in orchard trees. Using Shackel’s methodology and his new tool (based on an air-rifle pump mech-

anism), tree crop growers have realized 40 to 50 percent water savings without sacrificing productivity.

Extension pomologist **Louise Ferguson** is investigating the use of waste-quality water for irrigation in pistachio orchards. Her results show that pistachios can be grown using water with salinity levels equaling approximately 25 percent that of seawater without affecting productivity.

Conversion Costs

California Farmer reported that the University of California Cooperative Extension (UCCE) released a study showing current per-acre transition and production costs for converting almonds from conventional to organic production in the northern San Joaquin Valley. The studies’ preparers included Extension specialist **Karen A. Klonsky** and research associate **Richard L. DeMoura**, both in the Department of Agricultural and Resource Economics.

Findings will be helpful in making production decisions, determining potential returns, preparing budgets and evaluating production loans. Tables show establishment costs, profits over a range of prices and yields, monthly cash costs, hourly equipment costs, investment and business overhead costs.

Radio Waves Zap Pests

Elizabeth Mitcham, Cooperative Extension specialist with the Department of Pomology, tests the use of radio waves to kill pests in dried fruit and nuts. Mitcham says improvements in the technology and decreased costs make the process a viable alternative to chemical treatments.

The radio-wave alternative already is used in drying cereal and crackers. Industrial-size radio frequency machines will be tested at a large packinghouse in January and could be available for commercial use by fall 2004.

Methyl bromide, a pesticide commonly used by dried fruit and nut producers, will be banned beginning in 2006.

Math Multiplies Solutions

Professor of environmental science and policy **Alan Hastings** wrote in the journal *Science* about the many new links and promising collaborations between mathematicians and biologists.

The article, co-authored by Margaret Palmer, aquatic ecologist at the University of Maryland, listed such problem-solving possibilities as: stopping a disease outbreak, reducing the risk that insects could become resistant to genetically modified crops or predicting a wide range of effects of global climate changes.

Hastings and Palmer cited the math-biology collaborative success in curtailing the foot-and-mouth epidemic in the United Kingdom in 2001.

Accommodating Disabilities

Martha Stiles, academic coordinator, and **James Meyers**, health specialist, Cooperative Extension Farm Safety program in the Department of Biological and Agricultural Engineering, have partnered with Easter Seals to establish the California AgrAbility project. Agricultural production is one of the three most hazardous occupations in the nation, resulting in more than 20,000 disabling injuries on California farms each year. The program aids farmers, workers and families by providing education, assistance and support to disabled individuals.

CalAgrAbility can help with work-site modification; peer support; farm job restructuring; farm safety; equipment purchase or modification; identification of funding, services or care resources; stress management; or community and health care coordination. For more information, contact Martha Stiles, (530) 752-2606.

Extending Longevity

James Carey, a biodemographer in the Department of Entomology, reported in the journal *Aging Cell* that he, **Shelley Cargill**, reproductive physiologist in the Department of Animal Science, and co-authors found that female mice who received ovaries transplanted from much younger mice

lived significantly longer than control groups.

At the age of 11 months -- equivalent to 50-years for a human woman -- when the mice are normally past their reproductive stage, the mice with the donor ovaries had a life expectancy greater than 60 percent better than their counterparts. This is equivalent to an increase in life expectancy for a woman from the current U.S. level of 80 years to a remarkable 98 years.

Ag Research Frontiers

Several UC Davis-based scientists were part of the National Academy of Sciences committee that recommended the U.S. Department of Agriculture refocus its \$2 billion annual research budget to reflect changing public values and needs.

Davis contributors include **Janet C. "Jenny" Broome**, UC Sustainable Agriculture Research and Education Program (SAREP) associate director; **Julian Alston**, agricultural and resource economics professor; and **Christine Bruhn**, UC Cooperative Extension consumer food marketing specialist.

The subcommittees provided key input to the synthesis committee's report, "Frontiers in Agricultural Research: Food, Health, Environment and Communities."

Synthesis committee members included vice provost **William Lacy**; former SAREP interim director **Robert Reginato**; and professor of animal science **Ransom Baldwin, Jr.**

Wildfire Prevention

Michael Barbour, professor in the Department of Environmental Horticulture and ecologist with the Tahoe Research Group, recommends that purposely set fires known as 'prescribed burns' should be used as a management tool in the forests surrounding Lake Tahoe. Such fires are intended to alleviate the massive buildup of fuel caused by the suppression of wildfires during the past century and prevent catastrophic fires by burning smaller trees, brush and forest litter. Prescribed burns, coupled with judicious thinning, should foster the

survival of the most mature trees.

Remote sensing, a technique that relies on satellite images of Earth, is now used to monitor the amount of vegetation in an area and gauge the risk of wildland fires. **Susan Ustin**, a remote-sensing expert and professor in the Department of Land, Air, and Water Resources, is working with NASA's Jet Propulsion Laboratory, the Los Angeles County Fire District and researchers at UC Santa Barbara to develop a better vegetation map of the fire-prone Santa Monica Mountains -- using satellite sensor capabilities.

The airborne sensor produces infrared images indicating how much brush is present and also the type and water content of the shrubs. This information indicates where fire is likely to start, in which direction flames are likely to spread and where prescribed burns may be most useful.

Perchlorate Clean-up

Several researchers in the Department of Land, Air, and Water Resources are involved in the clean-up of perchlorate -- a salt used in the production of rocket fuel, flares, fireworks and matches -- that is now contaminating some of the state's water supplies.

Hydrogeologists **Graham Fogg** and **Eric LaBolle** and ecotoxicologist **Michael Johnson** are analyzing where and how fast such contaminants travel through the subsurface. They are developing a three-dimensional computer model using the latest groundwater-modeling technology coupled with water-distribution models.

Dennis Rolston, professor of soil science and director of the John Muir Institute of the Environment, studies the transport and biodegradation of several organic and inorganic contaminants in soil. His work with graduate student Deborah Tipton investigated when soil and environmental factors control the movement and biodegradation of perchlorate in various soil materials.

Kate Scow, professor of soil microbial ecology, in collaboration with Rolston and postdoctoral researcher Mamie Inoue, is studying the biodegradation of perchlorate by

indigenous microbial communities in soils, using DNA-based technologies. Scow hopes to determine if the use of chemical additives or microorganisms enhances perchlorate removal.

Pacific Rim Planning

The UC's Pacific Rim Research Program has awarded a grant to **Mark Francis**, professor, Department of Environmental Design, to organize a three-day workshop titled "Constructing Communities in the Face of Change: Workshop on Community Design and Social Change in the Pacific Rim."

The 2004 workshop will gather scholars and practitioners from China, Japan, Taiwan, the U.S. and Canada to engage in a transnational and cross-cultural dialogue on changing communities and implications for community design in the Pacific Rim. The workshop will involve participants from the fields of architecture, city and regional planning, community development, landscape architecture, sociology and urban design.

Francis' research focuses on theories and methods of community and urban design. He has been involved in the design of urban projects throughout the world and has lectured about his work in Japan, New Zealand and Canada.

Ergonomics in Agriculture

The National Institute for Farm Safety recognized an Agricultural Ergonomics Research Center team and county-based collaborators with a research award for the article, "Priority Risk Factors for Back Injury in Agricultural Field Work," published in the *Journal of Agromedicine*.

The award, for contributions to the prevention of agricultural injury or illness, was made to **James Meyers**, agricultural and environmental health specialist, **John Miles**, professor, and **Diana Tejada**, research coordinator, Department of Biological and Agricultural Engineering, and to their co-authors. The team identified jobs in wine grape vineyards and cited proven preventive concepts for those tasks.

Field Ecology

Peter Moyle, professor in the Department of Wildlife, Fish and Conservation Biology, teamed with Jeffrey Mount, a geology professor, to offer a field course on Watershed Ecology that involved 26 students from three UC Davis colleges -- College of Agricultural and Environmental Sciences; Letters and Science; and Engineering.

Working in teams, students looked at the condition of coho habitat in the Scott Valley streams of the Scott River, a tributary of the Klamath River.

Because much of the coho habitat is on private ranch land, several social events were arranged on the ranches so that students and landowners could meet.

Moyle wrote the Expert Column for the Spring 2003 issue of *Streamkeepers Log*, the quarterly newsletter of California Trout. The article, "Goose Lake Redband Trout: High Desert Survivors," illustrates the resiliency of trout and the positive effects that humans can have on the future of a species.

College Forges Collaboration with United Arab Emirates



During an exchange of gifts, UC Davis Chancellor Larry Vanderhoef, right, presented Abdulrahman Khaleg with the book *Abundant Harvest*, about the founding and development of UC Davis. In return, he received several books about the United Arab Emirates and a gold-and-marble clock featuring the camel and date palm, two of the UAE's most prized resources.

On July 7, campus and college leaders gathered with representatives from the United Arab Emirates to initiate an agricultural research collaboration focused on salt-tolerant crop research conducted by Eduardo Blumwald, professor in the Department of Pomology. Two years ago, Blumwald announced in the journal *Nature Biotechnology* that he had genetically engineered tomato plants that thrive in salty irri-

gation water. This research produced the first truly salt-tolerant crops and offered hope that other crops also could be genetically modified for planting in many areas of the world that have salty irrigation water and salt-damaged soils. Blumwald was awarded the 2003 Alexander Von Humboldt Award for his research.

During a ceremony at the Walter A. Buehler Alumni and Visitors Center,

CA&ES

IN MEMORIAM

Ralph D. Cochrane

('59, Plant Pathology; '59 Horticulture)
October 6, 2002

Knox F. Parker

('67, Agricultural Business Management)
December 28, 2002

Thomas B. Lewis

('48, Plant Science)
December 31, 2002

Winifred B. Spurr

Administrative Assistant
Graduate Group in Ecology
January 22, 2003

Robert W. Allard

('41, Agronomy)
Professor Emeritus
Department of Agronomy
and Range Science
March 25, 2003

Harry H. Laidlaw

Professor Emeritus
Department of Entomology
September 19, 2003

UC Davis Chancellor Larry Vanderhoef and Dr. Abdulrahman Khaleg, agriculture adviser to the President of the United Arab Emirates, signed a Cooperation Resolution, pledging to further develop a scientific exchange. Vanderhoef noted that the new collaboration is in keeping with the campus's tradition of extending new research developments throughout the nation and abroad.

The campus currently collaborates with 80 universities around the world and has an extensive exchange of students and scholars between UC Davis and other nations.

Oliver C. Compton (M.S., '32, Horticulture) of Corvallis, Ore., who earned his Ph.D. at Cornell and is a retired professor at Oregon State University, celebrated his 100th birthday in March of this year. In retirement, he identifies varieties of apples and pears sent to OSU by farmers and gardeners and cares for his two-acre farm which grows walnuts, grapes and blueberries.

Katsumi Tokunaga ('50, Plant Science) of Campbell, Calif., recently retired after 50 years service with Franklin Life Insurance Company.

Michael Nury (B.S., '51; M.S., '52, Food Science) of Fresno, Calif., is CEO of the Vie-Del Company.

George A. Porter (B.S., '52, Animal Science) of Santa Barbara, Calif., is retired from veterinary practice. He published two books: *Pet ER: Memoirs of an Animal Doctor* and *ER Vet: Diary of an Animal Doctor*. He and his wife, Marilyn, a former UC Davis employee, have three sons, Brad, Bart and Jim. All three graduated from UC Davis.



Roderick A. Shippey ('52, Animal Science) of Ukiah, Calif., is retired and does beef cattle consulting. He also oversees

Volunteers for Overseas Assistance (VOCA) and keeps busy as his local Kiwanis Club activity chair.

Dan Coutolenc ('60, Agronomy) is a corporate executive with Grain Management, Inc., of St. Paul, Minn.

Fredric L. Frye (B.S., '60, Animal Science) of Cloverdale, Calif., is a pathologist and professor on the faculty of several universities in the

United Kingdom and Italy. He is the recipient of a number of prestigious awards, including fellowships with the Royal Society of Medicine (1989) and the Institute of Biology, London (1993).

Franklin Laemmlen (B.S., '60, Entomology; Ph.D., '70, Plant Pathology) of Santa Maria, is Santa Barbara's county director and farm advisor in the UC Cooperative Extension office in Santa Maria. He recently attended the 8th International Congress of Plant Pathology in Christchurch, New Zealand, and toured that country's South Island.

Barbara Persson Coatney ('63, Agricultural Business Management) of Etna, Calif., is the owner of Cottage Gardens nursery in Etna.

Stephen P. Rae (B.S., '68; M.S., '70, Botany) of Napa is self-employed as an environmental scientist with MUSCI Natural Resource Assessment. He performs botanical surveys and watershed assessments, researching moss flora of California. Rae retired from the California Department of Fish and Game with 26 years service. While there, he developed the State Rare Plant Program and collaborated in developing the Timber Harvest Assessment Program and the Watershed Academy.



George Redpath (B.S., '70, Wildlife and Fisheries; M.S., '72, Ecology) of Kailua, Hawaii, is senior ecologist, principal scientist and manager for Tetra Tech's Hawaii office, specializing in National Environmental Policy Act reporting, biological surveys and environmental compliance services. Projects include Department of Defense actions and a cultural survey for the National Park Service. He also is involved in marketing throughout the Pacific Rim, teaching NEPA workshops and conducting reef fish surveys as a volunteer for the Reef Environmental Education Foundation.

Brent Harrington ('72, Environmental Planning and Management) of Angels Camp, Calif., is president of the Regional Council of Rural Counties in Sacramento. RCRC, a legislative advocacy and member services organization, represents 30 rural counties in California and administers a loan program for first-time homebuyers. He previously was planning director and county administrative officer for Calaveras County. Daughter Shaye graduated from UC Davis in 2000, majoring in community and regional development.

Candy Matthews Schaer-Johnson ('73, Plant Science) of San Diego, is information technology coordinator, deputy agricultural commissioner and sealer of weights and measure for the County of San Diego Department of Agriculture. She worked for EDS in Europe and in Beijing, China, before moving to San Diego five years ago.

Steven K. Ault ('74, Entomology) of Aliso Viejo, Calif., is a regional ecologist with the World Health Organization, currently working in Brazil coordinating technical cooperation to eliminate or control vector-borne diseases. His wife is doing research at the University of Brasilia, and their two children attend a bilingual school.

Constantine Dillon ('75, Environmental Planning and Management) of Grand Canyon, Ariz., is superintendent of the National Park Service's Albright Training Center in Grand Canyon. He is responsible for managing the training of new NPS employees and developing curriculum for NPS Resource Stewardship training.

Vernon J. Feliciano ('76, Plant Science) of Long Beach is a senior claims analyst with Specialty Claims Management of Irvine.

Michele McRae ('76, Nutrition Science) of Santa Cruz, Calif., is senior manager of nutrition and formulation for Rainbow Light Nutritional Systems, a producer of nutritional supplements with vitamins, minerals and herbs.

Richard Roush ('76, Entomology) of Glen Osmond, Australia, earned a Ph.D. in entomology from UC Berkeley and conducted postdoctoral research at Texas A&M. He is now director of UC's Statewide Integrated Pest Management Program, based on the UC Davis campus. He formerly taught at Mississippi State University, Cornell University and the University of Adelaide.

Roush served as CEO of the Cooperative Research Centre for Australian Weed Management. His research in Australia focused on using insects and fungal diseases to control weeds. He also studied risk assessment and management for genetically modified crops.

David M. Katz ('77, Entomology) of San Mateo, Calif., is a math tutor at Carlmont High School in Belmont. He serves as tutor for 1,700 students, teaching algebra and geometry. His theme is, "Grades Going UP—Starting Today!"

Douglas J. Muhleman (B.S., '77, Fermentation Science; M.S., '79, Food Science) of Chesterfield, Mo., is group vice president of brewing operations and technology for Anheuser-Busch, responsible for the brewing

and packing of the company's beers in the U.S. and 15 other locations around the world. He is a member of both the Strategy Committee and Management Committee. He also sits on the boards of directors for Anheuser-Busch International, the Anheuser-Busch Packaging Group, and Busch Agricultural Resources.

Gary Novack (Ph.D., '77, Pharmacology and Toxicology) of San Rafael was selected as a UC Regent by the UC Santa Cruz Alumni Association. Novack is an alumnus of both UC Davis and UC Santa Cruz. His wife, **Dona Greb Novak** holds a B.S. in Consumer Food Science, '78.

Sharon Gail Bias ('78, Agricultural Economics and Business Management) of North Highlands, Calif., is the owner of AVATAR Business Systems, a medical billing service, established in 1989. She is an active member of the Foothill-Highlands Rotary Club and on the board of the Sacramento German Genealogy Society.



Jenlane Gee Matt ('78, Human Development) of Modesto, Calif., is a teacher who enjoys gardening in her spare time. She recently developed a new passion -- fishing.

Thomas Dietz (Ph.D., '79, Ecology) of Grand Isle, Utah, is director of Michigan State University's Environmental Science and Policy Program, and associate dean for Natural Science and Social Science, as well as professor of sociology and crop, and soil sciences in the MSU College of Agriculture and Natural Resources.

Donna Gilmore Rhee (M.A., '80, Agricultural and Environmental Chemistry) of Ashland, Ore., is retired from a career that included basic research for the EPA on the fate of pesticides; regulator for California

State Water Resources; director of an analytical laboratory; director of technical support for an environmental consulting firm; coordinator of a UC Davis hazardous waste certificate course; self-employed consultant; and environmental activist.

Bill Gerlach (M.S., '81, Agricultural and Managerial Economics) of Valencia, Calif., is the new product development director for Melissa's World Variety Produce in Vernon, Calif., conducting research and development on exotic plant species and negotiating with international produce suppliers in an effort to identify and secure new products for U.S. markets. He consults with USAID on agricultural trade and development projects. He and his wife have a nine-year-old son.

Eileen Fay Laber ('81, Agricultural and Managerial Economics) of Ventura, Calif., works in technical sales for Aqua-Flo Supply.

Becky Pannell Morlock ('81, Design) of Fresno, Calif., is chief financial officer and co-owner of ReCyCo., Inc. a leading recycling center in California.

John Morgan Benson ('83, Landscape Architecture) of Berkeley is the Northern California manager of commercial real estate for Washington Mutual in Walnut Creek. He is in charge of business development and portfolio management, focusing on real estate developers and investors.

Neil Forsberg (Ph.D., '83, Nutrition) of Salem, Ore. professor in the Department of Animal Sciences at Oregon State University, recently founded an agricultural biotechnology company, OmniGen Research. The firm is based in Corvallis, Ore., and provides feed ingredients and diagnostic support to the dairy industry nationally.

Forsberg's wife, **Azizah Mohd** (B.S., '78; M.S., '81, Animal Science) is a research assistant in the Depart-

ment of Environmental and Molecular Toxicology of Oregon State University. They have two children, Amelia and Johan.

Richard M. Kerri ('83, Landscape Architecture) of Livermore, Calif., is the owner of Kerri Landscape Services.

Karl Ockert ('83, Fermentation Science) of Lake Oswego, Ore., has spent the bulk of his career as brewmaster of the BridgePort Brewery in Portland. In 2000, Ockert's BridgePort India Pale Ale won the British Institute and Guild of Brewing's gold medal and world championship for bottled ales.

Ockert, the first American brewer to win in the 115-year competition, accepted the trophy in London.

John W. Serbia (M.S., '83, Food Science) of St. Louis, Mo., is vice president of brewing for Anheuser-Busch in St. Louis, Mo. Over the past 20 years Serbia has held a number of positions with that company at both brewery operations and corporate staff levels in the U.S. and other countries. He and his wife, Roberta, a former UC Davis employee, have three sons, Cody, Zach and Dylan.



Sandy Archibald (Ph.D., '84, Agricultural Economics) relocated from Washington to Minnesota to assume the position

of dean of the Daniel J. Evans School of Public Affairs, University of Washington. She was associate dean of the Humphrey Institute of Public Affairs at the University of Minnesota where she had been a professor since 1992. She also served as interim dean of the institute and associate vice provost for faculty development of the university.

Archibald has published extensively on the environmental effects of economic liberalization in central and eastern Europe. She is co-author of

Management and Leadership in Higher Education. Her most recent research focuses on the economics of water, including the politics of water allocation policy and institutional barriers to improved management.

Donna J. Moerschell ('84, Developmental Resource Consumer Economics) of Montgomery, Ala., is a Lt.Col. in the U.S. Air Force. She is attending the Air War College at Maxwell AFB in Alabama. She is married to a retired submarine officer; they have two daughters.

Steven "Tad" Deshler (M.S., '86, Animal Science) of Seattle Wash., is co-owner of Windward Environmental, an environmental consulting firm in Seattle, Wash. The firm specializes in aquatic environmental sciences, particularly sediment and water quality, human health and ecological risk assessment, natural resource damage assessment and habitat restoration. Deshler and his wife have two children, Kira and Kian.

Mark Zacharia (B.S., '86, Physiology) of Edmonds, Wash., is the owner of Edmonds-Westgate Veterinary Hospital. Prior to opening his small animal hospital, Zacharia worked for six years at a clinic in California. His two sons are in elementary school.

Michael Rogers ('88, Agricultural and Managerial Economics) of Morgan Hill, Calif., is a pension consultant with Invesmart, Inc., located in Campbell.

Julia L. Jones ('91, Landscape Architecture) of Bend, Ore., is a loan originator with The Mortgage Professionals, and the mother of a one-year-old son, Devon.

Michael B. Wofford ('91, Atmospheric Science) of Ventura, Calif., is a senior forecaster with the National Weather Service in Oxnard. He and his wife welcomed their first child in May.

Leonard Diggs ('92, Agricultural Science and Management) of Forestville, Calif., was appointed to the Roots of Change Council, a coalition of foundations launching a new initiative to facilitate a greater transforming rate of California agriculture to a more sustainable framework. Diggs, who is a farmer, has been a long-time member of the Small Farm Program Advisory Committee and a faculty member at Santa Rosa Junior College.

Also appointed to the council were Desmond Jolly, consumer specialist in the Department of Agricultural and Resource Economics and director of the UC Small Farm Program, and **Richard Rominger** (B.S., '76, Agricultural Economics and Business Management.) of Winters, Calif., former U.S. Department of Agriculture deputy secretary.

Shelly Bianchi-Williamson, formerly Bianchi-Tomasin, ('92, Design) of Forestville, Calif., is a geographic information technician for the County of Sonoma in Santa Rosa.

Jill Everett Hornbeck ('92, Design) of Livermore teaches interior design classes, part-time, at Las Positas College in Livermore, Calif. She and her husband have a two-year-old son and recently welcomed twins -- a girl and a boy.

Robert S. Sronce ('92, Applied Behavior) of Sacramento is a housing planner for the City of Citrus Heights. He is responsible for updating and implementing the city's General Plan housing element, including strategic planning; developer assistance; housing redevelopment; housing repair oversight; and down-payment assistance programs. He also administers federal community development funds for the City of Citrus Heights. Sronce was a member of the ASUCD Council in 1989-90.

James R. Campbell (B.S., '94, Design; M.F.A., '96, Textile Art and Costume Design) of Ames, Iowa, along with co-designer Jean Parsons,

both assistant professors of textiles and clothing at Iowa State University in Ames, Iowa, created an inaugural gown for Iowa's First Lady Christie Vilsak. They used innovative digital technology to transform visual images from a stained glass window in the governor's mansion into textile surface design.

Scott Griffin ('94, Agricultural and Managerial Economics) of San Francisco is employed in the Wholesale Finance Group of Wells Fargo Bank's San Francisco office. He was married in March to Gilwa Guadamuz.



Ilene Polhemus Johnson ('94, Microbiology) of San Jose, Calif., recently opened her private optometric practice in Los Gatos. She

specializes in family optometry, pediatrics and laser vision correction. She and her husband, Mark, have a two-year-old daughter, Morgan.

Shelley Bischoff Kavlick ('94, Agricultural and Managerial Economics) is studying in the Master's of Defense Administration program at the Royal College of Military Science, Shrivenham, England.

Susan Nelson Myers ('94, Environmental Policy Analysis and Planning) of Portland, Ore., has worked as a computer applications developer with the Xerox Corporation in Wilsonville, Ore., for the past three years.

Amy Myrdal ('94, Dietetics) of Oak Park, Calif., is director of nutrition marketing and education for Dole Food Company. After earning her degree at UC Davis, Myrdal completed an internship at the University of Minnesota and then earned a master's degree in nutrition communication at Tufts University in Boston. She is co-author of *The Healthy Heart Cookbook for Dummies*.

Michele C. Chin (B.S., Zoology '95; DVM, '99, Veterinary Medicine) of Carlsbad, Calif., is an emergency and critical care veterinarian in the VCA Emergency Animal Hospital & Reference Center of San Diego. She and her husband have one son.

Jeffrey A. Judson ('96, Agricultural and Managerial Economics) of Moraga, Calif., is a financial representative with the Northwestern Mutual Financial Network in San Francisco.



Stephen Weber ('96, Microbiology) of Boston, Mass., graduated in May from the Boston University School of

Medicine, receiving both M.D. and Ph.D. degrees. He is in the residency program at Oregon Health and Science University. His career interests include facial plastics and reconstructive surgery or head and neck oncology. His thesis research focused on delineating the molecular mechanism of the anti-inflammatory drug, chloroquine. Results were published in several peer-reviewed publications.



Daniel Nolt ('97, Biochemistry) of Fresno completed a clinical pharmacy pediatric specialty residency last year at Children's

Hospital Central California, where his work included research on antiepileptic medication used in children with Angelman syndrome and the physical compatibility of various intravenous drugs used in neonatal intensive care. He currently is a staff clinical pharmacist at the hospital and an assistant clinical professor UC San Francisco School of Pharmacy.

David H. Franklin ('98, Human Development) of Mountain View, Calif., is a teacher at Benjamin Bubb Elementary School. He has taught sec-

ond grade and a second/third grade class, in addition to serving as a fourth-grade student teacher at C.E. Dingle Elementary School in Woodland. Franklin enjoys reading, running, volleyball, softball and hanging out with friends. "School should be a place of wonder and passion for finding things you never knew," he writes.

Melissa Grigione (Ph.D., '98, Ecology) of Tampa, Fla., is an assistant professor in the Department of Environmental Science at the University of South Florida. She and husband Ron Sarno have one son, Marcus James.

Tom Palecek ('99, Genetics) of Atherton, Calif., has been working for the E&J Gallo Sales Company for over three years. He currently manages one-third of that company's chainstore business in Northern California. Palecek is beginning studies in the Stanford Graduate School of Business MBA program.

Janelle Weigel ('99, Biology Sciences) of San Francisco is enrolled in the masters degree program in nursing at San Francisco State University.

Katy Heckendorn ('01, Dietetics) of Davis is a chemist and reference standard administrator with ALZA Corporation, a Johnson and Johnson pharmaceutical company located in Vacaville. She spends her leisure time travelling around the country -- her favorite vacation spot being the Sierra.

Erin Hung ('01, Animal Science) of San Jose, Calif., is a research biologist with the ALZA Corporation in Mountain View.

Deena Blumenkrantz ('02, Biochemistry and Molecular Biology) of San Francisco is a research assistant in the Center for Molecular Cell Biology at the University College London's Royal Free Medical School.

Alumni Information Sheet

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