

UC DAVIS

COLLEGE OF AGRICULTURAL
& ENVIRONMENTAL SCIENCES

where knowledge meets need...

IRANIAN WATER SCIENTISTS
Visit to UC Davis

Neal Van Alfen
Dean

August, 2008

Our History



- 1906 Established as University Farm – 776 acres
- 1938 Name changed to College of Agriculture
- 1959 UC Davis became an independent campus
- 1967 Name changed to College of Agricultural and Environmental Sciences
- 2006 5,146 acres (800 acres central campus; 4,375 acres devoted to agricultural research)

College of Agricultural & Environmental Sciences

Agricultural Sciences

Animal Science
Biological & Agricultural Engineering
Entomology
Nematology
Plant Pathology
Plant Sciences
Agricultural Plant Biology
Crop & Ecosystem Sciences
Horticulture
Viticulture and Enology

Environmental Sciences

Environmental Science & Policy
Environmental Toxicology
Land, Air & Water Resources
Atmospheric Sciences
Hydrology
Soils & Biogeochemistry
Environmental Design
Landscape Architecture
Wildlife, Fish & Conservation Biology

Human Sciences

Agricultural & Resource Economics
Food Science & Technology
Human & Community Development
Community Studies and Development
Human Development and Family Studies
Nutrition
Textiles & Clothing

Our Focus on Teaching



4,800 Undergraduate Students
1050 Graduate Students
370 Faculty
29 Majors

Our Focus on Research



Institutional Rankings

ISI Essential Science Indicators: Numbers of Peer Reviewed Papers

Agricultural Sciences

- 1) **University of California, Davis**
- 2) University of Wisconsin
- 3) Cornell University
- 4) University of Illinois
- 5) Iowa State University

Ecology / Environmental Sciences

- 1) **University of California, Davis**
- 2) University of California, Berkeley
- 3) Colorado State University
- 4) University of Florida
- 5) University of Minnesota

Food Science and Nutrition

- 1) **University of California, Davis**
- 2) University of Wisconsin
- 3) Cornell University
- 4) University of Georgia
- 5) University of Minnesota

UC Davis also ranks #1 in the U.S. with regard to competitively-awarded federal grants that support agricultural R&D.

CA&ES Research Impacts California's Economy and Quality of Life



- Agricultural Sustainability
- Environmental Science & Planning (land, air and water)
- Support Competitiveness of Major Commodities
- Rural/Urban Interface
- Food and Health
- Genomics
- Human Development
- Wildlife Conservation
- Youth Development and Education (4-H)
- Safe Pesticide Use

Tomato Processing

1963 2.5 million tons harvested

2007 12 million tons harvested (with
introduction of tomato harvester and new
tomato cultivars)
Total value \$874 million



Strawberry Industry

1960 – 2006 Introduction of new UC strawberry cultivars tripled yields and extended harvest season from two months to 12 months

2007 35,800 acres in production in California
Total value \$1.2 billion



Centers and Institutes

Addressing Research and Outreach Needs



- Agricultural Sustainability Institute
- California Center for Urban Horticulture
- California Institute for Food and Agriculture Research (CIFAR)
- Center for the Study of Regional Change
- Center for Produce Safety
- Center for Vectorborne Diseases
- Energy Institute
- Foundation Plant Services
- Foods for Health Initiative
- Robert Mondavi Institute for Wine and Food Science
- Seed Biotechnology Center
- Western Institute for Food Safety and Security (WIFSS)

Our International Focus

Facilitate college-wide programs to position UC Davis as a global leader in agriculture and environmental knowledge and delivery



Current International Programs

Afghanistan

Agricultural extension
Almond nursery management
Horticultural support
Curricula development

Japan

Student exchange

Vietnam

Curricula development

Iraq

Agricultural extension

Madagascar

Dairy



Recently Completed International Programs

Egypt – improved horticultural production for poor farmers

India – develop capacity for center for food safety and quality

Rwanda – sustainable food security and improved rural income



International Fellows Program

Borlaug Fellows

India

Mauritania

Cochran Fellows

Afghanistan

Colombia

India

Indonesia

Iraq

Mexico

Moldova

Montenegro

Peru

Humphrey Fellows

Benin

Burkina Faso

Cote D'Ivoire

India

Morocco

Panama

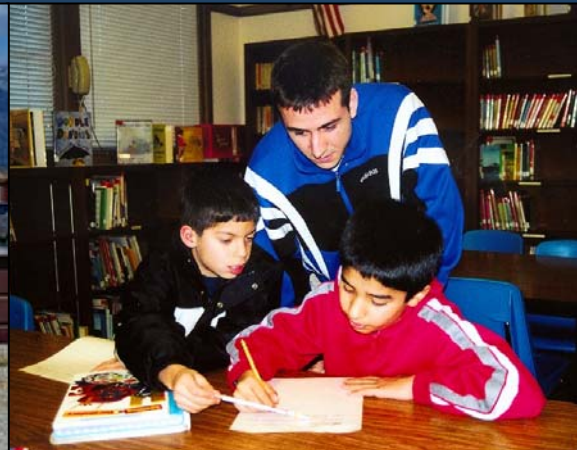
Philippines

South Africa

Vietnam



Our Focus on Outreach



Cooperative Extension

- Teamwork among faculty, specialists and advisors at UC Davis, UC Riverside, UC Berkeley and county CE offices



Focus for the Future

- Natural resource use & environmental protection
- Stable Food Supply
- Food safety and nutrition
- Human health and well-being
- Globalization of trade and information
- Changing demographics and consumer demands
- The information explosion
- Global climate change

Broad Goals Endorsed by Strategic Planning Committee

Agricultural Sciences

Maintain core strength in foundational areas. Continue to lead in the development of truly sustainable agricultural systems.

Consolidate leading position in both novel and traditional approaches to crop and livestock improvement.

Build strength in critical new and emerging areas, e.g., biofuels, biobased materials, heritage species, and biotechnology.

Broad Goals Endorsed by Strategic Planning Committee

Environmental Sciences

- Expand capacity to confront global change and its impacts on water supply & other life-support systems.
- Develop capability in new informatics tools that are becoming a cornerstone of environmental analysis.
- Maintain and renew basic organismal expertise that forms CA&ES excellence in environmental sciences.
- Create a strong continuum from basic to applied research to deliver societally-important products in environmental sciences, just as CA&ES traditionally has in agricultural sciences.

Broad Goals Endorsed by Strategic Planning Committee

Human Sciences

- Continue to ensure human health and nutrition, economic and community development, and public/private decision making about resource use are recognized for their fundamental roles in enabling translation of scientific knowledge into socially desirable solutions.
- Build capacity to weave agricultural, environmental, and human sciences research into effective decision making by public policymakers, stakeholder groups, and the public.

Specific Planning Recommendations for 2007-2012

II. Ideas for the Future

Recommendation: Recognize ten academic themes as areas of college wide significance to receive high priority for future development as resources allow:

1. Agricultural sustainability
2. Bio-based materials
3. Biodiversity and ecosystem services
4. Complex microbial ecosystems
5. Environmental and human health
6. Environmental informatics
7. Food safety (foods for health)
8. Global change, water and watersheds
9. Regional change
10. Science, policy, and public perception

Specific Planning Recommendations for 2007-2012

VIII. International Focus

Recommendation: The college should embrace education abroad programs, international experiences for graduate students, new internationally-focused courses and teaching programs, and other ways to enhance our international focus.

College of Agricultural & Environmental Sciences

Applying knowledge – Providing solutions

- Education
- Research
- Outreach



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