

Office of the President

TO MEMBERS OF THE PUBLIC ENGAGEMENT AND DEVELOPMENT COMMITTEE:

DISCUSSION ITEM

For Meeting of January 24, 2018

COMMUNITY OUTREACH AND IMPACTS, DIVISION OF AGRICULTURE AND NATURAL RESOURCES

EXECUTIVE SUMMARY

The University of California's division of Agriculture and Natural Resources (UC ANR) is a statewide network of UC researchers and educators providing science-based information to families, farmers, ranchers, natural resource managers, communities, and policy makers. With programs in every county of the state, UC ANR is "the face of UC" for hundreds of communities.

UC ANR's contribution to mission-oriented research and community engagement is critical for the University to fulfill its land grant mission of teaching, research, and public service. Vice President Humiston will provide an overview of the extensive public engagement programs of UC ANR.

BACKGROUND

History of the Division of Agriculture and Natural Resources

President Abraham Lincoln signed the Morrill Act in 1862 allowing the federal government to transfer land to any state that would create a public university to be open and accessible to all people. President Lincoln's vision of an educated citizenry and his faith in the power of scientific research to increase agricultural productivity and improve the lives of all Americans has allowed the public land grant institutions in the United States to be among the premier research universities in the world.

The Agricultural, Mining and Mechanical Arts College of California opened in 1868 in downtown Oakland. In 1873, the college moved to its current location and became the University of California, Berkeley campus. Agriculture Experiment Stations were created by the Hatch Act of 1887, with UC Berkeley as the first California campus to receive Agriculture Experiment Station (AES) funding. Berkeley's research farm in Davisville also had AES funding, and later became UC Davis. UC Riverside evolved from the Citrus Experiment Station. These three campuses continue to receive AES funding today. Although only three of the ten UC campuses receive AES funding, the UC system itself is the land grant university for California, not any one

individual campus. This structure differs from most other states where only one campus has “land grant” status.

In time the land grant universities realized that new mechanisms were needed to extend the research knowledge generated by the experiment station scientists directly into rural areas. Congress passed the Smith-Lever Act in 1914, making federal funds available for “cooperative agricultural extension” work. All states were enabled to employ “county agents” whose salaries were paid by joint agreement between the federal and state governments, with local expenses paid by the counties in which they worked. The Division of Agricultural Extension was established in the College of Agriculture at UC Berkeley in 1914, long before any other UC campuses existed. This legislation also included boys and girls clubs, later known as 4-H Clubs (head, heart, hands, and health).

The land grant philosophy embodies the concept of service to society by providing broad access to the benefits of higher education, irrespective of wealth or social status, and by addressing the practical problems and needs of society through objective research and non-formal education of youth and adults, as well as classroom teaching. Inherent in this philosophy is the ability to adjust research and educational programs as the problems and needs of society change.

Cooperative Extension Today

UC Cooperative Extension (UCCE) is a national, publicly funded, non-formal educational system that links educational and research activities and resources of the U.S. Department of Agriculture (USDA), state and county governments, and land grant universities. In California, UCCE provides residents who may never set foot on a UC campus, with local access to UC resources. County-based UCCE Advisors work with teams of non-academic staff and volunteers to deliver services through programs such as 4-H Youth Development, Integrated Pest Management, and Master Gardeners.

Campus-located UCCE Specialists at the Berkeley, Davis, and Riverside campuses, work to connect UCCE Advisors to the campus-based AES faculty and other resources that provide relevant research and new technologies to address the many issues and needs of California. Additional UCCE Specialists at the Merced and Santa Barbara campuses link specific programs into the statewide network.

The Agricultural Experiment Station Today

Since its establishment in 1878, AES has maintained a mission-oriented focus on basic and applied research. AES has over 600 faculty members housed in 40 departments in the College of Natural Resources at UC Berkeley, the College of Agricultural and Environmental Sciences and the School of Veterinary Medicine at UC Davis, and the College of Natural and Agricultural Sciences at UC Riverside. AES faculty provide worldwide leadership in environmental sciences, nutrition, and youth development. AES faculty also collaborate with UCCE Specialists and Advisors in their research, and in extending their findings to the public.

Statewide Programs and Institutes

UCCE Specialists and Advisors, and AES faculty are on the cutting-edge of research that is applied to emerging issues. This science-based information is provided to Californians, in communities large and small, through local UCCE Advisors and Statewide Programs and Institutes.

Agricultural Issues Center

The Agricultural Issues Center (AIC) is a forum for the identification and analysis of important issues affecting the agricultural sector. AIC provides broadly based, objective information on a range of critical, emerging agricultural issues and their significance for the economy and natural resources through studies, conferences, and publications. The audience for AIC research and outreach includes decision-makers in agriculture and government, scholars and students, journalists, and the general public.

CalFresh Nutrition Education Program

The University of California CalFresh Nutrition Education Program is a joint agreement among the USDA Food and Nutrition Service, the California Department of Social Services CalFresh and Nutrition Branch, UC Davis and UCCE. (Federally, the CalFresh program is known as SNAP-ED, the Supplemental Nutrition Assistance Education Program).

UC CalFresh consists of adult, family-centered, and youth programs operating throughout California. Last year, 19,288 preschoolers participated in a nutrition and literacy curriculum that includes reading storybooks with food-related themes and hands-on nutrition education and physical activities; 84,307 school-age youth participated in grade level appropriate nutrition programs that included introducing students to new foods. Another 10,925 adults and 1,985 seniors were reached with direct education on nutrition and stretching food dollars.

California Institute for Water Resources

The California Institute for Water Resources (CIWR) is the California hub for the national network of water research institutes supported by the federal Water Resources Research Act. CIWR fulfills its mission of integrating California's research, extension, and higher education programs to develop and communicate research-based solutions to water resource challenges.

California Naturalist Program

The mission of the California Naturalist Program is to foster a diverse community of naturalists and promote stewardship of California's natural resources through education and service. The Program collaborates with partner organizations to train volunteers using a science curriculum, hands-on learning, problem-solving, citizen science, and community service to instill a deep appreciation for the natural communities of the state, and to inspire individuals to become stewards of their local resources

Expanded Food and Nutrition Education Program

The Expanded Food and Nutrition Education Program (EFNEP) is a federally funded program through the USDA National Institute of Food and Agriculture that offers nutrition education to limited-resource families and children in all 50 states and U.S. territories. In California, EFNEP is administered by UCCE. EFNEP programs assist limited-resource clients gain the knowledge, skills, and behavior changes necessary to choose nutritionally sound diets and improve well-being. In 2017, 65,000 hours of nutrition education were delivered in Spanish, Chinese, Vietnamese, Hmong, or English. Of the California participants who reported income, 95 percent are at or below 185 percent of the Federal Poverty Level. The Federal Poverty level for a family of four is \$24,600; 185 percent of the Federal Poverty Level for a family of four is \$44,955. EFNEP program graduates reported an average monthly food cost savings of \$38.20.

4-H Youth Development Program

The 4-H Youth Development program focuses on providing experiential learning that develops leadership, citizenship, life skills, and supportive environments in which culturally diverse youth and adults are engaged to reach their fullest potential. Youth can participate in 4-H clubs, camps, after school programs, and events. More than 109,000 youth were enrolled in the 2016-17 program year, and UC ANR certified nearly 22,000 adults to work with 4-H youth. These committed adult volunteers contributed more than 1.3 million volunteer hours.

Informatics and Geographic Information Systems

Informatics and Geographic Information Systems is the nexus for UC ANR's rich and diverse geospatial and ecological data, research information, and resources for academics and the public who rely on geospatial and informatics data, analysis, and display.

Integrated Pest Management

The UC Integrated Pest Management Program (UC IPM) helps residents, growers, land managers, community leaders, and other professional pest managers prevent and solve pest problems with the least unintended impacts on people and their surroundings. For example, UC IPM partnered with storm water agencies and State regulators to train Advocates to work in retail nurseries and garden centers. UC IPM Advocates work as consultants to help retail stores provide information about less toxic products and the safe use of pesticides. Surveys indicated that 76 percent of participating stores used the UC IPM website for identifying pests or solving problems, 70 percent increased shelf space for green or less-toxic pest management products, and more than 76 percent increased sales of green products.

UC IPM has developed an active program to train, in English and Spanish, the people who will deliver training to pesticide handlers and agricultural field workers (a "train-the-trainer" program). Pesticides are an essential part of many UC IPM programs, and it is important that people who handle pesticides know how to use them safely. The law requires that handlers be instructed in ways to safely and legally apply pesticides. In 2012-13, 135 growers, farm labor contractors, and others attended trainings. Based on their estimates, that group expects to train

almost 21,200 field workers and 4,500 pesticide handlers. This multiplier effect is what makes train-the-trainer programs such an effective outreach approach.

Web and printed publications provide a wealth of how-to information about identifying and managing pests, and the program also provides online training courses. The IPM website averages 36,000 page views per day.

Master Food Preserver Program

The UC Master Food Preserver Program extends UC research-based information about home food safety and preservation to the public. It is important for home canning and preserving that the processing methods used are up-to-date with the most reliable and trusted information about food safety. UC-trained volunteers reached nearly 18,000 people last year, contributing 18,000 hours of service.

Master Gardener Program

The UC Master Gardener Program's mission is to extend research-based information on home horticulture to the people of California. More than 6,000 UC-trained volunteers are answering gardening questions from the public, working to save water, reduce pesticide use, and promote appropriate plants for California's climate, pollinators, and birds. Volunteers support more than 4,000 active projects statewide, and hold nearly 145,000 events every year. Volunteers contributed 398,000 hours of service last year, reaching more than two million people.

Nutrition Policy Institute

The Nutrition Policy Institute (NPI) conducts and evaluates research related to the impact of nutrition and physical activity on public health. NPI values research that provides a strong basis for public policies that can eliminate health disparities, especially those stemming from lack of access to healthy foods and opportunities for physical activity.

Sustainable Agriculture Research and Education Program

The Sustainable Agriculture Research and Education Program (SAREP) provides leadership and support for scientific research and education in agricultural and food systems that are economically viable, conserve natural resources and biodiversity, and enhance the quality of life in the state's communities. SAREP serves farmers, farmworkers, ranchers, researchers, educators, regulators, policy makers, industry professionals, consumers, and community organizations across the state.

Research and Extension Center System

The Research and Extension Centers make up the largest system of agriculture and natural resource research and education field stations in California. The Centers are geographically located throughout California, and are focal points for community participation in UC programs, and for active UC involvement in identifying and addressing regional agricultural and

environmental problems and issues. The nine-center system, with more than 13,000 acres of land, annually manages more than 375 research projects and conducts more than 600 educational outreach programs annually, reaching 16,000 adults and 8,000 K-12 students.

Additional Information

More information on all UC ANR programs is available on the UC ANR website.

Key to Acronyms

AES	Agriculture Experiment Station
AIC	Agricultural Issues Center
CIWR	California Institute for Water Resources
EFNEP	Expanded Food and Nutrition Education Program
NPI	Nutrition Policy Institute
SAREP	Sustainable Agriculture Research and Education Program
SNAP-ED	Supplemental Nutrition Assistance Education Program
UC ANR	University of California's division of Agriculture and Natural Resources
UC IPM	UC Integrated Pest Management Program
UCCE	UC Cooperative Extension
USDA	U.S. Department of Agriculture