

UC's Priorities and Funding Requests in Agriculture and Natural Resources

With the University of California (UC) serving as a vital partner, California continues to be the nation's top agricultural state. For more than a century, California's \$47 billion agricultural industry has depended on UC for the stream of new technologies and research breakthroughs needed to stay competitive and be responsible stewards of the land. UC's critical food, agricultural, and natural resources research and public outreach activities serve all Californians and, ultimately, the nation. UC works hand in hand with farmers and industry to enhance agricultural markets, and deploy scientifically tested production techniques.

UC Agriculture and Natural Resources' (ANR) Requests for FY 2018 (3)

Please support FY2017 funding levels or higher—including a \$200M increase for the National Institute of Food and Agriculture (NIFA)—to support federal USDA programs that address the most important social and political imperative of our time: providing the means for people to grow and access safe, affordable, and nutritious food in a healthy, sustainable environment.

1 Support those who do the work

- Hatch (Research and Education support for AES): \$291M
- Smith-Lever (Cooperative Extension): \$358M
- McIntire-Stennis (Forestry Research and Education): \$40.5M

These programs provide critical “people power” and research talent to enable California to connect local issues with the power of UC research. In 2015, 2,219 research and extension projects were conducted by 650 Agriculture Experiment Station faculty, 175 Cooperative Extension (CE) Advisors, and 115 CE Specialists, including 22 new CE academics. In California, 1,360,080 adults and youth were directly reached through extension.

IMPACT: Fostering the next generation of scientists

Nearly 310,000 California youth annually benefit from high-quality programming efforts with support from 20,000 trained volunteers who devote over 1.5 million hours of service each year to youth education programs — services valued at nearly \$42 million.

Youth who participate in 4-H have better outcomes than youth in other programs:

- 2 times more likely to have better grades
- 1.7 times more likely to take courses/pursue STEM careers

IMPACT: Research and technology drive water security

- ANR evaluated the water savings of using micro-sprinklers in strawberry production. The year-long study demonstrated that significant water savings—32% in just three weeks—did not disrupt or have a negative impact on fruit yield in the \$2.2 billion California crop.
- ANR is providing science-based information to agricultural and water resource managers in California by repackaging soil survey data into interactive, map-based decision-support tools driven by internet and smartphone apps. The interactive website, which includes data for 5.5 million acres, allows users to navigate across the state to identify the suitability of their soil for groundwater banking.



IMPACT: Leveraging interactions with clientele to support innovation and technology in agriculture

- Over the past eight years, ANR academics filed 148 patents with the U.S. government. Data from 2013 indicates that UC ANR has been involved with the development of seven of the top 25 royalty-receiving UC patents. UC ANR's day-to-day interaction with clientele who provide insight on current problems helps to identify areas of technological need to increase operation productivity.
- The role of drones in agriculture and natural resources research is rapidly growing as this new sector is expected to generate thousands of new jobs in the coming years. UC ANR provides workshops on unmanned aerial systems technology and regulations across California for UC employees, but also open to the public. A UC academic is using small, low elevation drones to develop new methods for analyzing crop water stress to foster the acceptance and adoption of drone technologies to monitor factors that affect crop productivity.

ANR developed new varieties and rootstocks such as Tango Mandarin, Golden Hills Pistachio, and Albion Strawberry; and new technology for nitrogen and water sensors.

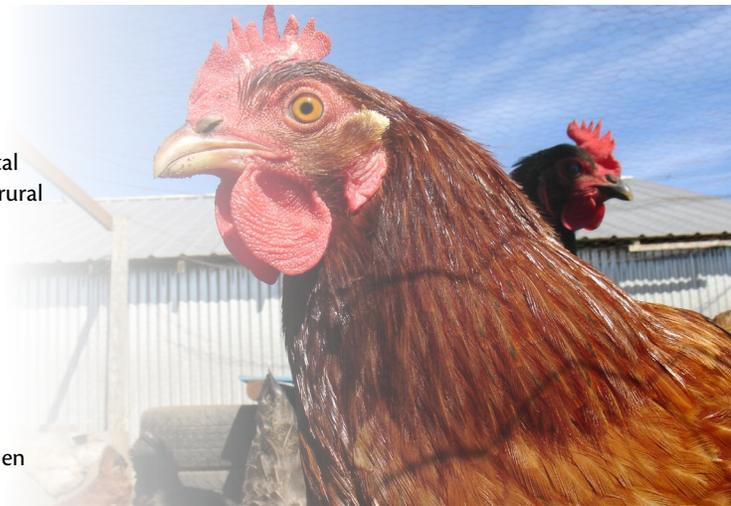
2 Support research

• **USDA NIFA's Agriculture and Food Research Initiative (AFRI) research program: \$418M**

As of February 2017, UC has 97 active AFRI projects with more than \$106M in total awards to find cutting-edge solutions to high-priority issues affecting California's rural and urban communities.

IMPACT: Strengthening biosecurity against avian flu

- To prevent outbreaks of Avian Flu in the U.S., UC academics are analyzing biosecurity and management practices on poultry operations and backyard flocks to identify high-risk locations and time periods for avian flu outbreaks. The information will be used to develop biosecurity education programs for poultry farmers, backyard producers and poultry veterinarians to help strengthen the industry's defenses against this threat to bird and human health.



3 Support nutrition education

• **Support the Expanded Food and Nutrition Education Program (EFNEP): \$68M and Supplemental Nutrition Assistance Program Education (SNAP-Ed): \$414M**

EFNEP helps low-income families improve their nutrition practices and teaches food-budgeting skills, while the UC CalFresh (California SNAP-Ed) program brings nutrition education to youth in local schools.

IMPACT: Improving health for low-income families in California

- Through UC CalFresh, nutrition education has reached 116,505 school-aged children in 31 California counties. In addition, EFNEP enrollment has increased by 17%, averaging 9,400 low-income families, with 90% improving nutrition practices and 85% improving their skills managing a food budget over the last four years.

Studies have shown that for every \$1 invested in EFNEP, more than \$10 is saved in current and future healthcare costs.



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