Investing in California

University of California
Agriculture and Natural Resources
UC Agriculture and Natural Resources is a vital partner, working hand in hand with agriculture to enhance markets, help the balance of trade, address environmental concerns, protect plant health, and provide growers with scientifically tested production techniques and Californians with increased food safety.

In 2011:

- California farm revenue: $43.5 billion
- Number of crops produced: 400+
- Number of crops that exceed $1 billion in revenue: 11
- California ag exports: $14.7 billion
- Farm revenues up by 15% over 2010
- 800,000 workers on 81,500 farms
LEVERAGING RESEARCH CAPACITY

Three colleges, one professional school, nine Research and Extension Centers, and a statewide network of more than 50 local Cooperative Extension offices leverage UC's research and outreach capacity.

Volunteers also leverage program delivery. In 2011 4-H volunteers clocked in over 1 million hours, Master Gardeners 336,000 hours—a value of over $30 million contributed to UC.

687 UC and multi-state research projects federally funded by the national land grant system in 2011

264 UC scientists have 292 research projects under way at RECS in 2012

Published 1,702 peer-reviewed publications in 2011

National Academy of Sciences – 9 inductees in 2011

Fulbright fellows – 12 in 2011

American Association for the Advancement of Science fellows – 14 in 2011

Shared the 2007 Nobel Peace Prize for scientific research on climate change
PATENTLY PROVEN

Public research institutions have generated 24% of all patents in agricultural biotechnology—10 times that of other industries. UC is the largest public holder of agricultural and biotech patents registered in the United States.

“From agriculture to aerospace, knowledge created by UC’s research enterprise helps to ensure that our state remains a leader in all aspects of its business endeavors.”

— William Tucker, Executive Director, UC Innovation Alliances and Services
Nearly 1 billion people worldwide go to bed hungry each night. The United Nations Food and Agriculture Organization predicts that world food production will need to double by 2050 in order to meet demand.

UC ANR researchers are working to meet the challenge with innovations in animal care and breeding, plant varieties, irrigation and nutrient delivery, and pest and disease management practices.

To make our food safer, UC Davis School of Veterinary Medicine researchers identify practices to reduce pathogens in our food system, assure a safe and secure food supply, and protect the public health.

16.2% of California households are food insecure.

California ag exports:
- tree nuts $3.6 billion
- fruits $3.2 billion
- vegetables $2.8 billion
- dairy $1.2 billion

California is #1 in:
- almonds
- dairy
- kiwi
- grapes and grape products
- cut flowers
- dates
- walnuts
- pistachios
- olives

Average yields in California in the past 3 decades:
- Almonds 122%
- Processing tomatoes 69%
- Milk 44%
No crop better illustrates how UC-led innovations contribute to a success story than almonds. California almond growers have increased food safety and nearly doubled yields by adopting practices based in UC Davis and UC Cooperative Extension research in irrigation, nutrient delivery, tree spacing, and canopy management.

"The research and outreach done by UC Agriculture and Natural Resources—both the Ag Experiment Station and Cooperative Extension—have significantly contributed to the growth and success of California almonds."

—Bob Curtis, associate director, Agricultural Affairs, Almond Board of California

"The University of California has been a wonderful partner in improving our farming practices; the whole system is not only more efficient, but more sustainable."

—Joe MacIlvaine, president of Paramount Farming Company
Scientists at UC Riverside are studying climate-related changes in insect pests, and predict that current pests will expand into new areas and that new pests will appear.

A team at UC ANR's Kearney Agricultural Research and Extension Center is developing a geographic database to provide information to ensure quick action when an outbreak of Asian citrus psyllid is found.

UC Berkeley researchers, along with UC Cooperative Extension advisors and UC Merced scientists, are looking at ways to manage Sierra Nevada forests to maintain water supplies for drinking water, power generation, agricultural, and ecological needs in the face of changes in timing and amounts of snowfall.

UC scientists at UC ANR's Desert Research and Extension Center are investigating new heat-tolerant varieties.

$1.6 BILLION
value of California lettuce and spinach threatened by increases in temperatures. UC scientists at UC ANR's Desert Research and Extension Center are investigating new heat-tolerant varieties.

100,000 acre-feet
amount of water saved annually by California growers using UC-developed technology.

Exploring bioenergy opportunities
More than $4.5 million in federal grants given to small businesses that received direct technical assistance from UC ANR.

2.7°F
by 2050
predicted increase in temperatures in California — 3× the rate over the last century.
Number of registered users of the CIMIS weather system developed jointly by UC Davis and the State of California including local water districts, fire and weather agencies, and utilities.

**6,000**

Number of low-income, high risk adults and youth receiving nutrition education through UC ANR programs

**166,797**

**BENEFITS TO ALL**

UC ANR advances benefit far more than agriculture and natural resources; research by UC scientists affect the lives of every Californian everyday.

"Meeting these challenges will require a renewed commitment to research, innovation, and technology development in agriculture. If we act strategically today, we will gain invaluable benefits tomorrow, including enhanced food security, better nutrition, greener sources of energy, and healthier lives, while we grow the rural economy."

—Daniel Schrag, co-chair of the President's Council of Advisors on Science and Technology, Agriculture Preparedness Working Group