

Investing in California



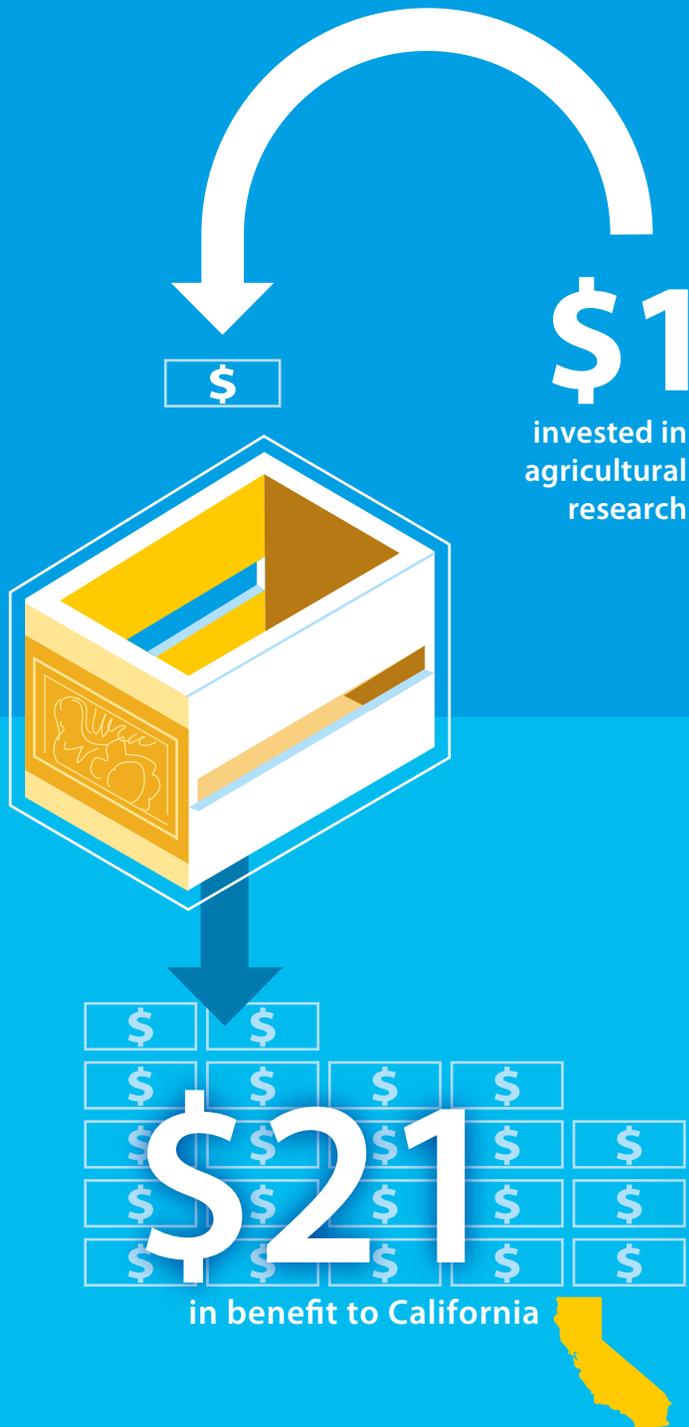
University of California
Agriculture and Natural Resources

GROWING THE ECONOMY

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



627 active
UC plant
licenses

UC varieties:

More than
citrus varieties **40**

90% of California's
wheat

65% of California
strawberries

Strawberries
worldwide **40%**

90% of California's
grapevine
stock is certified by UC Davis



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

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**of the 25 top grossing
UC patents**
are varieties of strawberries
or citrus

FIELDS OF YIELDS

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.

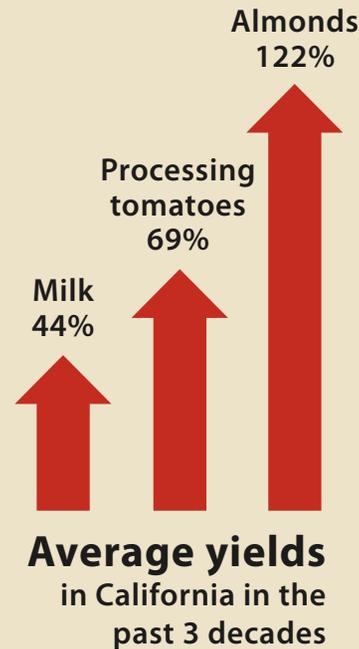
16.2%

of California households
are food insecure

**\$7.7
BILLION**

2011 value of
California
Dairy Products


up 30% over 2010



California
ag exports

tree nuts \$3.6 billion
fruits \$3.2 billion
vegetables \$2.8 billion
dairy \$1.2 billion

California
is

#1

almonds dairy kiwi
grapes and grape products
vegetables cut flowers
greenhouse dates walnuts
and nursery products
pistachios olives

2011 California almond crop

2 BILLION

 **POUNDS**



100%
of US production



75%
of world production



40 years ago:

1,400 pounds per acre



Today:

2,670 pounds per acre



PROGRESS IN A NUTSHELL

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

**\$3.9
BILLION**

Value of 2011 California
almond crop

RISING TO THE CLIMATE CHALLENGE

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 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.

2.7°F
by 2050

predicted increase in temperatures
in California — 3× the rate
over the last century

\$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.



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

Number of registered users of the CIMIS weather system developed jointly by UC Davis and the State of California

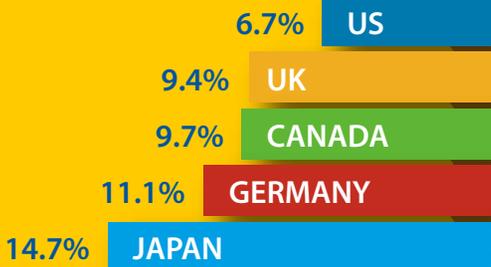
6,000

including local water districts, fire and weather agencies, and utilities.

30-70%

amount of water saved by professionals and homeowners using new SMART irrigation controllers

that use weather data generated by CIMIS to water only when needed



Americans enjoy the world's lowest food costs as a % of income



166,797

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

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

#1

California was the first state to ban the sale of soft drinks in schools

informed in part by research on obesity conducted by UC scientists



University of California Agriculture and Natural Resources



COLLEGE OF
Natural Resources
UNIVERSITY OF CALIFORNIA, BERKELEY

