

Today is _____, _____ the _____. This is Ken Morgan's Northcoast Ag Report, our lead story is about _____ when we return

- [Predicting California Tree Mortality](#)

Nancy Grulke of the US Forest Service explains a model to predict tree mortality in California based on factors like bark beetle and drought. She explains how the model can help land managers to make plans.

- [Perdue On White House RFS Meeting](#)

The Agriculture Secretary discussed a White House meeting among stakeholders of the Renewable Fuels Standard before some of the nation's leading commodity groups. (Rod Bain and Secretary Sonny Perdue)

[Posted on USDA.gov](#)

Get your foodie passport ready to tour scrumptious California veggie country! With over 970 thousand acres of harvested vegetables, melons, and strawberries, the just released USDA NASS [Vegetables 2017 Summary](#) places California at a whopping \$7.85 billion in vegetable production – over half of the U.S. total of \$13.8 billion. Where are all of these amazing crops grown? Let's take a trip through some of the most delicious and prosperous rural regions in the Golden State.

Just as the treasured garlic clove rests behind pale, papery covers, the small farming community of Gilroy waits to be discovered off the 101 and 152 travel corridors. Gilroy is centrally located at the southern gateway to Silicon Valley, about 30 miles south of San Jose. California produced over \$322 million worth of fresh market garlic. Wow! Gilroy may not be in the largest garlic-producing county, but its farmers might claim to be the proudest. Look closer to discover an amazing world-class garlic community touting the internationally renowned Gilroy Garlic Festival and continual celebration of all things "garlicky."

The NASS *Vegetables 2017 Summary* positions California as a leading example of rural prosperity. The Golden State is the top producer of artichokes, head lettuce, leaf lettuce (yeah, it's different from head lettuce), romaine, broccoli, spinach and more. Weather, alternating between a moist marine layer from the nearby ocean and cool sunny days, provides the perfect climate to grow everyone's favorite smoothie superfoods in its verdant valleys.

'Lettuce' head over the 152 to Highway 101 for more tasty fun in Monterey County, an area often referred to as the "Salad Bowl of the World." First stop is a Fibonacci favorite, the butter-loving artichoke (it grows according to the mathematical sequence discovered by – you guessed it – Fibonacci). Northern Monterey County features the U.S. artichoke capital in the prosperous rural town of Castroville. From bold artichoke sculptures to daring recipes, the annual Artichoke Festival celebrates California's official state vegetable. According to the *Vegetables Summary*, California is the sole U.S. producer of artichokes, with production valued at more than \$65.5 million in 2017.

Monterey County boasts some of the most beautiful farmland east of Highway 1. Literary aficionados may know Salinas for the annual Steinbeck Festival (you may have heard of John,

great American author and all that), but did you know the Salinas Valley is also recognized as one of the top leafy green producing areas in California? Some of your favorite green superfoods grew up the Salinas Valley of Monterey County. California produced over \$850 million of the nation's \$926 million broccoli crop and more than half, \$242 million, of the nation's \$401 million spinach crop. What a vegetable delight!

Scrumptious strawberries make salads, cakes, and even the annual NASS Vegetables Summary more delicious. Take Highway 101 down the coast to Ventura County in May for the California Strawberry Festival held in Oxnard. The festival celebrates the \$3.1 billion California strawberry industry (out of the U.S. total of \$3.5 billion).

As you complete your culinary loop back north, consider a drive up Highway 5 or 99. This is the famous Central Valley, where California farmers work hard to feed the country and the world the best foods. If it's tomato harvesting season, don't be surprised to see a few tomatoes strewn along the roadside. Sometimes they fall out of the steady stream of overflowing trucks on their way to the processing plants. The Vegetables Summary suggests everyone loves tomatoes – it's a billion-dollar crop for California and the United States.

No matter which direction you drive in California, you will see a great variety of vegetable crops and a range of growing conditions and seasons. You may see small organic farms supporting the burgeoning farm to fork movement. Down the road, you may come across larger farms that grow vegetables that end up on people's plates across America and the world. No matter which way you turn, you will be amazed at what California farmers can grow and thankful for their bounty.

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UC ANR receives Innovations in Networking Award for Broadband Applications

The nonprofit organization [CENIC](#) has awarded the UC Division of Agriculture and Natural Resources its 2018 Innovations in Networking Award for Broadband Applications. The award recognizes work to extend high-speed broadband to University of California researchers in rural communities across California by connecting UC ANR sites to the California Research and Education Network (CalREN).

"The internet at Kearney was like a drinking straw delivering and retrieving information, when what we needed was a fire hose," said Gabe Youtsey, chief innovation officer for UC ANR. "High-speed, broadband Internet at our Kearney Research and Extension Center, just south of Fresno, will allow UC ANR to lead innovative, on-farm agriculture technology research and extension for UC in the Central Valley. It will allow UC researchers to share big data and big computing with colleagues at campuses and globally."

Project leaders being recognized include Tolgay Kizilelma, chief information security officer; Tu Tran, associate vice president for business operations; and Youtsey.

Until recently, UC ANR facilities have been hamstrung by poor Internet connectivity, hindering their ability to support campus-based researchers and UC Cooperative Extension scientists who are engaged with community and industry partners to ensure that California has healthy food systems, environments and communities.

Extending from the Oregon border in the north, through the Sierra foothills and Central Valley, along the Pacific Coast and south to the Mexican border, UC ANR's research and extension facilities are situated among California's rich and unique agricultural and natural resources. This allows for the application of scientific research to regional challenges and issues. Today, nearly all research and data analysis involves remote collaboration. To work effectively and efficiently on multi-institutional projects, researchers depend heavily on high-speed networks and access to large data sets and computing resources. The high-speed broadband connection also provides a new way for Cooperative Extension advisors to collaborate with farmers, naturalists and others in these rural regions.

In 2016, CENIC began working with UC ANR to connect its nine research and extension centers to CalREN, equipping them with internet speeds comparable to those found on UC campuses. For example, the UC Hopland Research and Extension Center in Mendocino County and the UC Desert Research and Extension Center in Imperial County are both connected at 500 Mbps, five times their previous level of connectivity.

Due to the remote location of most of these facilities, the work involved in identifying suitable pathways for connections between each site and the CalREN network has been extensive. Engineers from CENIC and UC ANR collaborated on network design, deployment, and troubleshooting to equip these facilities with the high-speed internet they need. High-speed connectivity with significant bandwidth now allows researchers to use equipment like infrared cameras to collect data on how crops respond to heat, among many other electronic tools. Farmers who are unable to visit the Research and Extension Centers can now connect virtually and tune in to real-time video streams, gaining access to the latest knowledge.

In addition to the Research and Education Centers, the [Citrus Clonal Protection Program](#) in Riverside is now connected to CalREN. [Elkus Ranch](#), the environmental education center for Bay Area youths, the UC ANR administrative offices in Davis and 30 UC Cooperative Extension sites are in the process of being connected.

"You can't do big data with dial-up Internet speed," said Jeffery Dahlberg, director of Kearney Research and Extension Center. "Before this upgrade, our internet was slower than my home internet speeds. Now we have speeds more like you will find on UC campuses."

Dahlberg noted that high-speed internet will become a powerful research tool allowing researchers to collect and share data in real-time. "For instance, a researcher can use an infrared camera in a field collecting readings to determine how a crop responds to heat as

it changes throughout the day, but even this modest instrument needs significant bandwidth," he said. "We now have the bandwidth to do that."

"The impact of these newly established broadband connections is significant," said Louis Fox, president and CEO of CENIC. "UC ANR researchers and educators can now enhance and share the creation, development and application of knowledge in agricultural, natural and human resources, bringing practical, science-based answers to Californians and California industry."

Innovations in Networking Awards are presented each year by CENIC to highlight the exemplary innovations that leverage ultra-high bandwidth networking, particularly where those innovations have the potential to transform the ways in which instruction and research are conducted or where they further the deployment of broadband in underserved areas.

UC Agriculture and Natural Resources researchers and educators draw on local expertise to conduct agricultural, environmental, economic, youth development and nutrition research that helps California thrive. Learn more at ucanr.edu.

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COMMUNITY ALLIANCE WITH FAMILY FARMERS



ACTION ALERT!

Tell CA Legislators: Farmers Can Fight Climate Change!

We need your help to tell California legislators that more funding is needed for the state's Healthy Soils Program and the State Water Efficiency & Enhancement Program (SWEEP). Please take just a minute to [sign on to this letter](#) and voice your support for these programs.

The [Healthy Soils Program](#) launched in December 2017, and recently awarded over \$5 million to support practices such as cover cropping, composting, conservation planting, reduced tillage and more. The very popular [SWEEP program](#) has given out \$67.5 million in grants since 2015.

Governor Brown's proposed budget for 2018-19 falls short of what is needed. We are reaching out to you because your elected representative may serve on the budget committee that will soon be debating how to allocate the state's \$1.25 billion cap-and-trade revenue for the fiscal year. They need to hear from their constituents that these climate smart agriculture programs are valued.

[Will you add your name to the letter?](#) And please share this with other farmers, ranchers, organizations and businesses in your area.