

**April 2022****Placer County**

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Since I started keeping precipitation records when we moved to Auburn in 2001, we've measured an average of just under 15 inches of rain from January through the end of March. In 2017, we measured over 34 inches during the first three months of the calendar year. Last year, the driest water year since I've been keeping track (with a total of 19 inches), we received over 13 inches from January 1 till March 31. This year, however, we've received just 2.46 inches of rain - no wonder the soil is dry and the forage is drying.

Ranchers know that drought is more than just a lack of precipitation. Low rainfall years, provided the storms come at the right time, can produce above-average forage. This year, however, the warm temperatures have brought oaks and other vegetation out of dormancy earlier than normal -



this early onset of the growing season in our oak woodlands has increased evapotranspiration (or soil-water demand). The north winds haven't helped. Before we received an inch of rain on March 14-15, I checked soil moisture in Auburn - and found it to be less than 20% (more like May than March). The rain gave us a short boost, but by the end of last week, soil moisture was back around 25%.

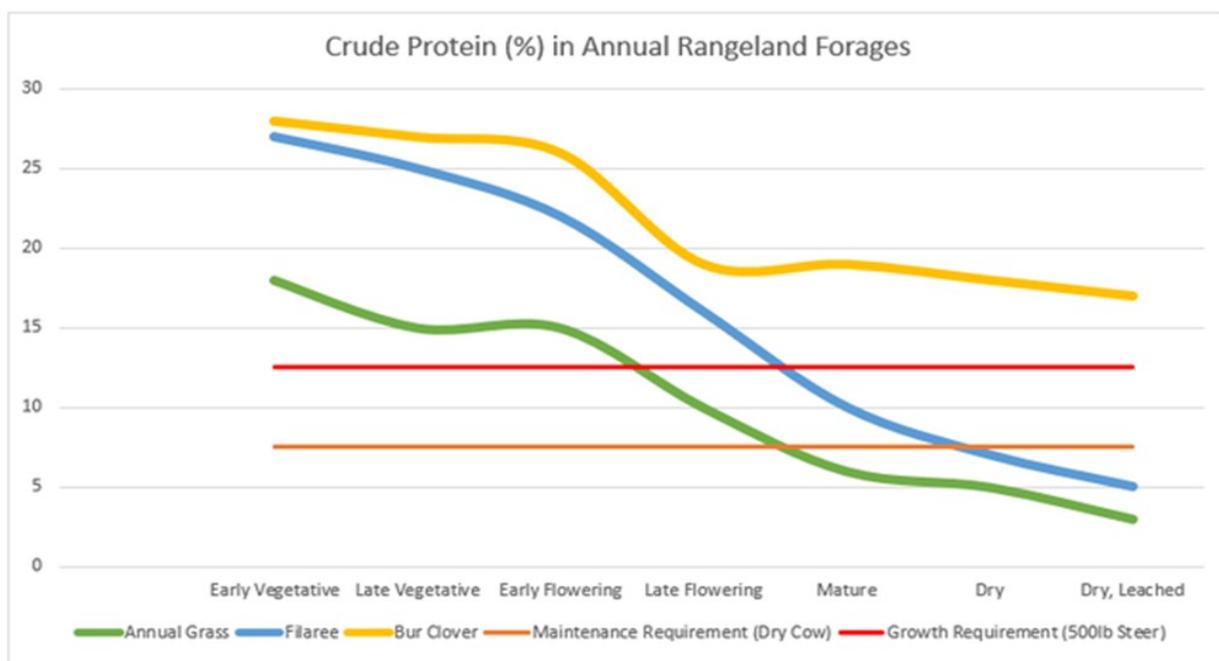
Our rangeland vegetation reflects these poor growing conditions. Our annual grasses and forbs, by definition, must produce seed every year. In dry conditions, this means that they reproduce and turn brown early and at a shorter stature. Where our sheep are grazing just west of

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Auburn, I've seen soft chess and annual ryegrass headed out this week - a good 30 days early. In a good year, the soft chess will be as much as 18 inches tall; this year, it's done growing at 6 inches. Many of our important broadleaf forage plants are maturing equally early - I'm seeing vetch dying back on our shallower soils, and the filaree is already in the late bloom stage, as well.

These are all red flags from a forage quantity perspective - shorter feed this spring means less residual feed to return to next fall. But early maturity also compresses our forage quality window. Many of us expect a 45-60 day period when we have high quality forage on our annual rangelands - and we set our production calendars accordingly. As these grasses and forbs mature, they decline in quality - providing less protein and energy to our grazing animals. They also become less palatable - in other words, they don't taste as good and they don't provide as much nutrition. The graph below demonstrates that crude protein levels in annual grasses drop below cow maintenance levels between the late flowering and maintenance stages (which we're approaching). If we're trying to put weight on animals, protein levels are deficient by the time we reach the early flowering stage. For more information, check out this ANR Publication ([Annual Rangeland Forage Quality](#)).

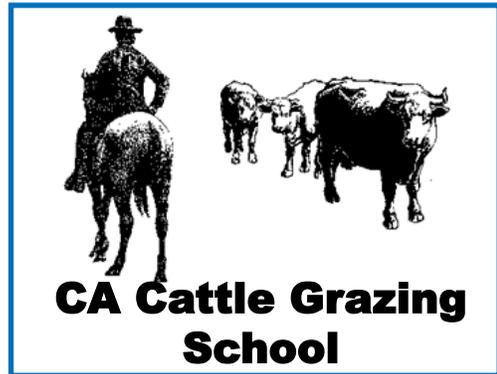


We're still hopeful that the significant snow pack we built up in December will mean we'll have adequate irrigation water here in the foothills - other regions in the state aren't so fortunate. Given the exceptionally dry conditions, however, I expect we'll need to make at least 2 irrigation rotations over our irrigated pastures to rebuild soil moisture and start growing forage. For us, this means we won't start regrowing irrigated pasture forage following our first graze periods until the end of May.

In light of these impacts, what are some of the strategies we should consider going forward? The basic premise of most drought management strategies is to increase our forage supply (by buying hay or other feed, irrigated early, or leasing new pasture) or reducing our forage demand (by selling livestock or weaning early). Check out our [Drought Decision Making Tool for Ranchers](#) for information on how to analyze the economics of these options!

Early weaning is a specific strategy that some fall-calving operations are considering. We recently completed a study funded by the Western Sustainable Agriculture Research and Education program (WSARE) looking at the costs and benefits of early weaning. Check out our [DROUGHT STRATEGIES: Weaning Calves Early](#) bulletin online!

As far along as our annual rangeland vegetation is today, another rain won't do us much good - other than perhaps grow some summer annual weeds that may have some grazing value. Rain would give our irrigated pastures a boost, however - at least here in the foothills. We'll see what April brings!



Cattle & Sheep Grazing School set for July 14-15, 2022!

Join UCCE Placer-Nevada and local ranchers for the first-ever California Cattle and Sheep Grazing School in Auburn, CA, on July 14-15. This 2-day intensive grazing school will cover the principles of managed grazing, electric fencing systems, and grazing planning – and will provide participants with hands-on opportunities to graze both cattle and sheep.

This year's grazing school is co-sponsored by Sierra Harvest – a limited number of scholarships for new/beginning ranchers are available. For more information on scholarships, contact me at dmacon@ucanr.edu.

Your \$175 tuition includes lunch and dinner on Day 1, breakfast and lunch on Day 2, and all course materials.

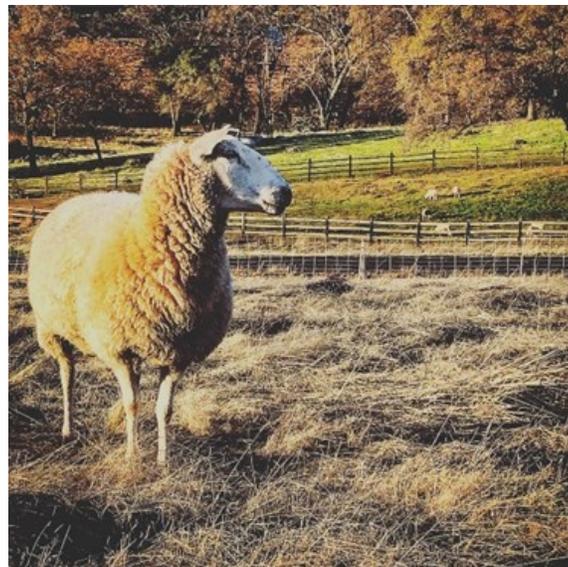
Register at <https://surveys.ucanr.edu/survey.cfm?surveynumber=37123>



Sheep and Shepherds in the 21st Century – PhotoVoice Survey

I'm collaborating with the US Sheep Experiment Station in Dubois, Idaho, on a survey project to help identify opportunities and challenges associated with raising sheep on rangelands in the 21st Century.

If you raise sheep, I invite you to participate in this study. Your participation in our survey, and submission of 1-3 photographs that best reflect your own perspective on the role of sheep and shepherds in the modern, world will help rangeland managers, ecologists, and the public better understand sheep production and sheep producers. In addition, this project will connect members of an international sheep community through photovoice, a participatory method that engages knowledge holders as experts in the creative process of photography. Your stories and photos will be displayed as a scientific or popular poster and/or publication. We will acknowledge and identify photographers who submit material and information for this project.



Please note that the use of electronic means of communication (e.g. the internet, email, text messages, faxes, and social networking) may not be secure, private, or confidential in your community. Please use care in submitting photographs; do not submit anything that might get you in trouble with authorities.

Your participation in this research should take about 10 minutes. You can access the survey at http://ucanr.edu/sheep_and_shepherds_photovoice_survey/

If you have any questions about the project, please contact me at (dmacon@ucanr.edu).

2022 Livestock Access Pass Update

In 2021, UCCE, along with the Placer, Nevada, and Yuba County Agriculture Departments, worked with ranchers in all three counties to create California's first multi-county Livestock Access Pass program. This program provides training and certification for commercial livestock producers to safely access and care for their animals in an evacuation zone. Placer, Nevada, and Yuba Counties are included in a single program, corresponding to CALFIRE's Nevada-Yuba-Placer Unit.

The program, which was developed in coordination with CALFIRE, local law enforcement, and local offices of emergency management, defines a Commercial Livestock Operator as an owner of livestock consisting of 50 + head of livestock (including in utero, e.g., 25 + bred cows), 100 + poultry or rabbits, or 50 + beehives that reside in Placer, Nevada, or Yuba County for at least a portion of the year, or a person who, through an agreement with that owner of livestock, has authority and is responsible to oversee the care and well-being of the owner's livestock. Commercially raised species of livestock include cattle, sheep, goats, hogs, poultry, rabbits, llamas, alpacas, and bees, and "commercially raised" means the livestock are raised as part of a business.

Livestock Access Passes are provided by the agricultural department in the operation's home county. Each department also maintains a database of pass holders, that will be made available to first responders in an emergency. To gain access to livestock, pass holders will notify the County Agricultural Department and/or UCCE before receiving permission to enter an evacuation zone.

Commercial ranching operations often include too many livestock to evacuate in a single trailer. Many ranchers shelter their livestock in place, but need access to feed, water, and care for their animals when it's safe.

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These passes are intended to allow commercial ranchers to enter an evacuation zone and care for livestock once first responders feel it is safe for them to do so.

Pass holders must participate in 4-hour training session to receive their first pass. This initial training includes information on the incident command system, wildfire behavior and terminology, the responsibilities of pass holders, and ranch-scale disaster planning. Once a rancher has received initial training, a one-hour refresher course is required each year.

For new passholders, an initial 4-hour training session will be held on Saturday, May 21, 2022, at the UC Sierra Foothill Research and Extension Center in Browns Valley, CA (with lunch provided by the Yuba-Sutter Farm Bureau). A one-hour refresher course for 2021 passholders will be provided virtually.

To apply for a Livestock Access Pass (even if you received one in 2021), please complete the following survey: <https://surveys.ucanr.edu/survey.cfm?surveynumber=37083> or contact Dan Macon at (530) 889-7385 or dmacon@ucanr.edu to receive a paper application.

Livestock Guardian Dog Updates

Our research and extension efforts regarding the use of livestock guardian dogs in commercial ranching operations has continued during the winter months! Here are a few updates!

Bonding LGDs with Cattle

Beginning last summer, we started working with a large-scale cattle operation in Modoc County to demonstrate techniques for bonding livestock guardian dogs with cattle. While Sam the LGD got a great start with Likely Land and Livestock, the ranch decided that with cows being shipped to foothill pastures for the winter, and with a group of heifers due to calve at the home ranch, Sam was an extra task that nobody had time to cover. In January, we introduced Sam to a new operation (7B Ranch, owned by the Baser Family) here in Placer County. Sam continues to progress – he’s definitely bonded with a group of heifers in his new environment, and he’s learned some manners from older dry cows. A couple of key lessons learned so far:

- The cattle need to bond with the LGD just as much as the LGD needs to bond with the cattle! As Sam is still essentially a 90-lb puppy, he can sometimes be overly enthusiastic about meeting new livestock. We’re finding that heifer calves respond to his exuberance by trying to run from him; cows with calves at their sides respond by chasing Sam away. The Basers have managed this by keeping a handful of heifers that have bonded with Sam with him at all times, introducing naïve cattle every several weeks.
- Sam’s presence seems to have disrupted coyote activity at the ranch, even though he doesn’t have access to the entire 300 acres at the moment. The Basers have reported seeing far fewer coyotes on the entire property since Sam’s arrival.
- Sam is friendly around people, but prefers to be with livestock. We saw this while he was in Likely – he chose the cattle when given the option between the pasture and the adjacent ranch headquarters. When we visit Sam at his new home, he’s glad to see us but quickly goes back to his cattle. These are all good signs that the bonding process is working.



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LGD Bonding Survey

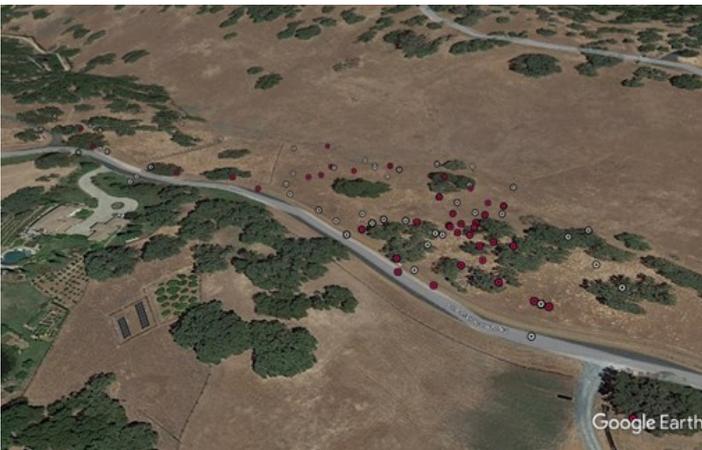
Along with my colleague Carolyn Whitesell (a UCCE Human-Wildlife Interactions Advisor in the Bay Area), I am conducting a survey of producers who are currently bonding LGDs with livestock. Successful bonding is critical to long term success with LGDs, and this survey will help us better understand successful (and unsuccessful) bonding strategies. If you're interested in participating in this survey (which will track your bonding processes for 12-18 months), please contact me at dmacon@ucanr.edu or (530) 889-7385.

LGD Tracking Collars



I've been experimenting with cost-effective, durable GPS tracking collars for tracking LGDs and livestock for several years. From a research perspective, tracking LGD behavior relative to livestock and wildlife will help us understand whether the dogs are displacing predators on the landscape, or simply disrupting their predatory behaviors. From an extension standpoint, tracking data will help demonstrate periods of greater activity and movement; most day-time demonstrations of LGD behavior involve a few half-hearted barks, followed by a nap! Tracking data will help us show what the dogs are up to when we're not around! And from a production perspective, tracking collars can help producers know if a dog has wandered away from the livestock.

Working with colleagues at the Texas A&M Livestock Guardian Dog Program, we are trying out a new tracking device that fixes locations every 15 minutes. These trackers were originally designed to track the locations of shipping containers, so they seem to be both durable and weather-tight. We're hoping they also prove to have enough battery life that we can leave these collars on



dogs for a full season without swapping batteries. The trackers do require a cellular contract and only send real-time data when the dogs are in a good cell service area; however, they also store location data onboard when the trackers are out of cell range, which means we should be able to collect data in more remote locations. We'll keep you posted!



LGD Fact Sheets

Download these LGD Fact Sheets from my website:

- [Livestock Guardian Dogs](#)
- [Selecting a Livestock Guardian Dog Puppy](#)
- [Bonding and Training your Livestock Guardian Dog Puppy](#)

Foothill Agricultural Water Use Survey

We are launching a survey of commercial agricultural operations in Placer and Nevada Counties to better understand how agricultural irrigation water is used, the types of crops it supports, and the economic and ecological impact of irrigated agriculture in the foothills. This survey will help provide an objective evaluation of agricultural water use in our counties.

This survey is being sent to raw water customers of the Nevada Irrigation District, the Placer County Water Agency, South Sutter Water District, and other producers in the two-county region. **All responses will remain confidential and anonymous.** Please complete the survey **only if you are a commercial farming or ranching operation.** Answer each question as accurately and completely as possible. The results of this survey will help inform future educational programs, local decision-making, and policy development.

If you're not a customer of any of our local water districts, or you you'd like to get a jump on participating, the survey can be completed online by going to the following link: http://ucanr.edu/foothill_ag_water_survey or by scanning this QR Code to go directly to the survey. If you would prefer a paper survey, please contact me at dmacon@ucanr.edu or (530) 889-7385.

Please note: if you lease your property to another individual or business, please work with your tenant to complete this survey. If you lease land, please coordinate with your landlord.



Can't Make the Webinar? Check out these Virtual Learning Opportunities!

Can't make it to a webinar or a field day? Wish you could remember what that speaker said during the workshop? Want to take a deeper dive into livestock guardian dogs? Or maybe you just want to see why Dan Macon and Ryan Mahoney decided they had faces made for podcasting!

Check out the [Ranching in the Sierra Foothills YouTube Channel](#),



Subscribe to our [Sheep Stuff Ewe Should Know](#) podcast (also available on Apple Podcasts and Google Podcasts!)





BIRDS (AND THEIR PRODUCTS) FROM HPAI CONTROL AREAS REQUIRE PERMITS TO ENTER CALIFORNIA



A statewide quarantine on imports has been imposed because live poultry, hatching eggs, & poultry products that may be infected or could have been exposed to Highly Pathogenic Avian Influenza (HPAI) can devastate poultry in California.

All hatching eggs, live poultry, and certain poultry products that originated or passed through an HPAI control area without obtaining an official movement permit, **WILL BE QUARANTINED** and both the shipper and receiver may be issued a violation upon arrival at the destination.

Restrictions **ONLY** apply if the origin of the movement is in a USDA or State HPAI Control Area OR if the origin premises is suspected of having HPAI.

Permits Required for:

1. Hatching or Embryonated Eggs
2. Nest-run Eggs
3. Poultry Products
4. All Live Poultry Including:

- | | |
|---|--|
| <ul style="list-style-type: none"> • All chickens • Turkeys • Turkeys • Pheasants • Peafowl • Guinea fowl • Quail • Ducks • Geese • Swans • Gallinules | <ul style="list-style-type: none"> • Doves • Pigeons • Grouse • Partridges • Francolin • Tinamou • Ostriches & other ratites (including but not limited to the rhea, emu & cassowary) |
|---|--|

Exempt



Processed poultry products (including eggs for consumption) going to licensed distribution or retail facilities that **do not have poultry on property or on adjacent property.**



What is a Control Area?

A control area is a geographic region designed to contain a foreign animal disease (FAD) outbreak such as HPAI. The control area consists of a central infected zone, surrounded by one or more buffer zones.

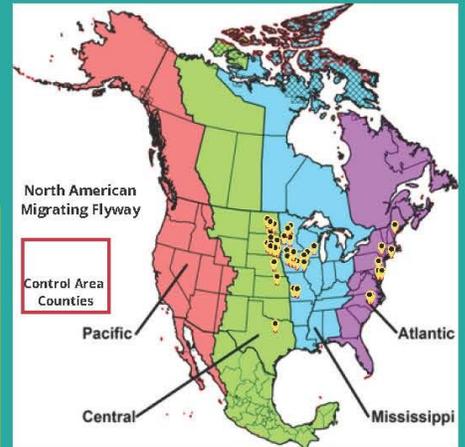


As of April 4, 2022, USDA APHIS has detected HPAI in domestic flocks in the following states:

- | | |
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| <ul style="list-style-type: none"> • Connecticut • Delaware • Illinois • Indiana • Iowa • Kansas • Kentucky • Maine • Maryland • Massachusetts • Michigan • Minnesota | <ul style="list-style-type: none"> • Missouri • Nebraska • New Hampshire • New York • North Carolina • North Dakota • Ohio • South Dakota • Texas • Virginia • Wisconsin • Wyoming |
|---|---|

Current counties with control areas:

- Delaware: Kent, New Castle
- Iowa: Buena Vista, Cherokee, Franklin, Guthrie, Hamilton, Humboldt, Osceola, Sac, Taylor
- Kansas: Dickinson
- Maine: Cumberland
- Maryland: Cecil
- Minnesota: Kandiyohi, Lac Qui Parle, Meeker, Morrison, Stearns
- Missouri: Jasper, Lawrence
- Nebraska: Butler
- New York: Monroe, Suffolk
- North Carolina: Johnston, Wayne
- North Dakota: Dickey, Kidder, Lamoure
- South Dakota: Beadle, Bon Homme, Brule, Charles Mix, Clark, Edmunds, Hanson, Hutchinson, Jerauld, Kingsbury, Lake, McPherson, Spink
- Texas: Erath
- Wisconsin: Jefferson



For the latest updates from USDA APHIS of 2022 Detections of Highly Pathogenic Avian Influenza



Questions and requests for animal movement permits e-mail the Animal Health Branch Permit Line at SFSPERMITS@CDFA.CA.GOV.



To report sick or dead birds, call the Sick Bird Hotline at (866) 922-2473.



Animal Health Branch-CDFA



@animalhealthbranch_cdfa



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[@flyingmule](#) (*Be sure to check out my production-focused IGTV channel!*)



[FoothillSustainableRanching](#)



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How do you prefer to get information from your local

UC COOPERATIVE EXTENSION

LIVESTOCK and NATURAL RESOURCES Program?

Please take this short survey to help me better meet your information needs!

<http://ucanr.edu/livestockinfosurvey>

For a hard copy of the survey:

Please call (530) 889-7385 or email me at dmacon@ucanr.edu.

Thank you!

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