



Ranch Roundup

Greetings from the Farm Advisor,

It has been a busy summer here in the office. Our partnership with the Farm Bureau, Modoc National Forest, and Modoc County has put over 30 people to work across the county collecting data, preparing timber sales, assisting the public, and more. Modoc's first ever Master Food Preserver class will be graduating later this month. They will have a booth at the Modoc District Fair and look forward to talking to you about all types of food preservation. Modoc Harvest has helped to fund our Master Food Preserver class but has also partnered with UCCE to conduct agritourism workshops in Modoc over the next two years. Our first workshop will be September 25th at the four seasons building at the Fairgrounds.

We continue to work on drought and fire issues in Modoc County and beyond but this year we also collected data to support financial help for people affected by grasshoppers. The Farm Service Agency (FSA) has resources for farmers and ranchers affected by drought and grasshoppers. Keep good records of your losses and financial support may be available. We are also continuing to work on the Big Valley Groundwater Sustainability Plan and more broadly on resources for domestic and agricultural water supplies. There will be a groundwater and watershed health workshop at the Bieber Veterans Hall this Saturday, August 14 from 5-8pm. An agenda is on Page 5.

Thanks for reading and check out the next pages for research updates and more information on all the upcoming happenings. We also publish a blog every Wednesday that can be found at devilsgardenucce.org.

Sincerely,

Laura K. Snell



Find us on Facebook:

Devil's Garden Research and
Education—UCCE

UCCE RESEARCH UPDATE

This past year we conducted research and outreach on forest and range health, wild horse interactions with wildlife, dewormer effectiveness, carcass composting and more. Several updates and blogs are available on our website, devilsgardenucce.org and you can also follow along on our Facebook page. Here is a short update of a couple projects.

Livestock Mortality Composting

In partnership with Chico State University, we have now composted four cows at our research site at the Tulelake Research and Education Center (IREC). This study aims to change current state policies that make livestock mortality composting illegal in California. Composting can be used on-farm to decrease predator interactions at bone piles, and provide safe, economically disposal of materials from small-scale butchering operations. We are currently developing Best Management Practices (BMPs) to be accepted into policy for on-farm composting. At the end of July we were one of the research stops at the IREC field day showcasing what we have learned and answering questions.

Vacant Allotment Range Monitoring

We collected a third year of data on the Emerson allotment and Warner Mountain Wilderness, assessing vacant allotment conditions and concerns. The Modoc National Forest has some of the lowest numbers of vacant allotments of any forest in the country but these allotments are still sought after for grazing and grass banks. Grazing is also an important tool for decreasing fine fuels which can help to decrease catastrophic wildfire.

Livestock Guardian Dogs and Cattle

Livestock Guardian dogs (LGD) can be used with a variety of livestock to protect against an assortment of predators. In other areas of the U.S. and the world, where large predators are more common, LGD have been used successfully for decades but in California, cattle producers have less experience using LGD. We are studying the process of bonding LGD successfully with cattle and researching how they may best be used within our current production system. Our first LGD has been placed in Likely with weaned calves and is doing great. We look forward to seeing how this project goes. Picture, right.

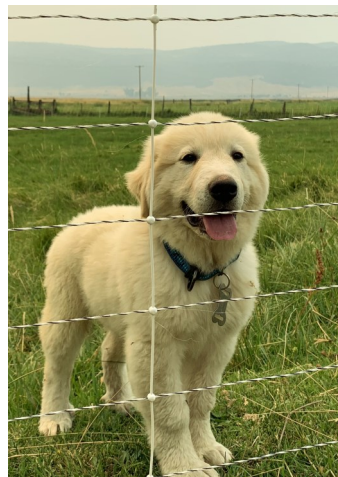
Big Valley Groundwater Research

In partnership with the North Cal-Neva RC&D and Modoc County, UCCE Modoc has contributed significantly to data collection supporting the **Big Valley Groundwater Sustainability Plan (GSP)** development. The unique characteristics of Big Valley provide opportunities for groundwater sustainability and longevity not available in other parts of the state, and the research we continue to collect aims to provide options for compliance that are not the typical increased taxes and pumping restrictions adopted by other basins. More information about the GSP at bigvalleygsp.org.

The next Big Valley GSP advisory committee meeting will be held on September 9th, in Adin at the community center. We will also be hosting a Groundwater and Watershed Health Workshop at the Veterans' Memorial Hall in Bieber on Saturday August 14, from 5-8pm. Dinner will be provided.

We continue to monitor groundwater levels at the five well clusters in Big Valley monthly. With over a years worth of data now, trends in pumping and recharge for the basin are becoming more clear. We are also monitoring surface water quality. The stream gauging station planned for installation on the Pit River above where it flows into the basin is getting traction and we now aiming to install it in September.

This summer we brought on an intern to assist with groundwater programs in Big Valley. Currently she has been working on the Lassen Modoc Flood Control Water Control District's Voluntary Well Metering program which was identified in the GSP as being both a way to increase stakeholder involvement



in the Plan, and to help refine the water budget. This program provides both domestic and agricultural groundwater users with flow meters for their wells. Contact us for more information. As the drought continues, we have also been compiling resources and information to assist those struggling with water supply shortages. A new blog on water resources can be

found at devilsgardenucce.org.

FROM THE SUMMER AG MEETING

On June 29th, the Modoc County Cattlemen and UC-CE Modoc hosted a summer ag meeting. McArthur Farm Supply sponsored a great meal and American Ag Credit sponsored the beverages. Here are a couple reports from the meeting. More can be found on our website, <https://www.devilsgardenucce.org/post/2021-modoc-county-cattlemen-s-field-day>

Alternative Feedstuffs During Drought

With California entering a drought and the ever-increasing cost of hay, as a producer you may be looking into options of alternative feedstuffs that are more readily available and cost effective for your operation.

Additionally, cattle have different energy requirements in order to meet body maintenance or growth depending on the phase of production as seen in the graph to the right. UC Livestock and Range Advisor for Shasta/Trinity counties, Larry Forero, gave an interesting presentation on different feed options and how to go about creating an affordable complete feed for cattle.

One common choice of an alternative feed is Almond Hulls. Almond hulls are a byproduct of the almond industry which is one of the largest agricultural sectors in California. Almond hulls are generally a cheaper source of feed supplement compared to other options but can have a much lower nutrient value. Almond feeds can be named differently depending on the amount of crude fiber and ash, which does not make all feeds created equally in terms of nutritional value.

Another option of a feed source is rice straw. Rice straw is a byproduct of the rice grain industry in Northern California which makes it great potential alternative feed source for local producers. Rice straw comes with some potential challenges when using it as a feed source. It has to be baled within 10 days of harvest, it has low digestibility, low protein and is high in oxalates. With proper supplementation, rice straw could be an effective replacement for forage in a ration.

If choosing to supplement with an alternative feed source, it is important to test them for nutritional value and combine them with other feed sources to make sure the complete nutritional needs of the cattle are met. Make sure to contact your local Farm Advisor if you are interested in creating a ration with alternative feedstuffs or want more information.

Cattle Deworming Project

Larry Forero, Laura Snell and Gaby Maier, UC Cooperative Extension

Over the last couple months, livestock advisors across Northern California have been conducting fecal samples to look at internal parasite loading and the effectiveness of dewormers. Internal parasites are roundworms, tapeworms, flukes, coccidia and other protozoa. In order to control internal parasites, you want to interrupt their life cycle. This can be accomplished by:

- Creating unfavorable climatic conditions like when winter sets in or dry rangeland, removing the warm, moist environment that they thrive in
- Development of resistance in cattle, especially older cattle
- Management of cattle to prevent their ingestion of infective organisms by rotating cattle through pastures before parasites are at the stage to infect cattle again (rotating every 4-6 weeks)
- Destruction of intermediate hosts
- Therapeutic chemical treatment of cattle

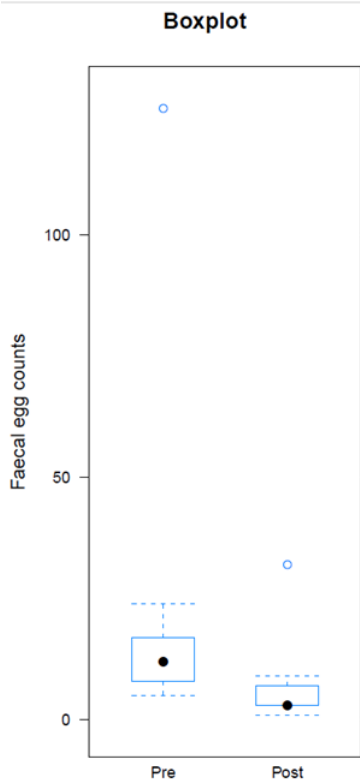
Some key points to remember are that cattle suffering nutrition stress and disease are likely less resistant to parasites and that 10% of the herd sheds 90% of the parasites. Management of individual cattle and fecal testing of replacement heifers can be an effective parasite management strategy.

So far we have sampled approximately 25 groups of cattle from irrigated pasture and dry land operations. About 50g fecal was collected one day and then animals were dewormed. A second sample was taken two weeks later to evaluate different chemical dewormers.

Some general rules about sampling results, 150 eggs per gram (epg) likely should be treated. Treatment should result in at least 90% reduction in egg count. Less than that could indicate resistance. However worm counts don't tell the whole story, species identification is important. For example, 700 epg *Trichostrongylus* probably is not an issue, whereas *Ostertagia* at same levels is a problem (Coles, G.C., et al. 1992 World Association for Advancement of Veterinary Parasitology Paper).

Samples from Modoc County have generally been low in worm counts. Region wide, this isn't necessarily the case. Pretreatment ranges have been from 35- over 600 epg. Continued page 4.

DEWORMER STUDY



Continued from page 3—The graph on the left shows a herd with generally low worm counts but one individual with a very high count. Even after treatment, this animal still had high levels of worms. This case is an example of the principle that few cattle host a majority of the parasites and continue to spread them to the rest of the herd. Lastly, another take away from this herd and others is that 90% treatment from chemical dewormers is not being widely

seen. This count indicates that we have a resistance to dewormers in cattle in the region. This study will continue with final results to be shared in 2022.

DG COLT CHALLENGE

On Saturday, June 19th, we hosted the 2nd annual Devil's Garden Colt Challenge at the Alturas Livestock Showgrounds. Twenty of the thirty-two 2021 Colt Challenge youth trainers came from across Northern California to show off the progress they have made gentling their Devil's Garden wild horses. With over \$3,000 in cash and prizes for top scoring participants, the competition was fierce, and the stakes were high.

This year, youth participants located in counties from Modoc to Monterey took home a Devil's Garden weanling from the 2020 gather. If they chose to compete, participants had just under six-months to prepare their colt for the Showmanship, Halter, and Obstacle Course classes at the Challenge. Carlie Chandler, a Senior from El Dorado county, was our first-place Showmanship winner with her horse "Bentley". Travis Kuendig and his horse "Rusty" took home first place in the Obstacle class with the only perfect score of the day. Our 2021 Overall Colt Challenge winner and receiver of \$1,000 cash prize was Kaitlyn Kuendig and her horse "Casper." This is Kaitlyn's second year in a row taking home first in the Overall category with a Devil's Garden colt. Earlier this year, the trainers also had the option of competing in a video challenge, where they submitted a progress video with their horses to YouTube. This year's Video winner was Goldie Christofferson, and her horse "Bella."

The 2021 wild horse weanlings gathered starting September 1st, will be used for the 2022 Devil's Garden Colt Challenge program which is expanding eligibility to all California 4-H and FFA youth. Annual gathers are conducted for the health of the ecosystem and health of the horses as populations are significantly over the appropriate management level of 206-402 horses. We are very excited to continue to grow the program with the help of our next generation of horse trainers. Applications for the 2022 Devil's Garden Colt Challenge open on September 1st, 2021 and can be found online at <https://ucanr.edu/survey/survey.cfm?surveynumber=35282>.

You can find more information on the 2022 Devil's Garden Colt Challenge at <https://www.devilsgardenucce.org/post/colt-challenge-faq>. Make sure to stay up to date with new information regarding the Colt Challenge through our Facebook page, Devil's Garden Research and Education.

DEVIL'S GARDEN
Colt Challenge

Applications open September 1st at
<https://ucanr.edu/survey/survey.cfm?surveynumber=35282>

Questions? Check out our FAQ page at
<https://www.devilsgardenucce.org/post/colt-challenge-faq>

LIVESTOCK PREDATOR INTERACTIONS

3 Steps When Finding a Livestock Predator Kill

By Tracy Schohr and Laura Snell

Predation is a growing concern across rural counties with mountain lions, bears, coyotes, and now wolves on the landscape. When you encounter a livestock kill at your home ranch, on leased pasture or out on a wide-open allotment, it is important to take critical steps to preserve the site so a formal investigation can take place.

1. If you suspect predation, because you've seen sign of a recent predator, call:

- Kent Laudon, Wolf Specialist, CA Department of Fish and Wildlife* - 530-215-0751

*For questions on wolves and wolf predation

- Bill Watkins, non-lethal Specialist Wildlife Services - 530-616-5593
- Mike Williams, Wildlife Services (Modoc)* – 530-233-6400 (*Newly hired please call the Modoc County Farm Advisor for updated contact information)

If you can't get a hold of them, try calling the following folks:

- Local Game Warden: Brian Gallagher, Lieutenant (Modoc) - 530-233-5104
- Wildlife Services State Office - 916-979-2675
- Derek Milsap, North District Supervisor, Wildlife Services - 530-336-5623
- Local CDFW Biologist: Richard Shinn, 530-233-3581 or Richard.Shinn@wildlife.ca.gov

2. When initially inspecting the site, follow the steps below to preserve the site:

- Minimize your own impacts. Watch where you step and do not step on any signs (e.g. tracks). The fewer steps you make the better!
- If you happen to discover tracks while initially inspecting the carcass, cover them with a can, pot, bucket, etc. to protect them.
- Take a picture of carcass and surrounding areas.
- Mark location with camera picture, flagging, or GPS - this can be helpful for investigators to find the site.
- Protect the scene by restricting people, dogs, and livestock from disturbing evidence.
- The carcass should be protected by covering with a tarp to avoid further feeding disturbance.

CONTINUED

3. Officially report incident to the Department of Fish and Wildlife:

Wildlife Incident Reporting System at <https://apps.wildlife.ca.gov/wir>. This will provide a formal record of the incident. Such reports may result in the issuance of a depredation permit (permit to lethally take animals creating property damage) for designated species requiring a depredation permit by California Codes and Regulations (this does NOT include wolves). This report may also support depredation compensation in some circumstances.

This information is part of a fact sheet that can be found on our website, for more information visit: <https://www.devilsgardenucce.org/post/3-steps-when-finding-a-livestock-predator-kill>

GROUNDWATER AND WATERSHED HEALTH

Groundwater and Watershed Health Workshop

August 14, 2021 5-8pm
Bieber Veterans Memorial Hall
657-575 Bridge Street Bieber, CA 96009

Agenda

5:00pm Welcome

5:15pm Big Valley Groundwater Sustainability Plan

5:35pm Pit River RCD Forest Health Projects

6:00pm Irrigated Lands Regulatory Program

6:10pm California Department of Water Resources
AEM Surveys

6:30pm Dinner provided by GEI Consultants and UC
Cooperative Extension

Breakout Stations for Continued Learning and
Conversations



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FUTURE EVENTS OF INTEREST

Groundwater and Watershed Health Workshop

August 14, 2021 5pm Bieber Veterans Hall

Modoc District Fair

August 26-29, 2021 Cedarville Fairgrounds

Intermountain Fair

September 2-6, 2021 McArthur Fairgrounds

Tulelake-Butte Valley Fair

September 9-12, 2021 Tulelake Fairgrounds

Agritourism Workshop “Expanding direct-to-consumer sales through online sales/on-farm pickup, CSAs, farm direct delivery and commercial or contracted shipping”

September 25, 2021 Four Seasons Building Cedarville Fairgrounds