



Ranch Roundup

Greetings from the Farm Advisor,

2017 was a busy and productive year tackling research projects from irrigated lands to wild horses, range condition to juniper treatments. UCCE Modoc also hosted or co-hosted workshops on prescribed fire, food preservation, livestock, and cropping systems. We partnered with over 25 local groups, agencies, non-profits and entities to develop research projects and improve the sustainability of agriculture production and livelihood in Modoc County.

UCCE Modoc went through a transition with the passing of Steve Orloff last fall and my transition into the Modoc County Director roll. I will continue to work towards performing all the new rolls that county director brings while not affecting the great research and programs we have in Modoc County.

This next year we hope to start new projects studying groundwater in Big Valley and continuing important existing projects like the irrigated lands research and long term range trend studies. We will continue to work with partners utilizing private and public lands and aim to hold more workshops on upcoming issues.

Join Tom Getts and I, February 28 for our winter ag meeting at the Brass Rail and as always feel free to stop by or contact our office with questions and concerns.

Sincerely,

Laura Snell

Telling the agriculture story and spreading good science: Livestock consume 6.0 billion metric tons of dry matter per year. Approximately 20% of the feed livestock consume is in direct competition with human food. Another 30% is accounted for in crop residues and by-products that otherwise would increase the environmental impact of human food production. The largest portion of animal grazing (about 50%) is in forages that do not compete directly with humans. Much of this livestock production occurs on land that is unsuitable for other crops – converting otherwise non-productive land into protein for human consumption.

UCCE RESEARCH UPDATE

The 2017 field season was a busy one in Modoc County and we aim to continue to grow in 2018. We employed five staff members through the summer to accomplish projects on private and public land throughout the county. Here is a review of some of our projects. If you would like any additional information or have suggestions for further research, please feel free to call me at 530-233-6400 or email lksnell@ucanr.edu

Landscape Scale Land Treatment Database with Drone Imaging

Through grants from the Russell L. Rustici Endowment and UCANR, we are attempting to evaluate land treatments on a landscape scale using spectral imaging. In Modoc County we are applying this research to the juniper treatments in the northwestern corner of the county on private and public land. We ran our first drone flights this summer and will continue this work in 2018.

Water Quality Testing North Coast Water Board

In partnership with USFS Region 5, water samples were taken within the North Coast region of the Modoc National Forest in 2017 to determine the affects of land use on water quality indicators. Results were similar to past water quality monitoring on public lands in California where livestock grazing occurs. No quality standards were met or surpassed and most were at negligible levels.

Post-Fire Grazing

2017 was the second field season of this project and in total the group has surveyed 181 sites and identified over 225 plant species in Modoc and Lassen Counties. Although there is still a huge amount of data to get through, it appears that resting fire affected areas from livestock grazing directly after fire may not be necessary for the area to recover. In places with higher resistance to annual grass invasion and resilience to disturbance, the cover of perennial grass, cheatgrass, and bare ground are similar over time in both rested and not rested scenarios. Site specific characteristics like soil type and moisture, slope, fire intensity, and others may be a much better indicator of whether to graze livestock directly after fire then blanket guidelines for rest. This research has been influential in range management suggestions in Modoc County after the 2017 fire season.

Bear Occupancy Study in Big Valley

Partnering with the Integral Ecology Research Center, UCCE Modoc was able to provide support for a bear occupancy study in the big valley area near Adin. The study involved identifying potential bear habitat areas and installing trail cameras to conduct an occupancy study. Bear occupancy studies will continue in Modoc County through 2018.

Irrigated Lands Research

Modoc County is part of a statewide project to assess irrigated land management and productivity throughout California. Several study sites were developed during the 2017 field season and data will be collected through 2018.

Wild Horse Monitoring

2017 was the third field season studying the affects of wild horses on springs on the Devil's Garden Plateau. This winter and into 2018, all the data will be gathered with the goal of publishing results by the end of the year. Pictures and preliminary results have been presented across the country and used in the House committee on natural resources. An economic study paid for by the Modoc County Cattlemen, Permittees, Modoc County and the Modoc County Farm Bureau; has recently been completed on the impact of wild horses on the Modoc County economy. The spring 2018 estimate of wild horses on the Devil's Garden is nearly 4000 animals.

This is just a summary of projects, look for new publications on juniper treatments, range monitoring, and long term range trends in Modoc County soon.

Sean Hogan from UCANR lifts a drone off the ground to prepare for a flight over juniper treatments in northwestern Modoc County.



NEWS FROM THE MODOC AG DEPARTMENT

Welcoming our new interim County Ag Commissioner, Gary Fensler! Gary has been working in Modoc County for over 11 years, most recently as the deputy ag commissioner located in Tulelake. He takes over for Joe Moreo who served as Modoc County's ag commissioner until his retirement at the end of 2017. Gary was born and raised in Tulelake where his roots run deep, both sides of his grandparents were some of the first World War I homesteaders in the area. Gary is open to any new ideas or suggestions, so stop by and say Hi.

Alturas Ag. Chemical Permits

Permits can be renewed at the Modoc County Ag. Office for the 2018 growing season or at several agriculture meetings throughout the county this spring. All growers applying chemical themselves need to have a Private Applicators License. All growers employee's need to be trained one time every year for chemical applications and records kept for 2 years. If unsupervised, employees need to have a Private Applicators License. Permits are needed for any seed treatments, organic treatments, and field treatments. If you apply chemicals YOURSELF you need to turn in pesticide use reports to the Modoc County Ag. Dept. All restricted material need to have an NOI submitted 24 hours prior to application.

Organic Certification and Farmer's Market Registration

All organic and certified farmers market growers need to be registered with the CDFA and Modoc County. The Modoc County Ag. Dept will certify all weights and measures for sales.

Other Updates

All crops for seed or seed multiplication for sale need to be registered with the state of California and inspected by Modoc County.

Zinc Phosphide Meeting - February 7, 2018 at 10 am. at the Cal Pines lodge.

The **Newell Migrant Center** (Farm Labor Camp) will be open March 15, 2018. Call (530) 640-0152 for eligibility requirements.

MODOC FARM EXPO

Support the Modoc Heritage Foundation by attending the 2018 Modoc Ranch, Farm and Garden Expo. The Expo will be held at the **Modoc District Fairgrounds on March 9, 2018.**

There will be speakers from a variety of agricultural entities. Keep an eye out for a final agenda in late February.

Come Join Us and support the Modoc Heritage Foundation. Look for more information coming in the Modoc Record and online at www.modocheritagefoundation.org



A big **Thank You** to Janyne Little, Kyle Martin, and Dustin Hixon for a successful field season working on the post-fire grazing project. Here they are in the Blue Fire scar in the south warner mountains.

EMERGING WEED-MYRTLE SPURGE - BY TOM GETTS

I want to bring to your attention a weed which has just started to gain a foothold down in Lassen county. The common name of the weed is myrtle spurge, or if you prefer your plant name using the dead language, *Euphorbia Myrsinites*. Earlier this year a resident of Stone's Landing outside of Eagle Lake noticed one of his neighbor's ornamental plants spreading out of the beds it was planted in. Pockets of the plants were strewn throughout the neighborhood, along roadsides, and even creeping into BLM sagebrush land. The weed specialist from the BLM Eagle Lake field office identified the plant as myrtle spurge, which is an A rated noxious weed in Colorado. He quickly contacted the Lassen County Ag Department, who sent one of their biologists up to take a sample. The sample was sent down to the California Department of Food and Agriculture, or CDFA, where the identification was confirmed. Indeed, myrtle spurge was growing.

Myrtle spurge is a low growing perennial plant with fleshy leaves. The vegetation is typically a greenish blue color with leaves in an alternate formation. Another common name for it is "donkey tail." The flowers are yellow, and it was in full bloom when I stopped by to check it out in the beginning of May. In all honesty, it is a beautiful drought tolerant plant, and it is a bummer it is invasive. In areas of Colorado and Utah, the plant has really taken off, forming monocultures crowding out desirable plants that support wildlife and feed livestock. It is a creeping perennial, which can spread by roots, or seed which it can launch up to 15 feet when ripe. Be careful handling it, as the sap is milky white, and can cause contact dermatitis. Seriously, use gloves, and do not get the sap on exposed skin. Not everyone is sensitive, but I wouldn't take the risk to find out!

Now is the time to act while the population is small, so it doesn't get a permanent foothold here in North Easter California. Early detection rapid response is the way to handle weeds, before the population explodes! If you think you have seen this plant, we want to know about it! Even if it is in your garden, it could escape and threaten our rangelands and natural ecosystems.

Initially the CDFA listed myrtle spurge as a quarantine species, and currently it has been listed as an A list species. A list species are legally required to be eradicated from the state because of the potential economic and ecological harm imposed by this species.

More information can be found from the CDFA's website at: <http://blogs.cdfa.ca.gov/Section3162/?p=3849>

Fall and spring are good times to target myrtle spurge for control. As myrtle spurge is a creeping perennial weed, controlling the roots are important. Grubbing or digging can be effective to control myrtle spurge with CONSTANT VIGILANCE. Multiple years of digging up the plants (getting at least 4 inches of the root below the soil) can reduce the population. It is important to dig them up before they set seed. As this species is deemed for eradication, chemical control is another option. Literature from other states indicate glyphosate or 2,4-D* or 2,4-D + dicamba* can be effective chemicals for control. Applications should be made in the fall for greatest effectiveness. Spring applications can also be effective. Regardless what control method is used, a single control effort will unlikely be successful. Multiple diggings or herbicide applications will be needed over multiple growing seasons to ensure eradication. These herbicides do not have soil residual activity, so scouting will be necessary to prevent new seedlings from becoming established each year.

If you have this plant and would like to report a location or get more information, please feel free to contact me at Tom Getts, Office: 530-251-2650 Email: tjgetts@ucanr.edu. Help the county out, so we can get rid of myrtle spurge, before it spreads like white-top or Scotch thistle.



*2,4-D and Dicamba are restricted use pesticides in the state of California. Use of restricted material requires an applicators license and permit from the Agricultural Commissioner's department. Always read and follow the entire label when using pesticides.

UCCE WINTER AG MEETINGS

UCCE Modoc and UCCE Lassen will be hosting Winter Ag Meetings in each county. The meetings are sponsored by American Ag Credit and Helena Chemical and will cover a variety of topics including conventional and organic production, new research from the Intermountain Research and Extension Center in Tulelake, pest and weed invasion, and others. Lunch is provided at both meetings.

March 1, 2018 in Lassen County

Elk's Lodge, 400 Main St, Susanville, CA 96130

RSVP to Tom Getts at 530-251-2650

February 28, 2018 in Modoc County

12:30 pm at the Brass Rail, 395 Lake View Dr, Alturas, CA 96101

We will start with lunch and speakers will start at 1:00pm. Discussion and wrap-up at 4:00.

RSVP to Cheryl Kunert at 530-233-6400

Alturas Draft Agenda

Irrigation Efficiency

Integrating amendments and cover crops into organic crop rotations

What there is to know about Scotch thistle in North Eastern California

The importance of humates and humic Acid

Fertilizer Efficiencies

Modoc Ag Department Programs

LIVESTOCK AND CLIMATE CHANGE

In Mid-December, the University of California and VOX Media produced a video on how reducing and even eliminating meat consumption would drastically decrease greenhouse gas emissions. This video that has now been viewed over half-a-million times claims that if we reduce meat consumption we could offset emissions for a billion cars by 2050. Many in the livestock and agriculture industries saw this as a direct threat to their business and livelihood because the data and the way it was presented was flawed at best.

Glenda Humiston, Vice President and leader of the Agriculture and Natural Resource Division of the University of California, sent out an email January 4th outlining many of the mistakes in the video.

"It is true that livestock emit methane...however, U.S. animal agriculture is much efficient than in other parts of the world. In the U.S. livestock are responsible for 3.8 percent of GHG emissions while transportation accounts for 26.4 percent, according to U.S. Environmental Protection Agency data. In California, 5.4 percent of GHG emissions are attributed to livestock and 37 percent to transportation, according to the California Air Resources Board."

She goes on to say that livestock fit into the larger food system picture as a majority of the world's agricultural land is grazing land and unsuitable for crop production. Livestock provide ecosystem services and are a high-quality protein source.

Frank Mitloehner, UC Air Quality Extension Specialist, has been combating misleading data on livestock's impact on GHG's for years. "My goal is to clear the air on cattle's impact on climate change and air quality. I encourage others to share the good news of U.S. agriculture and the environment with others, as well"

BQAT PROGRAM

The online BQA Transportation (BQAT) Training and Certification Program launched this past November. There are two courses available: Farmer/Rancher and Professional. The Farmer/Rancher Course focuses on stock trailer transportation and equipment, it is designed with the everyday cattle and dairy producer in mind. The Professional Course is designed for cattle haulers using cattle pots and hauling cattle longer distances. Individuals that complete the Professional Course will receive a certification card and glove box handbook in the mail upon course completion. This was a significant hole in BQA training that producers asked for more training.

The online system will work just like the BQA Online Training, but will have its own database, users who have created a log in and password for the BQA Online Training will have to create a new log in and password. Access to the online training is now available at <https://bqatransportation.beelearningcenter.org/>.

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COOPERATIVE EXTENSION

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FUTURE EVENTS OF INTEREST

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February 7 Zinc Phosphate Meeting

10:00 Cal Pines Lodge

February 28 Winter Ag Meeting

12:30 Brass Rail Alturas, CA

March 1 Winter Ag Meeting Susanville, CA

March 9 Modoc Farm and Garden Expo Cedarville, CA

June 12-16 Junior Livestock Show, Alturas, CA