



Ranch Roundup

WATER, WATER, EVERYWHERE 2017 IS GOING TO BE A BUSY ONE

Greetings from the Farm Advisor,

I hope your 2017 is off to a great start! I am looking forward to a busy and productive year. UCCE Modoc will be continuing several projects in 2017 including monitoring horses and long term range trends on the Devil's Garden, meadow monitoring in the Warner Mountains, treating Medusahead and cheatgrass on private lands, and completing the post-fire grazing project. We also plan to start new research on irrigated pastures, analyze water samples for compliance with new North Coast water restrictions, and help land managers know their options with wolves coming to Modoc County. A special thanks to the Modoc Cattlemen's Association for funding a juniper treatment project. We are looking at cost and efficacy of treatments and forage benefits to treating different stages of juniper encroachment.

With all the rain and snow this winter, I am optimistic for a plentiful forage year and a replenishing ground water table after years of drought. I might even take my kayak out on Goose Lake and Upper Alkali Lake. As always, if you have any questions or just feel like stopping in to chat, I can be reached at 530-233-6400 or 202 W. 4th St. Alturas.

Cheers,

Laura Kay Snell

I had the opportunity to hike to Everest Base Camp in January. Yaks are used in the Himalayas to carry heavy loads up the mountain and also provide milk, meat, and wool.



WARNER MOUNTAIN MEADOW MONITORING

The Rangeland Watershed Lab at UC Davis and the US Forest Service have been monitoring meadows on public rangelands across California since 1999. David Lile (UCCE Lassen Co) and I have been re-reading plots on an annual basis on key sites in the Warner Mountain Ranger District and Lassen National Forest. We have collected production data, streambank alteration, stubble height, and cow pat data. This research project aims to produce long term trend data for meadow conditions, grazing, and riparian health as public land managers have decreased the number of cattle on permits in California 49% from 1980 to 2010. This study tests the current riparian standards and guidelines and provides support for grazing as an essential management tool. Livestock are essential to decreasing fuels and creating heterogeneity in the landscape.

This data is important for permit renewals, forest plan revision, and other federal reports as it is completed by an independent source (UCCE) and tests current protocols. We would like to continue collecting this data and expand the study to other allotments this coming year.

Results from the statewide meadow monitoring project will be published in a peer reviewed journal in the coming months and a northeastern California focused short paper will be available this spring.

This is the kind of work that can be done with permittee grazing credits on the Warner Mountain allotments. The grazing fee credit program is one success story from the Modoc Washoe Experimental Stewardship Program (MWESP). The MWESP is one of the last ESPs still running in the United States and provides a unique opportunity for research, range improvements, and collaboration between federal, state, and local agencies as well as private land managers.

Some of the other projects we hope to accomplish in the Warner's include identifying experimental projects on targeted grazing and use of prescribed fire as well as identifying range improvement projects. We also currently have post-fire grazing research taking place.



PERMITTEE MONITORING TRAINING

Coming soon to a allotment near you, permittee monitoring training. Have you ever wondered what protocols the Modoc National Forest and Bureau of Land Management use to determine when livestock need to head to a new pasture or head home? Do you have interest in collecting some of your own monitoring data on your permittee allotment or private ground? This spring, UCCE Modoc will partner with the Modoc Washoe Experimental Stewardship Program, Modoc National Forest, and Bureau of Land Management Applegate Field office to host a permittee monitoring training. We will look especially at riparian and streambank monitoring as well as woody species browsing and forage stubble height. This will be an opportunity to ask questions as well as put your new skills to practice. As always, cameras with GPS locators are available for check out at the Farm Advisor's office for photo point monitoring. Remember to keep records on when and where you took pictures so monitoring points can be replicated. More information will be available soon on the training.

ROUNDUP READY ALFALFA: MINIMIZING INJURY WHILE MAXIMIZING WEED CONTROL - BY TOM GETTS

The time of year is approaching to get out and control your weed populations, and I wanted to highlight an ongoing project involving Roundup Ready (RR) Alfalfa. Below is a summary of a longer document posted on the California Alfalfa Symposium website (<http://alfalfa.ucdavis.edu/+symposium/2016/index.aspx>).

Roundup Ready Alfalfa has been a useful tool for difficult-to-control weeds, and has provided application timing flexibility. In particular, perennial species such as Canada thistle, quackgrass and dandelion can be effectively controlled in a RR system. Likewise, many conventional alfalfa herbicides can only be applied while the alfalfa is dormant. However, Roundup is not a panacea for a variety of reasons. Roundup has no soil residual activity, so only emerged weeds will be controlled at time of application. Tank mixes of soil residual herbicides with Roundup can be a good way to address this weakness. Likewise, increasing instances of Roundup-resistant weeds throughout the state threaten its continued effectiveness in some areas. Utilizing multiple modes of actions and weed management techniques is always recommended to reduce the chance of herbicide resistance developing in your field. Cont. page 4

MODOC FARM EXPO

Support the Modoc Heritage Foundation in attending the 2017 Modoc Ranch, Farm and Garden Expo. The Expo will be held at the **Modoc District Fairgrounds on March 10 from 9-5**. Registration and lunch are free but a RSVP is required for lunch and donations are accepted to support the Modoc Heritage Foundation. RSVP to modocheritagefoundation@gmail.com or calling 775-232-6255.

There will be speakers from a variety of businesses talking about everything from irrigation to seeding, to federal programs. A final agenda should be available in late February.

UCCE Modoc will be participating and talking about Juniper treatments and current and future research. Tom Getts, Modoc County Weed Advisor and myself will both present on different aspects of juniper treatments.

There are door prizes throughout the day and the grand prize is a one week tractor rental courtesy of Pape Equipment.

Come Join Us and look for more information coming in the Modoc Record.

NEWS FROM THE MODOC AG DEPARTMENT

Tulelake Growers Meeting March 8th. Registration at 7:30, starts at 8:00 am. Tulelake Fairgrounds. **Cedarville Growers** - Zinc Phosphide Meeting March 10th - (ask Joe about details.)

Ag. Chemical & Permitting: 2017 Permitting has started. All growers need permits before applying chemicals to fields. That including 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/Fair Markets: Reminder all producers need to register with CDFA and make contact with the Ag. Dept. Follow all weights and measure laws.

Zinc Phosphide: Follow all federal, state, and county label laws. Have permits, labels, licenses, and safety equipment at all application sites. Submit NOI 24 hours prior to application. Do all pesticide use reports.

Cattle producers please give the Ag. Dept. a week notice to do your cattle scales. They need to be dry and clean to be certified.

RR ALFALFA CONT.

The RR technology was extensively evaluated by university personnel in California and all throughout the country. They found little to no injury to the crop, and trials resulted in effective weed control (although multiple applications were sometimes necessary for late emerging weeds). One benefit of the RR system was the flexibility to make applications throughout the growing season.

In the spring of 2014, UCCE Advisor Steve Orloff and a grower noticed something funny going on in a RR field in Scott Valley. An area where wheel-lines were anchored for the winter was not sprayed with Roundup. Alfalfa in that untreated area was much taller than the alfalfa that was treated with Roundup. A trial was conducted later that same spring and the stunting/injury could not be replicated.

In the spring of 2015, a similar situation occurred in Scott Valley. In the field which was most affected, there was a 0.8 ton first cutting yield reduction in the portion of the field that had been treated with Roundup. Alfalfa growth at the Intermountain Research and Education Center in Tulelake is typically behind Scott Valley, so a replicated field trial was initiated there. Alfalfa yield reductions to the tune of 0.3 and 0.4 tons/acre were observed in the trial when Roundup was applied at 22 fl oz/acre and 44 fl oz/acre respectively. No injury was observed in the second cutting, only the first. It was hypothesized that cold temperatures (frost) were needed after an application of Roundup for injury of the alfalfa to occur.

Injury symptoms observed included more than just stunting and yield reduction. Individual stems wilted forming a shepherd's crook, and some leaves were malformed and chlorotic. However, not all alfalfa plants within a field were affected, and it takes time for these symptoms to manifest after frost occurs.

Trials conducted in the fall of 2015 confirmed that injury symptoms did not develop until frost occurred after an application. Additionally, the fall trials indicated applications to shorter alfalfa resulted in less injury than applications to taller alfalfa.

There was some variation in the trials from site to site. However, most trials tested two rates of Roundup, 44 fl oz/acre and 22 fl oz/acre, against a conventional standard and untreated alfalfa. Additionally, treatments were made at various growth stages in alfalfa growth from the 2-inch stage up to the 10-inch stage. The temperature was monitored in all fields.

Because of a severe hail storm, significant alfalfa weevil pressure, and general field variability, statistical differences were not apparent at all 16 locations. However, injury symptoms in Roundup-treated plots occurred at 15 of the 16 field locations, and most sites produced reliable data. The only site which did not show injury was a seedling field with warmer conditions following applications, than the other fields. According to CIMIS weather stations, spring temperatures in 2016 were generally milder than springtime temperatures in 2014 and 2015. Likewise, observed injury was less severe in 2016 than the previous years.

RR Alfalfa treated with 44 fl oz Roundup/acre rate had a typical yield decline of 0.3-0.4 tons/acre in the first cutting. Alfalfa treated with 22 fl oz Roundup/acre had a smaller yield decline ranging from 0.1-0.3 tons/acre. In general, more injury was observed in older stands and stands that experienced colder temperatures. Treatments made to alfalfa at a taller growth stage typically had greater yield reductions than applications to shorter plants. Applications made when the alfalfa was less than 2 inches tall did not result in a yield reduction. However, applications made to alfalfa plants larger than 2 inches tended to result in yield reduction.

Research is currently underway to understand the mechanism causing the alfalfa injury, and the best agronomic management practices to avoid any yield reduction.

Current management recommendations: treat fields early in the spring, when the alfalfa has 2 inches of regrowth or less. All weeds may not be emerged when the alfalfa is this small. Because Roundup does not have pre-emergence activity, tank mixing with soil active herbicides may be needed (especially in thinner stands where the crop is less competitive). Additionally, tank mixing herbicides with multiple modes of actions is a good practice for herbicide resistance management. Roundup applications made later in the season after the risk of frost, should not result in alfalfa injury but it can be difficult to predict when spring frosts may occur.

Please do not hesitate to contact me with any questions you may have, or if you are having difficulty finding the detailed report online. (Tom Getts, Office: 530-251-2650 Email: tjgetts@ucanr.edu)

BELDING'S GROUND SQUIRRELS

Just in time for ground squirrel season, the University of California has come out with a new best management practices (bmp) website for ground squirrels. Belding's ground squirrels (the most common in Modoc County) have their own pages for management along with type of management and timing for most accurate control.



The University of California vertebrate pest specialist, Roger Baldwin, with help from UCCE Modoc will be testing whether prebaiting is necessary in the management of Belding's ground squirrels. Currently, Modoc County is the only county that does not require pre-baiting of zinc phosphide treated cabbage in the treatment of squirrels. This saves Modoc County producers time and money but the question remains on how it affects efficacy. Pre-baiting is thought to pre-condition animals to accepting bait that is not always available to them. 2016 studies on zinc-phosphide cabbage treatments in Northern California found an average of 69% efficacy rate.

Remember that in order to obtain zinc phosphide you need to update your restricted material permit with Modoc County and submit pesticide use reports. Please attend a training session with the Modoc County Ag Department for more information.

Find more information at www.groundsquirrelbmp.com and select Belding's Ground Squirrels

How to Time Management Efforts | Belding's Ground Squirrels



(Above) Belding's Ground Squirrel activity and timing of management options. (Below) Cost and treatment efficacy of several management options. See bmp website for more details.

Management Method Efficacy | Belding's Ground Squirrels

	Time of Year	Efficacy	Cost	Labor	Restrictions
Fumigation	February to April ¹	HIGH	●	●	● ²
Toxic Baits	February to May	MODERATE	●	●	●
Burrow modification	Year-round	MODERATE	●	●	●
Shooting	February to July	MODERATE	●	●	●
Exclusion	February to July	MODERATE	●	●	●
Repellents	February to July	LOW	●	●	●
Habitat modification	Year-round	LOW	●	●	●
Biological control	February to July	LOW	●	●	●
Trapping	February to July	LOW	●	●	●

¹ Management window may be longer if high soil moisture persists, particularly following substantial irrigation.
² Dependent on which fumigant is used.

● = Low
● = Moderate
● = High

MCCW BEEF NUTRITION WORKSHOP

The Modoc County Cattlewomen are organizing a Beef Nutrition Workshop presented by the California Beef Council **May 6th at the South Fork Event Center in Likely, CA.** Cost is \$15 and includes lunch. Look for more information to come. Look forward to seeing you there.

Non-Profit Organization
U.S. Postage Paid
Alturas, California
Permit # 22

**COOPERATIVE
EXTENSION**

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FUTURE EVENTS OF INTEREST

**INSIDE THIS
ISSUE:**

Warner Mountain Monitoring	2
Round-up Ready Alfalfa Damage	3
Farm Expo	3
Belding's GS	5

March 10 Modoc Farm Expo, Modoc District Fairgrounds, Cedarville, CA

March 23-24 Rustici Symposium, UC Davis, Davis, CA

May 6 Beef Nutrition Workshop, South Fork Events Center, Likely, CA

June 10 Modoc County Cattlemen Spring Tour TBA

June 12-16 Junior Livestock Show, Alturas, CA