Volume 2, Issue 4 Fall 2013

THE ROUNDUP

University of California Cooperative Extension

Livestock, Range, and Natural Resources Newsletter

Kern, Tulare, and Kings Counties

Fall is here, calving season has started and it has finally cooled off and even rained a little! What a great time of year. You will find that this newsletter looks a little different from normal. Instead of a research update and health article, I included a bunch of information on what I've been doing for you! You will also find an article on medusahead control, as well as, an article from NRCS introducing two employees who recently transferred to the area.

I've been on the job now for just over a year and a half and I wanted to take this opportunity to thank all of you for your support and patience. I've met many of you and for those of you whom I have not had a chance to meet yet, I hope you will forgive my delay and allow me the opportunity to meet you some time soon.

I've learned a few things since I joined Cooperative Extension and I wanted to share them with you all. First, the job of an Advisor is all about you! If you just said, "Duh", I don't blame you. Really though, all of the work I do is focused around topics and issues that affect livestock producers and range managers of all sorts. That means, if something is important to you, it's important to me. So please, feel free to call, email, or drop-in to chat. I would love to hear from you.

Second, it is critical that science remain objective. Most of you could name at least one situation or topic you have encountered where science was clouded by opinion, or perhaps, opinion was presented as science. My position is a science based position, and I serve a wide variety of people with an equally wide variety of backgrounds. I want all of you to know that I take my professional responsibility to be objective very seriously and I am committed to that responsibility.

Third, confidentiality is paramount. If you can't trust me to keep my mouth shut, why in the world would you even allow me near your front gate? I understand that concern, and I seek to maintain the highest level of confidentiality possible for each and every person I work with.

I wanted to share this with all of you, not because I've had anything negative happen, but because I haven't had a chance to meet or speak with all of you and I want to be sure all of you are confident enough to call me if you have something you think I might be able to help with.

Thanks for taking the time to read my newsletter.

Julie
Livestock and Natural Resources Advisor
UCCE – Kern, Tulare, and Kings Counties
661-868-6219
jafinzel@ucanr.edu
http://cekern.ucanr.edu/Livestock/

Project Update–What Have I Been Doing for You?

I wanted to provide you all with an update on some of the projects that I've been working on and projects that are just getting started. As I stated in my introduction in this newsletter, all of you are an integral part of my work. Without the help of producers, I wouldn't be able to serve any of you well. Thank you to all those who have worked with me on projects and to all those who I may work with in the future. As you read through the summary of each project, if you are interested in participating or have questions, I encourage you to call, email, or stop in and visit me and we can discuss the project (s) that are of interest to you.

Fecal Sampling to Determine Levels of Important Fecal Pathogens

Some of you may remember my predecessor in Kern County, Ralph Phillips, shooting squirrels and collecting them so their fecal matter could be tested for fecal pathogens. A large amount of work was done around the state about 15 or so years ago regarding fecal pathogens in all sorts of critters, not just cattle. What they found was that some animals, specifically squirrels, actually shed considerably more Cryptosporidium (Crypto) than cattle (See "Pellets, Pies, and Placement" in my spring 2013 newsletter).

Since the bulk of this work was done, new technologies have been developed that allow for better identification of Crypto, and researchers at UC Davis now think that the strain of Crypto cows carry isn't even highly pathogenic to humans, while the strain that squirrels carry is! As a result, they set out to survey as many cow herds as possible throughout the state of California so they could find out for sure. I assisted in this effort by sampling one herd in Kern County, one in Mono County, and two in Tulare County. Thanks a bunch to those who participated!

We all know water quality and potential water contaminants are a big deal and people can really get upset when they think their water might not be safe to drink. Down here in the southern San Joaquin, producers were buffered a bit from the call in the '90's from some San Francisco residents to remove all cattle grazing from the watershed lands that supply water to the city. A segment of the population was worried about getting sick from Crypto and other fecal pathogens that can contaminate water. What saved the ranchers from being kicked off their leases was earlier survey work that had been done to quantify the risk from cattle. That's why this work is so important! We may not have any similar issues right now, but sound science takes time. I don't know who said it, but I like the quote, "It's better to be proactive, then reactive". In a number of projects I discuss throughout this article, you will find that that is exactly what the project is designed to do.

Pre-Wolf Herd Productivity Survey

In response to the temporary, albeit somewhat lengthy, stay of a wolf in California, the California Department of Fish and Wildlife (CDFW) is working to develop a wolf management plant for California. The California Cattlemen's Association has been working with agency personnel as they move forward with the wolf plan. As a part of this process, CCA contacted the Oregon Cattlemen's Association to see if they had any advice to offer as California embarks on a pro-

continued on page 3...

Project Update, cont...

cess other states have already worked through. One piece of advice OCA shared with CCA was to determine herd productivity levels prior to the arrival of wolves in order to document the impact wolves have on cattle production not only through predation, but also through increased stress and agitation.

To this end, UC Cooperative Extension Livestock Advisors have developed a two-page information collection sheet for interested producers to fill out. This sheet prompts ranchers to record information such as number of head turned out in a particular field, starting weight of cows and calves upon turnout, and weight of cows and calves when removed from a field, to name just a few. With questions like that, we might as well be asking how much money you have in your bank account! In the interest of privacy, where this information is stored is determined by each participant. For example, many may choose to store their data sheets among their own ranch files, while others may wish to send them to me so they don't have to worry about trying to find them at some point ten or more years down the road when the wolves make it down into Fresno, Tulare, or Kern County.

At this point, any data collected is a pre-emptive action being taken by ranchers in order to help them better respond regarding impacts to their operation from wolves in the future. A secondary benefit to some ranchers, may be that the information collected reveals a previously unknown component of their operation that needs attention.

Bluetongue Virus in California

Two veterinarians from UC Davis are looking at the prevalence of the bluetongue virus among California beef cattle. Bluetongue is non-contagious viral disease typically associated with sheep; however, it can affect ruminant livestock and wildlife. Bluetongue is carried by gnats and typically occurs in late summer and early autumn and is already endemic to much of the U.S. including most of CA. A European strain of bluetongue and some other strains can cause serious disease in cattle and other livestock, with symptoms including loss of condition and ulcerative oral and foot lesions that mimic foot and mouth disease. Recently, in the southeastern U.S., 10 new strains of bluetongue were identified, although their significance remains uncertain.

Because of the potential economic implications of the disease, UC Davis is seeking to learn more about the prevalence of the endemic viral strains in California to assist in the development of potential control methods and also to model the path of a potential outbreak and identify high-risk areas. Currently, there is limited surveillance and monitoring of bluetongue in the U.S. Participants are asked to allow blood samples to be taken from about 20 calves four times in a year, at roughly 3 month intervals. All lab results will be provided to participants, and each participant's identity will be kept strictly confidential.

California Ranch Stewardship Interviews

Two researchers out of UC Davis, Ken Tate and Leslie Roche, have initiated the California

continued on page 9...

Controlling Medusahead on Rangelands

Medusahead is the common name for an invasive annual grass species found in many places throughout the western United States. The challenge, when working to control medusahead in California's annual grasslands, is that medusahead is so similar to desirable forage, that control efforts that are effective in other states where perennial grasses are more prevalent, often impact desirable annual grass forage availability here in California. Research has been done in California that focused on controlling medusahead while reducing negative impacts to desirable forage species.

Some of you may not have heard much about medusahead before this article, or you may have heard that it was a problem up north, but not in the southern San Joaquin valley. Until recently, I would have agreed with you, but medusahead is now present in Fresno and Tulare County, which means, it has finally arrived in our neck of the woods and it's time to start thinking about how to control it. The best way to control an invasive species is to never let it get a foothold, and that means addressing the issue of medusahead as soon as it appears on your property.

Medusahead is considered an invasive grass because it is only palatable to livestock during its early growth stages. Medusahead seeds have stiff awns, similar to ripgut brome and foxtail barley, that can injure livestock. Medusahead also forms a thick, silica-rich thatch, which takes a couple of years to break down on its own, without further thatch being added each year. The thatch layer affects the temperature of the soil and the moisture dynamic in the soil, reduces seed germination by crowding out sunlight and serves as fuel for wildfires. These characteristics make medusahead really good at crowding out other species and forming monocultures of grass across a landscape that livestock won't eat.

Medusahead can be identified by its distinctive seedhead and if you think about the mythical being, Medusa, and consider the snakes she had for hair, you should see a bit of a resemblance. Medusahead has twisted awns that can be 1 to 3 inches long. It produces large amounts of seed that often germinate in the fall. The plant will grow throughout the cool season, depleting shallow soil moisture and utilizing deeper soil moisture later. Medusahead tends to mature 2 to 4 weeks later than other annual grasses. This characteristic makes patches of medusahead particularly distinctive in late spring and early summer when other annual grasses have turned brown and the yellowish-green of medusahead monocultures stands out on the landscape. Seeds can germinate under low soil moisture conditions, but most seeds either germinate or lose viability after 2 years in the field. Medusahead is not commonly found in areas that receive less than 9 inches of rain on average each year.

If medusahead has a positive quality, it is that the seeds are short-lived, and through diligent control over 2 to 4 years, serious infestations of medusahead can be managed. Control measures should be aimed at reducing seed production and reducing thatch build-up in order to reduce its reproductive capacity and its competitiveness. Any management plan aimed at controlling medusahead should take an integrated approach and utilize more than one management method in order to provide the best results possible.

continued on page 5...

Controlling Medusahead, cont...

Control methods

Mechanical – pulling, cutting disking, mowing, etc.	Mowing – Early season mowing is most likely ineffective. Late-season mowing between the bolting and early flowering stage may help suppress seed production. It is important that mowing is not conducted too late, otherwise mowing will spread the seed rather than prevent seed set. Raking – If medusahead has established a thick thatch, raking can help reduce the thatch and allow other species to reestablish and compete. Tillage (disking or plowing) – Tilling will control medusahead by reducing seed production if it is completed before seed set. Again the best timing is between the bolting and early flowering stage. However, on rangelands there is a significant risk of erosion, loss of soil moisture, loss of organic matter, and loss of microbiotic soil crusts. Further, tilling when used alone can create an opportunity for continued invasion by weedy species including medusahead and others. Tilling is best used in conjunction with seeding or some other restoration effort.
Cultural – Fire, grazing	Fire – Fire is an effective control measure for two reasons. First, burning an area infested with medusahead clears out the thatch. Second, if burning is timed right, after desirable forage species have senesced, but before medusahead has gone to seed, fire is very effective at preventing medusahead from setting seed or it will kill the developed seed directly exposed to the fire flames. There are a few drawbacks to fire in some areas. At higher elevations or latitudes the temperatures of the burn and the fuel loads aren't high enough to carry the fire over the landscape at the necessary point in medusahead's life cycle. Also, fire permits can be very difficult to obtain and fire can reduce production of desirable forage significantly the following year. Grazing – Using grazing to prevent medusahead from setting seed can be done with careful timing and heavy stock rates. Livestock should be turned out before seed heads start to emerge, otherwise, they will very likely avoid it. This window of opportunity is only about 2 or 3 weeks long in most areas and may be even shorter in dry areas or in dry years. Because of the very tight time frame in which livestock must be used and the heavy stocking rates needed to force the animals to eat the plant, which is marginally palatable at this stage, grazing can be a difficult control method to implement over a large area. Trampling – Concentrating livestock in one area by placing supplement within the infested area is an effective way to treat small patches of medusahead. If timed properly the animals will trample the medusahead, reduce seed set and also break up the thatch from previous years. Fertilization – when rangeland is fertilized in the fall and into late winter, research has shown that the treatment can make medusahead more palatable, thereby making livestock more likely to eat it. This treatment is most effective in areas that receive more than 12 inches of precipitation annually. Please refer to the grazing section above for more information.

continued on page 9...

Ask The Advisor

I lost forage this year, in a fire that was started by a known party. How do I estimate the value of the lost forage in order to be compensated for my loss?

Despite the drought, there was still enough grass to carry a fire in a lot of places throughout the southern San Joaquin. Hopefully this is not an issue for you, but if you've lost forage for another reason, you can calculate that loss too. The UC has made available a forage loss calculator at: http://ucanr.org/sites/forageloss/. The website contains a publication, *Estimating the Cost of Replacing Forage Losses on California Annual Rangelands*, ANR publication #8446, and spreadsheets to help you complete the calculations to document your loss. The spreadsheets and publication are relatively easy to use, but if you have any questions or don't have access to the internet, feel free to contact me and I'd be glad to help. jafinzel@ucanr.edu or 661-868-6219.

Water Storage Options for Wildland Fire

With the devastation caused during this year's fire season fresh in everyone's memory, some of you may be wondering what would happen if your ranch caught fire. There are seemingly endless management decisions to make when considering ranch fire preparedness and just one of those is water availability for fire-fighting efforts. As we all know, fire season hits when water supplies are low, but there are options for concerned landowners and funding assistance may also be available.

One option is to install a water storage tank that has a special adapter where fire hoses can be connected. If storage tanks are already installed, but do not have the fire hose adapter, a simple change can make the tank accessible for wildland fire-fighting efforts. Some storage tanks are plastic or "poly" material and are less expensive. These often hold 5,000 gallons or less. The minimum recommended tank size when considering water storage for fire suppression is 5,000 gallons. Some storage tanks are constructed of steel or concrete and can hold up to 15,000 gallons. There is another option to install a fire hydrant. In many cases it may be possible to install a water trough in conjunction with the storage tank and thereby increase livestock access to water, in addition to making more water available for wildland fire suppression efforts.

For more information contact your local Resource Conservation District, Fire Safe Council, or Natural Resource Conservation Service office. To obtain contact information for any of the above entities you can contact Julie at: 661-868-6219 or by email at jafinzel@ucanr.edu.

Save the Date!

UCCE will be putting on a Livestock Symposium in the auditorium at the Tulare County UCCE office from 9 to 2 on February 20, 2014. Topics will include herd health management, horse health, marketing, budgets, and more! Mark the date on your calendar today!

Tax Options for Sales of Livestock due to Drought

After two years of hard-hitting drought in the southern San Joaquin valley many producers have been forced to destock, some drastically. In addition to the heartache of seeing your herd size shrink dramatically, selling large numbers of livestock means a lot of income dollars for the IRS to tax. Fortunately, as tax season looms ahead, there are a couple of options to postpone the tax burden imposed by the sale of large numbers of livestock and potentially avoid it altogether. The options are:

Code Section 451(e): The election to postpone reporting the taxable gain on the additional sales of any livestock for one year; or

Code Section 1033(e): The election to postpone, and altogether avoid, paying taxes on the gain from the sale of breeding, draft, or dairy animals if they are replaced within a specified time frame.

Each option listed above has specific requirements a producer must meet in order to utilize the tax break. One requirement they both have in common is that the principal business of the producer must be farming. Both also require that the producer show what their normal business practices would have been if weather conditions had not forced them to sell higher than normal numbers of livestock. See below for a chart that summarizes some of the requirements for each of the tax options listed above.

Question	Section 451(e)	Section 1033(e)
What livestock qualifies?	All livestock	Breeding, draft, or dairy livestock
Must the county be eligible for federal drought assistance?	Yes	No, but the reinvestment time frame is contingent upon the areas disaster declaration status
What sales does the election apply to?	Sales in excess of normal business practices	Sales in excess of normal business practices
How does the election benefit me?	Postponing payment of income taxes on the sale for one year	Deferral of paying capital gains by carrying over basis, reinvestment time frame applies
Is replacement of the animals required?	No	Yes
What effects does the election have on my tax basis?	N/A	Reduced by gain that is deferred
How long do I have to reinvest?	N/A	Two years if not eligible for federal disaster assistance; until one year following the official end of drought if eligible
How long do I have to make the election?	Due date for the return for the tax year of the sale	Two years from the end of the taxable year of the sale

continued on page 8...

NRCS Welcomes Employees in Tulare and Kings Counties

There are two recent additions to the NRCS staff in Tulare and Kings Counties that are of note for the ranching community. In Tulare County, Joe Williams, has returned as the District Conservationist working out of the Visalia office and in Kings County, Mike Higgins, has joined the NRCS staff as a Range Conservationist. Both Joe and Mike are excited about their new positions and eager to provide assistance. Keep reading to learn more about Joe and Mike!

Joe Williams

Joe has recently moved back to his home state of California and is currently the District Conservationist for the Visalia Field Office in Tulare County. Joe worked in Visalia for 10 years as a soil conservationist, agronomist, and district conservationist. From 2006 until February 2013 Joe was the manager of the USDA NRCS Corvallis Plant Materials Center in Oregon. Joe served as the SWCS Oregon Chapter President from 2011 to February 2013.

Joe received his BS degree in Agronomy from Cal Poly Pomona and is a licensed Certified Professional Agronomist and a Certified Crop Advisor.

Mike Higgins

The USDA-NRCS recently selected Mike Higgins as the Range Conservationist to serve private land ranchers in Kings, Tulare, and Kern Counties. Mike grew up in Oregon and spent most of his time hunting and fishing on his grandparent's wheat and cattle ranch. There he discovered his passion for working landscapes and range resources. He attended Oregon State University where he earned his degree in Rangeland Ecology and Management. During that time he worked for the BLM on the Montana highline as a range technician, assisted with ranch work in western and eastern Oregon, and conducted wolf research on the OX Ranch through a joint partnership between the Oregon Beef Council, Oregon State University, and the USDA's Agricultural Research Service.

Before accepting his current position in Hanford, California, Mike was assisting sheep and cattle ranchers in central Idaho with NRCS programs designed to protect working lands, improve grazing resources, and avoid the listing of the greater sage grouse as an endangered species.

Tax Options, cont...

The tax options article was summarized from a document made available by the National Cattlemen's Beef Association. The full article can be found at: http://www.beefusa.org/CMDocs/BeefUSA/Issues/NCBA%20Tax%20Document.pdf. If anyone would like a print version of the NCBA article, please contact Julie at 661-868-6219. Be sure to contact your tax professional to discuss your options this tax season and determine which option may be best for you.

Project Update, cont…

Ranch Stewardship Project. This project is really unique because it is a great opportunity for ranchers to share their knowledge about how they manage land and livestock not only with each other, but with a larger public audience. Ken and Leslie have done over 40 interviews across California and I was able to tag along on two of them. It was really interesting to listen to the similarities between the two ranchers. One theme that stood out is that you all produce nutritious, healthy food for Americans and others to eat, and you are proud to do so. Another theme that stands out, especially in multi-generation ranches that have long-standing traditions, is that if you have desirable species on your ranch, you are doing something right with your management. This is really important because some folks miss this point. I relate it to a truck, a truck needs good maintenance (management), but why would you replace the transmission if it's not broken? A similar principle applies to land management. If a desirable species occurs under current management, why would a recommendation be given to change management strategies without good, objective, scientific data to support the decision?

This project provides a unique outlet for knowledge that ranchers think of as common knowledge. Unfortunately, for lots of people across the U.S., practical land management knowledge is not as common as it used to be. There is a message coming from many groups about how important it is for ranchers to tell their story, so the larger masses of consumers and the voting public can better understand why you do what you do. This is really just one more way to tell your story, and to do so anonymously where the combined voices of (hopefully) over 60 ranchers can be heard and really drive home the message about what ranchers do, why they do it and why it is so important for the well-being of all people.

Controlling Medusahead, cont…

Biological	There is one potential biocontrol agent, crown rot fungus, for medusahead, however, currently, there are no studies that show its effectiveness.
Chemical	There are a number of potential herbicides that can be effective against medusahead. UC studies have focused on glyphosate and aminopyralid (Milestone). Milestone is effective when applied as a pre-emergent herbicide in the fall at a rate of 7 to 14 oz of product/acre. Care must be taken when using Milestone near trees of any species. Milestone has a long list of trees that it impacts and it is important to read the label carefully before mixing or applying any herbicide. In UC studies, glyphosate has been applied later in the growing season, when medusahead is almost done bolting, but has not yet developed a fully mature seed head. This method of glyphosate application has proven to be one of the most effective methods of controlling medusahead tested to date. Two other herbicides are effective against medusahead and are also safe to use around perennial grasses. Rimsulfuron (Matrix) and sulfometuron plus chlorsulfuron (Landmark XP) can both be used in the fall as pre-emergent herbicides that will suppress medusahead germination and also in early spring as post-emergent herbicides.

THE ROUNDUP

UC CE University of California
Agriculture and Natural Resources | Cooperative Extension

In This Issue...

Current Resident or:

University of California
Cooperative Extension
1031 S. Mt. Vernon Ave.
Bakersfield, CA 93307

Phone: (661) 868-6200
Fax: (661) 868-6208