

*Livestock and Range News is a newsletter published by the Farm Advisor's office containing research, news, information, and meeting notices related to the areas of livestock production, irrigated pasture, range, and natural resource management.*

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There is no charge for the meeting thanks to our generous sponsors. Please RSVP by February 10, 2017 for an accurate count for lunch in Orland or dinner in Cottonwood. Thank you! For more information or to RSVP, call Tehama County Cooperative Extension at (530) 527-3101 or email [jdavy@ucanr.edu](mailto:jdavy@ucanr.edu)

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#### **Cooperative Extension of Tehama County**

1754 Walnut Street, Red Bluff, CA 96080

PH: (530) 527-3101 FAX: (530) 527-0917

**Email: [jsdavy@ucanr.edu](mailto:jsdavy@ucanr.edu)**

Website: <http://cetehama.ucanr.edu>

*Josh*

**Josh Davy, UC Farm Advisor**

Livestock, Range, and Natural Resources



#### **Cooperative Extension of Shasta/Trinity Counties**

1851 Hartnell, Redding, CA 96002

PH: (530) 224-4900 FAX: (530) 224-4904

**Email: [lcforero@ucanr.edu](mailto:lcforero@ucanr.edu)**

Website: <http://ceshasta.ucanr.edu>

**Larry Forero, UC Farm Advisor**

Livestock, Range, and Natural Resources

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## Winter Animal Health Meetings February 17, 2017



### Orland Livestock Auction Yard

3877 Co Rd 99W, Orland, CA 95963

Friday, February 17, 2017

11:00 a.m. — 1:30 p.m.

*Sponsored by the University of California Cooperative Extension,  
Boehringer Ingelheim, Zoetis, & Elanco*

### AGENDA

- 11:00 am**      **Common health problems seen by submitted beef cattle to the California Animal Health Lab**  
*Dr. Rob Moeller, Veterinary Pathologist, CAHFS*
- 11:30 am**      **Market outlook**  
*Dr. Tina Saitone, UCCE Ag Economics and Brad Peek, Shasta Livestock/WVM*
- 12:00 pm**      **Lunch— Auction Yard Café, courtesy of : *Zoetis, Boehringer Ingelheim & Elanco***  
“Making the world a smaller place”  
*Josh Davy, UCCE Livestock/Natural Resource Advisor*
- 12:30 pm**      **Beef Cattle Contribution to Climate Change**  
*Dr. Frank Mitloehner, UCCE Animal Air Quality Specialist*
- 1:00 pm**      **Local research updates—UCCE Advisors**  
“Mineral consumption and range improvement trials”  
*Larry Forero, UCCE Livestock/Natural Resources Farm Advisor*  
“Late season weed control trials”  
*Josh Davy, UCCE Livestock/Natural Resources Farm Advisor*
- 1:30 pm**      **Adjourn**

**There is no charge for the meeting thanks to our generous sponsors. Please return the RSVP by February 10, 2017 for an accurate count for lunch in Orland or dinner in Cottonwood. Thank you!**  
For more information or to RSVP, call Tehama County Cooperative Extension at (530) 527-3101 or email [jdavy@ucanr.edu](mailto:jdavy@ucanr.edu); or Larry Forero at (530) 224-4900



# Winter Ag Meeting

## Shasta Livestock Auction Yard, Cottonwood

3917 Main Street, Cottonwood, CA

**Friday, February 17, 2017**

**5:00 p.m.—7:30 p.m.**

*Brought to you by : Hawes Farm and Ranch, Golden State Farm Credit, Elanco, Zoetis (formerly Pfizer Animal Health), Cottonwood Veterinary Clinic, Shasta Farm and Equipment, Shasta Livestock, Shasta And Tehama County Cattlemen's Associations*



### AGENDA

- 5:00 pm**      **Common health problems seen by submitted beef cattle to the California Animal Health Lab**  
*Dr. Rob Moeller, Veterinary Pathologist, CAHFS*
- 5:30 pm**      **Market outlook**  
*Dr. Tina Saitone UCCE Ag Economics and Brad Peek , Shasta Livestock/WVM*
- 6:00 pm**      **Dinner from the Branding Iron Restaurant courtesy of :**  
*Elanco, Zoetis, Hawes Farm & Ranch Supply and Shasta Farm and Equipment,*  
                  *“Making the world a smaller place”*  
*Josh Davy, UCCE Livestock/Natural Resource Advisor*
- 6:30 pm**      **Beef Cattle Contribution to Climate Change**  
*Dr. Frank Mitloehner, UCCE Animal Air Quality Specialist*
- 7:00pm**      **Local research updates—UCCE Advisors**  
*Larry Forero - “Mineral consumption and range improvement trials”*  
*Josh Davy, - “Late season weed control trials”*
- 7:30 pm**      **Adjourn**

**Please return the RSVP to Larry Forero or Josh Davy for Dinner by February 16, 2017**

**For more information, call Larry Forero at (530) 224-4900 or Josh Davy at (530) 527-3101**

## Grass Tetany

Larry Forero, Josh Davy, and Dr. John Maas

Good early season forage growth with a high moisture content can be ideal conditions for grass tetany. Cloudy, wet, windy days with daytime temperatures between 40 and 60 degrees F and soil temperatures below 50 degrees F are associated with a high incidence of this problem. This is particularly the type of season we are entering in to right now.

Grass tetany hasn't been much of a worry over the past few years. The multiyear drought in California has pushed this concern to the back burner. The pattern and amount of rainfall we have received this forage year may make it critical to evaluate our mineral supplementation program to assure cattle have adequate magnesium (Mg).

Grass tetany (sometimes called hypomagnesemic tetany) is typically seen in mature heavy-milking cows turned out on early spring grass. The demands of high milk production can result in low levels of Mg and Ca. Often times a dead cow is the first indication a producer has of the problem. Al Nueman (1977) notes affected cows may be in an excitable state with erect ears and may attack a person. They may be blind and if driven or roped often go down after becoming excited. Other symptoms include grinding of teeth, trembling and possibly deep coma followed by sudden death. Milder cases of grass tetany resemble milk fever. If you come across a dead animal and the ground is torn up from their legs and head thrashing around this can be indicative of grass tetany.

It is important to remember that Mg is associated with Ca and P. Many of our rangeland soils are inherently deficient in calcium. Cattle that have low levels of Ca and P are at greater risk to grass tetany. Recent data has also suggested that sodium (salt) levels in general can have repercussions on the incidences of grass tetany, meaning regular consumption of the salt based mineral to maintain even sodium levels in very important.

Take the time to review your mineral label. Consider the mineral information from the following two labels (note: crude protein, crude fat, acid detergent fiber and vitamins are not included).

Mineral	Product 1	Product 2
Calcium	8% (min)	9.5% (min)
Phosphorus	2% (min)	0.4 % (min)
Sodium	15% (min)	N/A
Magnesium	1% (min)	N/A
Potassium	20% (min)	N/A
Copper	2600 ppm (min)	2206 ppm (min)
Zinc	5580 ppm (min)	4410 ppm (min)
Salt	37%% (min)	19.4% (min)
Iodine	140 ppm (min)	N/A
Selenium	130 ppm (min)	45.1 ppm (min)

Product 1 includes magnesium and product 2 does not. If product 2 is being fed, there is no Mg and all the magnesium needed by the animal must come from the forage they consume.

Cattle with blood Mg levels between 18 and 35 ppm are typically considered adequate. Most sampling of cattle in Shasta, Tehama, Glenn, and Colusa Counties have found that routinely supplemented cattle fit within the required reference range, but this is not always true. Additionally, although the herd average may be adequate, many individual animals may still be deficient. This is very concerning because these cattle are susceptible to grass tetany. If this is the case, it might be necessary to determine the level of mineral in the supplement, and/or to evaluate consumption. Most supplements are designed to have a standard consumption that can vary from 1 ounce to over a pound of consumption daily. There are 800 ounces in a 50 lb bag of mineral. Divide from 800 the number of days to consume the mineral and then by the number of cattle in the pasture to get a rough estimate of daily consumption in ounces.

If you are concerned about grass tetany, you and your veterinarian should collect blood (serum) samples now as we are quickly approaching the season of worry. Collect and process blood samples before you expect a problem. This is also a good opportunity to find out how well your copper and selenium supplementation is working. The simple act of running a subsample of cattle through the chute to collect samples may precipitate the condition if Mg and Ca levels are low. Table 1 depicts the optimal range of serum results to prevent grass tetany.

Table 1. Optimal serum levels of cattle trace element panel to avoid grass tetany.

Element	Reference Range
Magnesium	18-35 ppm
Calcium	80-150 ppm
Phosphorus	45-60
Sodium	135-150

Measures that help prevent grass tetany include 1) extra Mg in their diet, 2) extra Ca in their diet and 3) additional salt (sodium chloride) intake. If you have a case of what you think might be grass tetany, work with your veterinarian to get an accurate diagnosis. Analytical tools for pinpointing this malady are much better than ten years ago. Your veterinarian can submit specific fluid samples to the California Animal Health and Food Safety lab (CAHFS) for diagnosis. If the diagnosis comes back positive, work with your veterinarian to develop a treatment and prevention plan to reduce the risk of further loss.

References: Nueman, A. L. 1977. Beef Cattle. John Wiley and Sons. New York  
Maas, John. 2005. Will this be a Bad Year for Grass Tetany. California Cattlemen's

## **Comparing Transline and Milestone herbicides**

Josh Davy, Larry Forero, & Joe DiTomaso

Transline (clopyralid) and Milestone (aminopyralid) are herbicides registered for use in rangeland, pasture, wildlands, and rights-of-way to control broadleaf plants, especially thistles. Both control some important Sacramento Valley weeds such as yellow starthistle, Italian thistle, milk thistle, and artichoke thistle. They will kill emerged thistles (postemergent control) and provide season long suppression of thistles that germinate after application (preemergent control). Yellow starthistle can germinate in the Sacramento Valley from October to May, so early applications (December-March in the Sacramento Valley, April in the mountains) of each herbicide can provide season long control. Properly timed applications to control yellow starthistle should be made before yellow starthistle bolts or before annual grasses exceed four to six inches in height. Research has shown that the earlier the application, the more grass that is produced on the site.

An acceptable rate for the control of most thistles with Milestone is 3 to 5 ounces per acre, and 4 to 11 ounces per acre of Transline (DiTomaso et al. 2013). The very low amount of material required per acre and the limited movement of the product from the application point has allowed them to be registered under the Reduced Risk Pesticide Initiative of the U.S. Environmental Protection Agency and eliminates grazing restrictions in the treated areas for beef cattle.

Research conducted from 2000 to 2006 on rangeland sites in California by UC Weed Specialist Joe DiTomaso found that as low as 2 oz/acre of Milestone and 3 oz/acre of Transline controlled yellow starthistle when applied in very early March, though these rates are below the lowest rate on the herbicide label. The trials demonstrate the effectiveness of both herbicides in controlling yellow starthistle.

Both herbicides are made by Dow AgroSciences, which creates confusion why the same company would market two similar products. The answer is that each product has particular circumstances where they would be most useful (Table 1). In general, Milestone has a broader control spectrum than Transline. The most notable plants controlled by Milestone, but **not** by Transline, are fiddleneck and filaree. If filaree is desired, Transline should be the product chosen. If the additional control of fiddleneck is a goal, Milestone would be a better option. Although Milestone has a higher cost per ounce, the lower rate applied makes cost between the two products fairly comparable. In cases where low rates are applied to control small thistles, Transline is a lower cost option.

In addition, if Milestone is sprayed as grasses are beginning to mature (boot stage, but not heading) it can inhibit grass seed production even at low rates, which may be of benefit in some situations. If applied at high rates (14 oz/acre, spot spray), Milestone can also prevent medusahead and other grass (not ryegrass) germination if applied prior to fall rains. Neither herbicide affects grasses when sprayed during their vegetative stages.

Milestone may also be harder than Transline on trees if applied over the canopy, but both are considered safe if sprayed under the canopy of non-legume trees. Both will have detrimental effects to woody legumes, such as red bud, and will kill clover and other herbaceous legumes. Neither herbicide will harm mustards.

Table 1. General comparison of Transline and Milestone		
	Herbicide	
	Transline	Milestone
Cost/oz	\$1.75	\$2.85
Rates for YST (oz/acre)	4-11 (8)	3-5 (4)
YST application timing	Oct-March	Oct-April
Filaree control	No	Yes
Fiddleneck control	No	Yes
Preemergent control of medusahead	No	Yes
Seed suppression of medusahead	No	Yes
Grazing restriction	No	No



Photo1. Area inside the fence line treated with Transline shows complete yellow starthistle control as compared to outside the fence line, which was not treated.

When herbicides are used, it is critical to read and follow all label instructions—understanding the label improves efficacy and assures the product is being applied safely. When pesticides are applied to commercial production pastures, use reports are required. Some products require a restricted materials permit where others only require an operator ID (see Table 2). If you have any questions about this—call your local agriculture commissioner’s office.

Table 2 summary of the regulatory and reporting requirements for products outlined above

Product	Operator ID	Restricted Material Permit	Notice of Intent	Use Report
Milestone®	Yes	No	No	Yes
Transline	Yes	No	No	Yes

DiTomaso JM, GB Kyser et al. 2013. Weed Control in Natural Areas in the Western United States. Weed Research and Information Center, University of California, Davis. 544 pp.

## **Winter Animal Health Meeting Announcement**

February 17, 2017

***Please R.S.V.P. by February 10, 2017:***

Call the Tehama County Cooperative Extension Office at **530-527-3101**  
or the Shasta County Cooperative Extension Office at **530 224-4900**

Or by Email to:

**Josh Davy** at [jsdavy@ucanr.edu](mailto:jsdavy@ucanr.edu) or **Larry Forero** at [lforero@ucanr.edu](mailto:lforero@ucanr.edu)

*This meeting is being provided at "no-cost" to attend due to our gracious sponsors.*

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<http://cetehama.ucanr.edu/>

*In addition, the website has many UC publications and information on topics such as livestock, range, natural resources, pest control, and other agriculture and crop production areas*