RANGE BULLETIN

Livestock & Natural Resources Newsletter

In this issue:

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Find us on Facebook! Search for **@UCCEFresnoMaderaLivestock** or visit the page directly at **https://www.facebook.com/UCCEFresnoMaderaLivestock/** for regular updates on upcoming events, recent news, and research information.

Last opportunity of 2021: SB 88 / AB 589 Water Measurement Certification Course

Until January 1, 2023, Assembly Bill 589 allows any water diverter who has completed this instructional course and a proficiency test on measurement devices and methods to be considered a *qualified individual* when installing and maintaining devices or implementing methods of measurement.

UCCE is offering a VIRTUAL training:
November 4, 2021 from 9:00 am to 12:30 pm

This is the last training being held in 2021.
If you need this training, register here:
surveys.ucanr.edu/survey.cfm?surveynumber=33616

Questions or comments: contact Larry Forero (lcforero@ucanr.edu) or Sara Jaimes (sbjaimes@ucanr.edu) or call the Shasta UCCE office at 530-224-4900.

Upcoming Events

Online Poultry Series for 4-H clubs, leaders, and youth

Hone your husbandry skills and attend one of our workshops on raising your own feathered friends. Join us and register today!

Register for a workshop here:

ucanr.edu/survey/survey.cfm?surveynumber=35342

Intro to Poultry: Breeds and Housing
October 21, 2021 · 6:00pm – 7:00pm

Buying vs Incubating + Hatching your own
December 11, 2021 · 10:00am – 11:00am

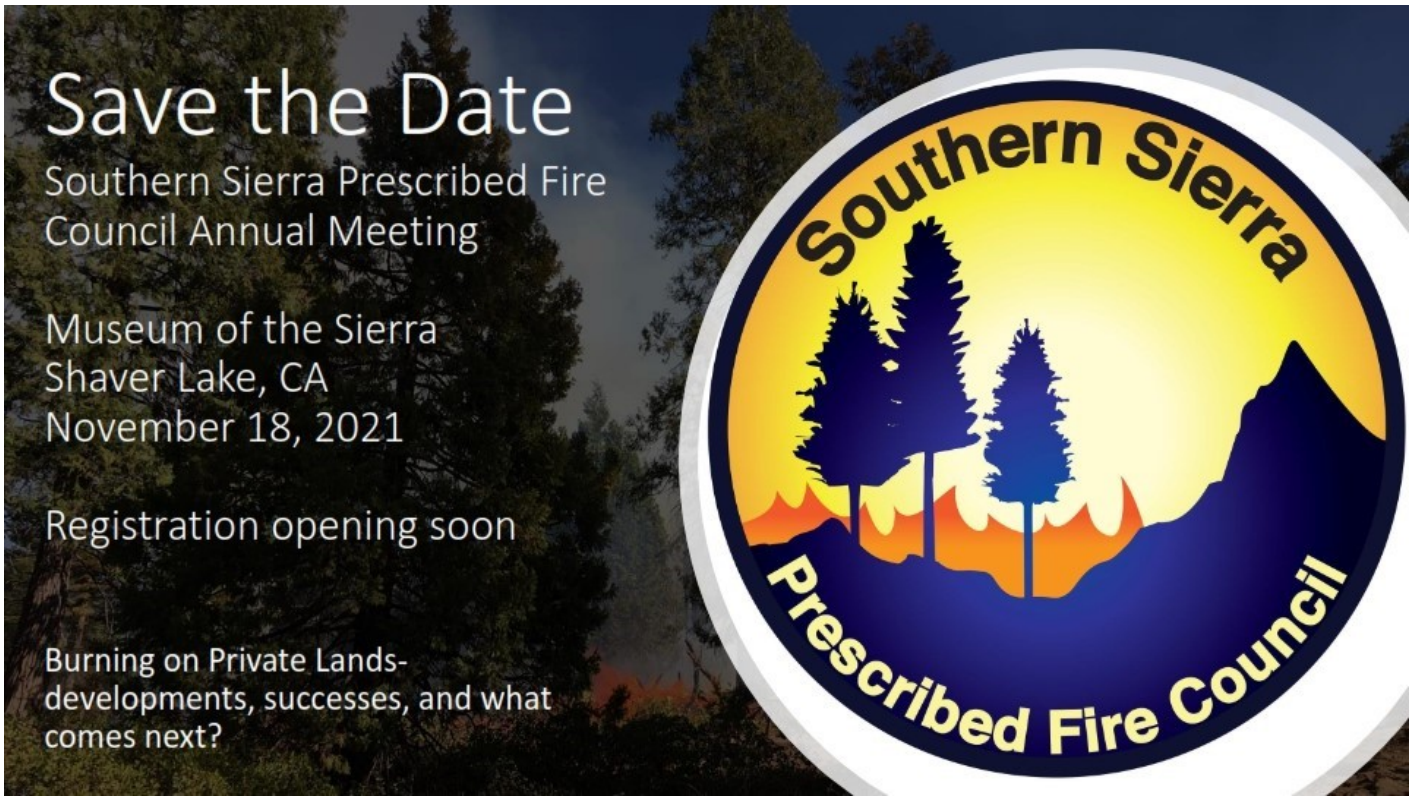
Nutrition
February 17, 2022 · 6:00pm – 7:00pm

Disease, Predators, and Prevention
April 9, 2022 · 10:00am – 11:00am

Registration is still open, and recordings of all sessions will be shared.

Upcoming Events

Fall Meeting: Southern Sierra Prescribed Fire Council



Virtual meeting planned for Weds, November 17
In-person field visit planned for Thurs, November 18

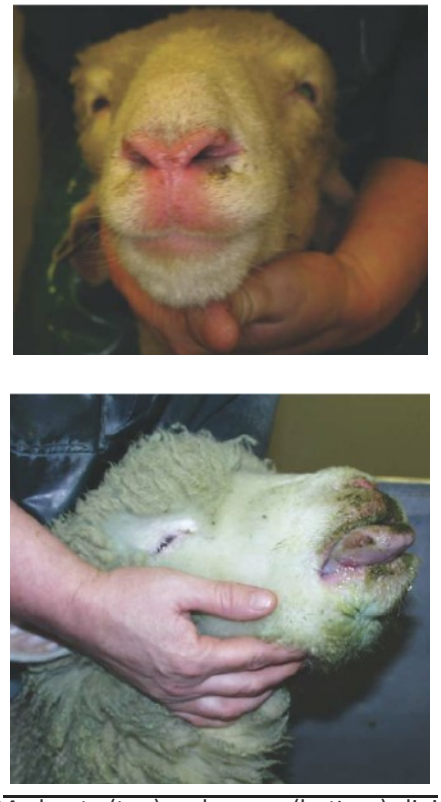
For more information or to register, visit
sites.google.com/site/sosierrapfc/home

Bluetongue

By: Rosie Busch, DVM, Sheep and Goat Extension Veterinarian, UC Davis, ***Alec Gerry, PhD***, Veterinary Entomology Extension Specialist, UC Riverside, ***Grace Woodmansee***, Livestock and Natural Resources Advisor, UCCE Siskiyou

In a nutshell:

- Bluetongue outbreaks are common this year - peak transmission occurs in October.
- The disease is spread by biting gnats and sheep commonly have the most severe symptoms.
- **Look out for**: high fever (104°F or greater), swollen tongue, face, or ears, ulcers in the mouth (especially the dental pad), excessive salivation and nasal discharge.
- Deer are very susceptible to Bluetongue and their interactions with sheep and cattle should be limited whenever possible.
- To reduce Bluetongue risk, consider housing sheep indoors at night, pasturing sheep and cattle together and applying insecticides.
- **If you suspect your animal has Bluetongue, contact your veterinarian immediately.**



Moderate (top) and severe (bottom) clinical signs of Bluetongue in sheep *(Source: Wilson et al., 2008)*

Sheep and cattle producers across the state have been experiencing Bluetongue outbreaks this year. These outbreaks typically occur between late July and October with the peak transmission time being in October. Bluetongue is a viral disease (*Orbivirus)* that is carried by small gnats called biting midges (*Culicoides* spp.). These gnats develop as immature insects in moist or wet habitat with high organic matter including along the margin of dairy ponds or in flooded cattle pasture. As adults, these gnats feed on the blood of large animals including sheep, cattle, deer, and horses. The gnats can transmit bluetongue virus to ruminant animals (including deer) when they bite.

We tend to see seasonal variations due to increasing gnat activity in summer and early fall, with some years being worse than others as a result of differences in environmental conditions. Counterintuitively, drought conditions can increase bluetongue infections as livestock and wildlife concentrate at the few remaining water sources allowing for greater opportunities for bluetongue transmission by gnats to these animals.

This article continues ▶

Bluetongue continued

Sheep typically have more severe clinical signs than cattle including: high fever (104°F or greater), swollen tongue, face, or ears, ulcers in the mouth (especially the dental pad), excessive salivation and nasal discharge. Many sheep will have swollen legs (especially around the coronary bands) and are often painful to walk or stand. Pregnant animals may abort or give birth to weak or stillborn lambs. Lambs may have nervous signs. Sheep that do survive infection may shed their haircoat weeks after infection. Death losses in susceptible flocks can be as high as 30%. Lambs are more commonly affected as they are less likely to have any immunity from previous exposure of the virus. While cattle are less likely to die of Bluetongue virus you may notice excessive salivation and even abortions, stillbirths, or calves born with nervous signs.

While a vaccine is available for this virus it is recommended to vaccinate prior to breeding and before the high-risk season for Bluetongue. For those who breed in the fall this may be feasible during the summer months. In a brief investigation, one flock in Siskiyou County was diagnosed with serotype 11 this fall of 2021. The vaccine that is commercially available aids in the protection against Serotype 10 and does not offer cross protection to other Bluetongue virus serotypes. There are multiple Bluetongue virus serotypes (10, 11, 13, and 17) that are present in Northern California during any given year. Generally, it is not recommended to use the commercial vaccine unless you are sure that serotype 10 is circulating in your area due to concerns about virus reassortment between the wild strains and the vaccine strain creating and entirely new serotype of Bluetongue virus with unknown effects.

While controlling these gnats using insecticides or by altering their developmental habitat is very difficult, gnat bites can be reduced by housing your animals indoors at night or protecting more susceptible sheep outdoors by pasturing them with cattle. Gnats seem to stay outside of structures (even without bug netting), so bringing small flocks into barns at night may help reduce animal exposure to these gnats. Also, gnats are more attracted to cattle and thus sheep may experience fewer bites and reduced occurrence of disease when sheep are held close to cattle. Deer on the other hand can be quite susceptible to Bluetongue and their interactions with sheep and cattle should be limited whenever possible.

When sheep must be moved through an area experiencing an outbreak of Bluetongue, the number of gnats biting sheep might be reduced for a short time by application of insecticides applied topically to each animal with particular care to treat the belly and flank. While insecticides applied in this way have been shown to reduce the number of gnats on treated animals, it is not clear that this will result in fewer animals being infected with Bluetongue. Appropriate insecticides to apply to sheep for control of biting midges can be found using the search tool for the VetPestX database here: https://www.veterinaryentomology.org/vetpestx

Ranch Disaster Planning

By Rebecca Ozeran, with recommendations and materials created by Dan Macon, UCCE Livestock and Natural Resources Advisor in Placer-Nevada-Yuba-Sutter Counties.

Table 1. Regardless of disaster type, the following aspects of your ranch should be considered.

Human health & safety	Livestock health & safety	Property & infrastructure		Forage	Access
Direct risks (life or death)	Direct risks (life or death)	Home(s)	Meat storage	Standing forage	Owned vs leased land
Indirect health risks	Indirect health risks	Barns, outbuildings	Equipment	Stored forage (hay)	Physical barriers
Mental health	Production losses	Corrals, fences	Stock water	Seasonal impacts	Law enforcement barriers
Health/ insurance/ legal documents	Other animals (e.g. working dogs)	Human drinking water	Information, data		Ability to move livestock

If you have animals in multiple locations, consider a separate plan for each location. Your plan should include a description of what you will do in response to disaster. Discuss plans with family, friends, and neighbors. The following focuses on wildfire preparation and response.

Human health and safety.

As much as you want to ensure the safety of your animals, human life is most important. Have a plan to keep yourself, your family, and any employees safe. It's like what they tell say in airplanes: help yourself to oxygen first, then you will be able to help others.

- Create and share a communication plan with family and employees.
- Identify safe meeting points on and off your property.
- Identify evacuation routes off your property – more than one if possible.
- Have an emergency go-bag packed and ready to take with you (see http://www.readyforwildfire.org/Emergency-Supply-Kit/).

Livestock health and safety.

Protect your animals by acting before and during a disaster. On leased property, you may need to work with the landowner to prepare some of these actions.

- Create and maintain safe shelter zones on your property
- Ensure access to feed and water – communicate with law enforcement or aid organizations as needed to bring feed and/or water onto your property.
- Consider opening internal gates or taking down temporary fences if you can't evacuate livestock.
- Keep up-to-date contact information for helpers who can handle livestock. Familiar handlers will help keep animals less stressed and easier to move.

This article continues ▶

Planning continued

Maintain an up-to-date record of where your animals are during the year.

Ensure your animals have identifiable tags, brands, or other markings in case they flee your property or are relocated to a shared space.

Maintain a relationship with a veterinarian to manage post-disaster health impact.

Property & infrastructure.

Protecting land and infrastructure helps protect human and animal health and can keep assets resilient during disasters. Consider buildings, pumps, power sources, water sources, fences, trailers and 4-wheelers, cold storage for home food or marketable meat, and information and data storage.

Harden structures (barns, homes) using appropriate construction and maintenance to reduce flammability. Remove flammable debris from around them.

Defensible space is the area around a structure that should be maintained to reduce risk of fire. In general, the closer to a structure, the stricter you should be about what vegetation and flammable items are allowed to be there.

Fuel breaks on boundary and/or interior fence lines can help create safe spaces and reduce the overall risk of fire spreading to, or within, your property.

Consider keeping alternative power or fuel sources – with their own defensible space – in case of power shutoffs, to maintain water pumps, refrigeration, and other functions that rely on electricity.

Keep important documents like ranch records, insurance information, property maps, and so on, in a safe place that you and others can access. If possible, have a digital backup of physical records, and a physical backup of digital records.

Forage.

People, animals, and property are aspects that come to mind first in an emergency. Longer term, you will want to consider forage for your animals.

Many actions to protect other assets will also protect forage, such as fuel breaks.

Stockpiled forage can be critical to get through a drought. Residual Dry Matter (RDM) can be managed to balance fire hazard with next year's forage growth.

Consider areas that can be used as "sacrifice areas" to contain livestock during an emergency. This area will receive high impact but allows you to stockpile in other areas, or to maintain proper RDM on the rest of the ranch.

Access.

Maintaining usable roads and handling facilities will make a big difference in evacuation or caring for livestock during an emergency.

Ensure that your evacuation route(s) is (are) adequate to allow truck and trailer traffic – consider whether routes can also accommodate EMS traffic.

Keep livestock handling equipment (chutes, halters, etc) easily accessible.

Some counties have developed Ag Pass or Disaster Pass programs. These tell law enforcement officers that you have a good reason to be behind their barricade: to care for or evacuate livestock. However, a pass *does not* guarantee access.

Have a backup plan if you can't access your property. Communicate in advance with law enforcement and partner organizations so they know where your animals are and what they need.

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Don't have a disaster plan? Try out this one-page template. ***Designed by Dan Macon.***

Fire Preparation Plan **Ranch Name**: _____

Date this plan is valid: _____ **Ranch contact has Ag Pass / Disaster Pass:** **Yes** **No**

Livestock details (species, class, #, re-pro status)	**Location (on/ off dates)**	**Safe zones (areas for shelter in place)**	**Evacuation routes, # of loads**	**Critical considerations (water, guard animals, feed)**	**Emergency Contact(s)**	**Emergency response option 1 (hours before crisis)**	**Emergency response option 2 (<1hr before crisis)**
EXAMPLE *50hd yearling beef stockers (steers + open heifers)* *Non-calving*	*Pasture 1* *On date: January 31, 2021* *Off date: June 15, 2021*	*1) Corral at south gate – no vegetation, metal fencing* *2) Stock pond –heavily grazed; shallow edges*	*1: South gate to main rd* *2: NE gate to gravel rd* *Stock trailer for 13hd: 4 loads to evac*	*Corral water has solar pump* *Corral needs hay* *Pond = 7+ days water, needs hay*	*Ranch owner* *Phone: XXX-XXX-XXXX* *Ranch hand* *Phone: XXX-XXX-XXXX*	*Evac to 2nd property, X miles away. One-way trip is X hrs.* *4 trips w/ stock trailer, 1 trip w/ semi.*	*Open, secure internal gates. If time, move herd toward stock pond or corral – away from fire threat.*

Backup haulers:

1. Name: _____ Phone: _____ • 2. Name: _____ Phone: _____

Other emergency contacts:

California Highway Patrol: _____ • CAL FIRE / County Fire: _____ • Sheriff: _____

Animal services/control: _____ • Other Emergency service: _____

Match.Graze

Looking for additional grazing land?

Check out Match.Graze, a platform created to connect livestock operations with landowners.

Match.Graze is a free online platform that connects livestock producers and landowners throughout the state of California. Whether you're a landowner seeking a small flock of sheep to mow your back 40, or a producer in search of seasonal pasture, Match.Graze can help you pair up with the animals or land base that you need! The Match.Graze map displays pertinent data from individuals that have voluntarily submitted information to the database, such as acreage or animal type available, forage characteristics, approximate location, and contact information. Search the map to find an answer to your personal grazing needs. With this service, University of California Cooperative Extension (UCCE) aims to support the expanded use of grazing to achieve California's collective habitat enhancement and fuels reduction goals.

View existing locations on the map and consider joining the network at:

matchgraze.com