



**Impacted by
2020
Wildfires?**

We want to
hear from you:

[https://
oregonstate.qualtrics.co
m/jfe/form/
SV_50YY07eUiRy0Bmu](https://oregonstate.qualtrics.com/jfe/form/SV_50YY07eUiRy0Bmu)



Theresa

By Theresa Becchetti
Livestock & Natural
Resources Advisor

WeedCUT

A new tool has been recently released to help find non-chemical control tools for a large variety of plants. Weed Control User Tool (WeedCUT) is available to help you determine the best non-chemical tool for managing weeds in natural areas. Tools that are included as options are: biological control, burning, competitive planting, bladed hand tools, chainsaw, pruners/hand saws, weed eaters, flaming, girdling (for trees), grub hoes, tillage, mowing, mulching, scuffle hoes, severing roots, solarizing, steaming, stump grinding, tarping, whole plant removal with hand tools and large equipment, and of course grazing. Not surprisingly, grazing is an option for the majority of the plant classes since many options will not work on a landscape scale (hand tools, steaming, solarizing, mulching, flaming, etc.). Cattle, sheep and goats can all be used to control a wide variety of plants from grasses and broadleaves to shrubs and young trees. There have been many tricks discovered to help encourage livestock to graze and browse more on plants they may not prefer and while typical grazing may not offer very good control on weedy plants, targeted grazing, intentionally done to reduce a specific plant, can be an important part of an integrated approach, with other non-chemical or chemical methods. If you are curious, you can check it out here: <http://www.weedcut.ipm.ucanr.edu>

Match.Graze

Match.Graze, a UC developed matchmaker site, is still gaining members, both grazers and people looking to use grazing as a tool on their property. If you have not checked it out yet, be sure you do. If you are interested in potentially finding more land for your livestock and have already submitted your information, take a minute to go look and see if any landowners are looking for livestock. Strike up a conversation and see if you can be a match!

<http://matchgraze.com>

Westside Rancher Meeting

The West Stanislaus RCD is holding the annual Westside Rancher Meeting **August 19, 2021** at Frank Raines Park. The agenda is heavily focused on ranching and fire due to the SCU Fire that affected the area in 2020. Please be sure to RSVP to the West Stanislaus RCD by calling 209-892-3026.

WeedCUT / Match.Graze / Westside Rancher Meeting	1
Drought / Fire and Grazing on Rangelands.....	3
Summertime—blue-green algae time.....	4

37th Annual Westside Ranchers Meeting

Date: **Thursday, August 19, 2021**

Time: 8:00 a.m. to 12:00 p.m.

Place: **Frank Raines Park – Del Puerto Canyon**

Complimentary BBQ Lunch Courtesy of West Stanislaus RCD

Prepared by Midvalley Cowbelles

Raffle Drawings and Prizes

Welcome and Introductions ~Norman Crow, West Stanislaus RCD Chair

8:05 **County Updates from the Stanislaus Board of Supervisors**

Chanace Condit, Stanislaus County Supervisor for District 5

8:15 **Burning and Air Quality Considerations**

Cassandra Melching, Outreach & Communications Representative, San Joaquin Valley Air Pollutions Control District

8:30 **Cal Fire updates**

Unit Chief Ed Orre and Division Chief Jake Hess

8:45 **Brand Inspection Update**

9:00 **County Ag Commissioner Update**

Kamal Bagri, Stanislaus County Ag Commissioner

9:15 **Farm Services Agency Programming post-wildfire**

Maria Perez, FSA Stanislaus County

9:30 **Natural Resource Conservation Service Programming**

Diana Waller, NRCS Stanislaus County

9:45 **The Value of Ranching in Wildfire Prevention and Suppression**

Theresa Becchetti, UCCE Livestock Advisor

10:00 **Ag Pass – A program to get ranchers onto their properties during a fire**

Detective Josh Talyor, Rural Crimes Unit; Theresa Becchetti, UCCE

10:30 **So you want a Prescribed Burn Association? How to start.**

San Benito PBA Charter Member

11:00 **Livestock Grazing, Wildfires and Greenhouse Gases.**

Felix Ratcliff, UCCE

11:30 **Lunch!**

MidValley Cowbelles

Raffle Prizes, Thank You and Adjourn

****Please bring a chair with you in case it is hot and we decide to be outside in the shade****

Drought

Drought is becoming a regular reality. Hopefully everyone has a plan that the entire family has agreed upon, whether it is when to purchase more feed, what types of feed, what pasture may have to be used as a “sacrifice” pasture that has good water and is easy to feed livestock in, and the hard decisions of culling – when to cull and what traits are you going to use. For culling, the easiest thing to cull on is an open animal. But what to do in a drought and you have 97% pregnancy rate, like some had this spring? Other things to think of include soundness – how well are their feet and legs holding up? Can they still work across your landscape? What about their teeth? Do they still have teeth left? Udders are another key thing to consider. Do they have abnormal teats, tend to have problems producing enough milk, get mastitis easily? Udder conformation as well as production can be low hanging fruit for culling. Beyond the easy culling decisions, make sure you have discussed what next you might have to make a decision so everyone is in agreement, and it is an easier decision to make if or when the time comes. Making decisions ahead of time can be easier and my guess is most of you have a plan in your head, probably very similar to what you have done to survive past droughts. If you have not discussed it with the rest of the family, be sure you do. You might be surprised who thinks they should be part of the decision process.

Fire and Grazing on Rangelands



Date: Monday, August 30, 2021

Time: 4:00 pm to 5:00 pm

Location: This will be a virtual meeting. You can join by Zoom or by telephone.

Cost: Free, but registration is required.

Register here: <https://ucanr.zoom.us/meeting/register/tJMtcuysqD8pGdNa5Si2CqcMFqMED4ms1FoL>

or contact Devii Rao at drorao@ucanr.edu or 831-205-3125. Once you register, you will receive Zoom/call-in information. Registration deadline is August 27.

This 1-hour workshop will provide updates on:

- A project exploring differences in greenhouse gas emissions and particulate matter from burned grasslands that were grazed versus ungrazed; and
- Central Coast Prescribed Burn Association (CCPBA) activities

Summertime - blue-green algae time

Gaby Maier, Extension veterinarian for beef cattle herd health & production, UC Davis

Josh Davy, County Director Cooperative Extension Tehama County, UC ANR

Blue-green algae, also known as cyanobacteria, can be found in surface water like ponds. These photosynthetic bacteria do not necessarily pose a threat and are actually part of the ecosystem that provides oxygen to other micro-organisms. Under certain conditions, though, a so-called algal bloom may lead to a dramatic increase in their numbers and their subsequent die-off releases toxins into the water. Warm weather, stagnant



water, and nitrogen or phosphorus fertilizer runoff are risk factors that can result in these algal blooms. Some slow flowing creeks and rivers can also be impacted – every year the Klamath Rivers seems affected and Clear Lake is known to have had problems as well. Mild winds can push and concentrate blue-green algae on the water's edge. You will see scum, foam, or a mat of algae, or they can look like paint floating on the water surface. Their color can vary between blue, bright green, brown or reddish. Blue-green algae produce two types of toxins, neurotoxins and hepato-toxins (liver toxins). Both types can lead to sudden death in cattle if they drink water from ponds where blue-green algae were blooming. Dogs playing in or drinking from ponds and other animals have also been affected. Exposed cattle can have bloody diarrhea, be weak or seem confused. Often the only sign is sudden death. Those animals surviving hepatotoxic toxin exposure can develop what is called photosensitization caused by liver damage, a term for describing that their skin is more sensitive to light, where the skin, especially the lighter areas like muzzle, teats, or vulva peels off. Blue-green algae toxicity is in any case a severe problem and ranchers should be on the lookout to avoid their cattle becoming exposed.

When you are suspecting a blue-green algae bloom, the best way to avoid problems is to prevent access to the water source by fencing off the pond and providing a different water source. Toxin levels will increase as the cyanobacteria die. Once the water has cleared up, the best way to assure the water is safe again is to test at the lab. Toxins likely distribute evenly throughout the water so pumping water from the bottom of the pond may not be safe. However, this can be a good method of prevention. Cattle standing in small ponds depositing nutrients can exacerbate conditions and lead to algal blooms. Smaller water bodies are more vulnerable, because a larger volume of water helps dilute the nutrient load, but large lakes and reservoirs are not immune and have been impacted as well. Diverting water from a pond to a water trough and then fencing off the pond can decrease the nutrient load and help prevent algal blooms. The [Natural Resources Conservation Service](#) (NRCS) can help cost share with this and other livestock water development projects.

Continued on Page 5

If you are in doubt whether you have blue-green algae in your pond, there are a few simple tests to distinguish them from normal harmless water plants or other types of algae. Wear gloves for all these tests to avoid contact with toxins. Thrust a stick onto a mat of algae and pick it back up – if it comes back looking like it has been dipped in paint, it is blue-green algae. If it comes back with threadlike algae dangling from it, it is a different type of harmless algae. Another way to check for blue-green algae is to fill a mason jar or other clear container about $\frac{3}{4}$ with water and refrigerate overnight in a secondary container like a clear plastic bag to avoid any contact between the jar and other surfaces. Carefully inspect the next day; if all the algae are at the bottom, they are likely not blue-green algae. If they are floating at the surface, they are likely blue-green algae. These tests are not 100 % accurate but can be helpful in assessing the situation. If you identify blue-green algae in your pond, that does not necessarily mean that they pose a threat at that time. It does mean, however, that you should watch for algal blooms where toxins are released.

Testing at CAHFS lab is also possible. The lab offers an algae toxin panel, which is priced at \$605 to test for 4 different toxins (Anatoxin-A, Cylindrospermopsin, Microcystins, Saxitoxins) or \$165 for individual toxins. Testing requires 500 ml (about 1 $\frac{1}{2}$ pints) of water that should be shipped on ice to the lab.

If one or more animals die acutely, it is important to consider a postmortem examination to try to determine if an algal toxin is the cause of death. The liver damage associated with exposure to hepatotoxic blue-green algae is dramatic and this can indicate the need to test for microcystins in water or gastro-intestinal content samples. The neurotoxic blue-green algae toxin does not cause any changes in organs after death, but gut contents can again be tested to help determine a cause of death.

Copper sulfate is a way to treat the water and kill the algae but can lead to high copper levels in the water, which can be harmful to cattle. Sheep are particularly susceptible to copper toxicity. Any treated drinking source should be tested for copper levels prior to allowing sheep to consume the water after a copper sulfate treatment. It is important to follow label directions to ensure enough product is used to be effective, but not an excessive amount that can cause toxicity to animals. Bleach can also be a successful treatment.

If a pond is treated it will be necessary to determine the volume of the pond, so the proper amount of product is applied. UC ANR publication [8681](#) demonstrates a method for measuring pond volume. In addition, rapid die-off of algae can lead to large amounts of toxins being released into the water making it unsafe even though it appears clear. For this reason, and to ensure ample time for the product to work, livestock should be excluded from the treated water source until the treatment period is over.

More sophisticated technical solutions are available but come with a price tag. Devices that emit ultrasound waves prohibit microscopic algae from floating to the water surface where algae need to spend time for photosynthesis, which is the plants' way of turning sunlight into energy. Blue-green algae will not survive without that energy source. Full systems adapt the emitted ultrasound frequencies according to an algorithm and monitor water quality in real-time alerting the user to any changes in algae levels. The advantages of this system are that the algal cells are not lysed and do not release their toxins into the water and no chemicals must be used that could be potentially harmful to non-target species. A ballpark figure is about \$1,200 / surface acre for larger water bodies. Smaller, less sophisticated units are also available. The disadvantage of this system is that it is less effective in shallow water below 3-4 feet.

Mechanical aeration and mixing are other ways to decrease blue-green algae but require an electrical power source and systems maintenance. Mixing is more effective for deeper water bodies (> 45 ft).

Another thing to keep in mind is that cyanobacteria have been around for billions of years and know a thing or two about evolution. They can adapt to their environment, so whatever you do to control them it's important to stay a step ahead of them and not rely on the same method over time.

Livestock Lines

Stanislaus & San Joaquin Counties

Look What's Inside:

- ◆ **WeedCUT / Match.Graze**
- ◆ **37th Annual Westside Ranchers Meeting**
- ◆ **Drought / Fire and Grazing on Rangelands**
- ◆ **Summertime—blue-green algae time**



By Theresa Becchetti
Livestock & Natural Resources
Advisor

To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products which are not mentioned.

The University of California prohibits discrimination against or harassment of any person employed by or seeking employment with the University on the basis of race, color, national origin, religion, sex, gender identity, pregnancy (which includes pregnancy, childbirth, and medical conditions related to pregnancy or childbirth), physical or mental disability, medical condition (cancer-related or genetic characteristics), genetic information (including family medical history), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994: service in the uniformed services includes membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services) or any person in any of its programs activities. University policy also prohibits retaliation against any employee or person seeking employment or any person participating in any of its programs or activities for bringing a complaint of discrimination or harassment pursuant to this policy. This policy is intended to be consistent with the provisions of applicable State and Federal laws. Inquiries regarding the University's equal employment opportunity policies may be directed to Linda Marie Manton, Affirmative Action Contact, University of California, Davis, Agriculture and Natural Resources, One Shields Avenue, Davis, CA 95616, (530) 752-0495