



Mineral Status of Cattle in California

Did You Know?

We have many great resources for weed control, including [free publications](#) on toxic plants.

By Theresa Becchetti
Livestock & Natural Resources Advisor

As a result of a Russell L. Rustici Rangeland and Cattle Research Grant, my colleagues and I sampled breeding cattle in the state to determine levels of different minerals. We found levels in cattle are sufficient for some minerals, but there are deficiencies still needing to be addressed. Minerals play such a vital role in the health and well-being of cattle, and some specifically play an important role in reproduction. Knowing what your levels are helps you determine if your mineral program is working, or if you need to start a mineral program.

Statewide, except for a few minerals, overall cattle are receiving adequate levels of minerals in their diets. We did find regional differences, and our region has more cattle below critical levels of selenium compared to the rest of the state. In our region, 28% of cattle are below critical levels compared to 3, 4, and 2% of cattle in the Intermountain, Northern foothill, and Southern parts of the state respectively. Selenium deficiency is also known as white muscle disease and affects calves, with up to 40% death rate. Symptoms vary but can range from a weak calf not able to stand, to one standing and walking stiffly, to muscles swollen and firm to the touch. With over a quarter of the cattle in our area deficient in selenium, it would be important to check your mineral program to be sure you are providing adequate levels.

Other minerals that would be of concern in our area include copper (31% of cattle were deficient), zinc (23% were deficient), iron (62% were deficient) and manganese (92% were deficient). Statewide, 92% of cattle were deficient in manganese, a mineral we know plays a role in reproduction, but until now we had no record of the levels in breeding cattle. Manganese deficiency can reduce the cow's ability to breed through reduced conception rates, abortions, silent heats and cystic ovaries. In addition, low levels passed to the calf cause skeletal deformities with enlarged joints, limb deformities, or the calf may be small and weak. With such high levels of cattle being below critical levels of manganese, and no corresponding increase in symptoms of deficiencies, we wonder if the critical level is actually higher than what has been previously reported.

Cattle in the Central region are typically above critical levels for magnesium, calcium, phosphorus, potassium, and sodium. Take a look at your mineral program and your breeding records. If you see any issues in your records in regard to calving rates, calving interval, or weak or deformed calves you may want to look at your mineral program and see how you can improve levels of some important minerals for your ranch.

Mineral Status of Cattle in California	1
66th Annual Oakdale Livestock Forum	2&3

66th Annual Oakdale Livestock Forum

March 7, 2019

9:00 a.m.—12:00 p.m.

Gene Bianchi Community Center

110 South Second Street

Oakdale, CA 95361

This meeting is sponsored by the University of California Cooperative Extension, the California Beef Cattle Improvement Association and the Calaveras, Tuolumne and San Joaquin/Stanislaus Cattlemen's Associations.

9:00 am **Registration and Morning Hospitality**

9:15 am **Welcome, Opening Remarks**

9:20 am **Not All Grasses are Equal**

Theresa Becchetti, UCCE Stanislaus and San Joaquin Counties

9:45 am **Genetic Improvement of Beef Cattle: Current Practice and Future Prospects**

Alison Van Eenennaam, UC Genomics Specialist

10:30am **Vaccinations/Mineral Supplement**

Gaby Maier, UC Davis Veterinary Medicine

11:15am **Livestock and Greenhouse Gasses – How bad is it?**

Frank Mitlohner, UC Davis

12:00pm **Lunch**

Conclude with Beef Lunch Prepared by the Mid Valley Cowbelles



Attendees may request meeting accommodations by contacting our office at (209) 525-6800 at least 48 hours prior to events.

66th ANNUAL OAKDALE LIVESTOCK FORUM
REGISTRATION FORM

Thursday, March 7, 2019
9:00 a.m.—12:00 p.m.
110 South Second Street
Oakdale, CA 95361

Name: _____

Address: _____

Daytime Phone: (____) _____ Number Attending _____

Refreshments and lunch will be provided to all participants.

Please return this form with payment of \$10.00 for each participant. Enclose a check or money order payable to U.C. Regents. Payments & Registration are due March 1, 2019 (or pay \$15.00 at the door).

Mail registration to:

Theresa Becchetti, Livestock Advisor
U.C. Cooperative Extension
3800 Cornucopia Way, Suite A
Modesto, CA 95358
(209) 525-6800

A Calaveras, San Joaquin, Stanislaus & Tuolumne Counties educational program



Attendees may request meeting accommodations by contacting our office at (209) 525-6800 at least 48 hours prior to events.

Livestock Lines

Stanislaus & San Joaquin Counties



By Theresa Becchetti
Livestock & Natural Resources
Advisor

Look What's Inside:

- ◆ Mineral Status of Cattle in California
- ◆ 66th Annual Oakdale Livestock Forum

Upcoming 2019 Events

2/19-3/22:	Vote for CA Cattle Council—ballots received in mail
3/7:	Oakdale Livestock Forum
4/10:	Westside Rancher Meeting

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

Current Resident or:

UNIVERSITY OF CALIFORNIA
COOPERATIVE EXTENSION
3800 CORNUCOPIA WAY, SUITE A

NONPROFIT ORG.
U.S. POSTAGE PAID
MODESTO, CA