



Did You Know?

COVID-19 and Coronavirus in cattle are not the same virus? See page 3 for more information!

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We are all witnessing history. Something that will shape the next generation of kids (Gen Z) and our futures. Livestock prices are dropping while at the same time there is a record demand for meat. Local grocery stores have limited supplies and messages are going out that due to packing plants being shuttered because of COVID-19, there may be even less supply. Meanwhile, live animals still need to be marketed up and down the chain. Now, more than ever, does the shortcomings of our food system really rise to the forefront. Hopefully, out of all of this will come something positive that improves our food system with potential benefits for the producer more than our current system. Time will tell.

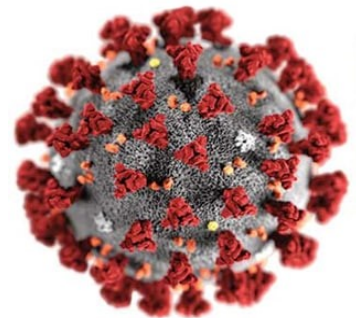
As you move forward with your spring work in our current shelter in place orders, I hope this article by my colleagues and our Vet Specialist gives you some guidelines to keep your family and friends safe. Agriculture, and now packing plants, are essential businesses, and you need to continue operating while also ensuring a reduced risk of spreading COVID-19.

To let you know, Cooperative Extension has been deemed essential because we work within agriculture. While I am not in the office, I am available (the office phone will forward to my cell) if you have any issues or concerns. We have been approved to do field work and farm calls, all while maintaining social distancing. I am hoping our efforts are working, that we find a vaccine, and we are able to return to “normal” soon.

Spring Cattle Work and COVID-19

Larry Forero, Shasta and Trinity Counties, Sheila Barry, Bay Area Counties, Josh Davy, Tehama, Glenn and Colusa Counties, and Dr. Gabriele Maier, CE Specialist for Beef Cattle Herd Health and Production

The COVID-19 pandemic has much of the California population staying home in an effort to reduce the spread of the virus. Across the state, many grocery stores have had shelves emptied of food and other day-to-day necessities as people have stockpiled these essentials. Bob Moller, a rancher in Shasta County, recalled this was similar to the grocery stores of 1945 that noted items were out of stock or customers were limited to the number of items they were allowed to purchase.



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Agriculture workers are considered “essential” and are allowed to tend crops and care for livestock. Beef cattle ranching differs from more intensive agriculture production as much of the work (fixing fence, feeding, checking cattle) is generally a solitary activity. This changes as spring work commences. While the kind of work may differ between ranches with spring calving cows and fall calving cows, establishing and following some simple protocols should reduce the risk of contracting and spreading COVID-19. Though many working cattle are not in the high-risk category, many will be, and future contact with someone that is will be inevitable so precaution is necessary.

1. Maintain the Center for Disease Control Social Distancing recommendation of six feet. This might mean:

- A. Taking separate vehicles to the work site
- B. Requiring that the chute operator conduct all the work associated with the animal in the chute (shots, tags, etc).
- C. Developing a system to bring cattle to the chute such that the crew maintains at least this distance.
- D. Branding crews might need to change the process up with just one person throwing the calf and changing the ropes and only one person conducting their assigned task at the calf at a time. Crews should adhere to social distancing while waiting to conduct their task.

2. Tools and Equipment

- A. When a task is assigned to someone, provide them with the equipment to do the task (syringe, ear tagger, etc). Have them wipe the tool down with a disinfectant. For syringes, just wipe the syringe handle--do not spray alcohol or something else on the vial. Do not expose modified live vaccines to disinfectants as they may inactivate the vaccine. Let the person assigned to the task do the job—resist the urge to ear tag the animal while they are refilling the syringe. The tool needs to be in their control.
- B. Provide plenty of hand sanitizer and wipes to disinfect equipment and tools and/or wear gloves.

Also remind everyone to not touch their face when working in a group.

- C. Consider avoiding meals together. It might be better to give the crew a gift card for takeout.

3. Limit the number of people participating

- A. The virus spreads readily through community contact. To reduce the possibility of spread, knowing who the crew is and having an idea of who they have been in contact with should help. If at all possible, try to work with people who are not a high risk.

The authors recognize that not all of these ideas will be possible all the time, however, urge beef cattle producers to consider the severity of this pandemic and their importance as food producers as they plan their spring livestock work.

Match.Graze

Have you ever thought about trying to do grazing as a service? Whether you graze cattle, sheep, or goats, all have been used for different types of contract grazing. It is more common to see smaller ruminants along freeways or housing departments, but with a push to reduce fuel loading, cattle have been and will continue to also be part of the equation. There is a new effort to try and connect grazers and browsers with landowners in need of the service. My colleague in Sonoma County has developed Match.Graze after witnessing wildfires in 2017 and 2019. Post-Tubbs Fire there was discussion locally about increasing grazing on all lands, private and public, in the county. But nothing happened. She has worked on creating a web-based clearing house for both the grazers and landowners to “find each other like Match.com dating app!” You can create a profile letting landowners



know where you are willing to graze (from Fresno to Sacramento Counties), what species you have access to (goats, sheep, and/or cattle), if there is a time of the year that you may be more available and any other information you wish to add. You can also search by landowners who post their requests for help grazing their property. This is a very new effort, and our hope is as more people begin to enter their services, there will be a larger section of California represented and more landowners will be drawn to the resource. The goal is to have not just small patches of freeway frontage needing to be grazed, but also potentially larger landscapes. It will be a great tool for private landowners who do not currently graze but want to use grazing to reduce fuels. If you have any interest, please fill out the survey at <https://ucanr.edu/matchgraze> so your information will be included on the site. The website will be up and running with some grazers and landowners within the month.



COVID-19 and Animal Health

Some animal rights activists are using COVID-19 to their advantage and pushing their platform to end animal agriculture. Please be aware, they are all using fear and mistruths. Our Beef Vet Specialist, Dr. Gaby Maier, has written the following article to set the record straight and provide you with information to share with others. If you are on social media, please share your stories – share pictures of how you are caring for your animals and your land, how you are taking steps to protect your employees (often your family, friends, and neighbors), and share statements from Dr. Maier to educate people about the differences in coronaviruses in humans and animals.

Coronaviruses in human and animal health

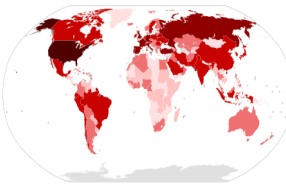
Dr. Gabriele Maier, CE Specialist for Beef Cattle Herd Health and Production

Now that we are in the midst of the Covid-19 outbreak, you might wonder about how this virus is different from coronaviruses that infect livestock and oth-

er animals. Let's try and answer some questions you might have with regards to this topic.

How widespread are coronaviruses?

Disease from coronaviruses is very common in humans and animals. Many species have their own version of coronavirus. In fact, one of the causes of the common cold in people is a coronavirus.



What's important to understand is that in general, these viruses stick with a species based on

how their surface proteins fit receptors on the cells of their target species, in a lock and key fashion. The reason this novel coronavirus is such a threat is because it is new to our species, there is no immunity to it in the population, it spreads easily, and it can cause severe disease.

What is the source of the novel coronavirus?

What is the source of the novel coronavirus?

SARS-CoV-2, the official name of the new coronavirus, is thought to have jumped from animals to humans. The exact source is still unknown, but, at the moment, the most likely explanation is that it came from bats. You probably remember the SARS outbreak from 2003, which was caused by a similar coronavirus. Bats were found to be the likely source of the virus in the 2003 SARS outbreak, and probably passed it on to other animals that were sold in markets in China, such as the palm civet, a cat-like animal. Along the way the virus underwent mutations and finally was able to infect a new host – humans. Most importantly, it was able to spread from person to person. A similar mechanism was likely at play for this new coronavirus outbreak but with new information coming forward, this idea may change.

How is the novel coronavirus different from coronavirus in cattle?

The good news is that the bovine coronavirus we have in the US belongs to a different strain of coronaviruses than the SARS-CoVs that have jumped to humans during the 2003 SARS and the current Covid-19 outbreaks. Bovine coronavirus is a cause of calf diarrhea, winter dysentery in adult cattle, and is thought to cause respiratory disease for example as part of the shipping fever complex. There is no expectation that the novel coronavirus can infect cattle or that the bovine corona-

-virus that is endemic in the US causes disease in people. There is also no evidence that imported animals or animal products pose a risk for spreading Covid-19, according to the CDC. Overall, there is no connection between coronavirus in cattle and SARS-CoV-2.

What about coronaviruses in other animals?

Epidemiologists are often worried about pigs as a mixing vessel for viruses that affect people and animals, e.g. for influenza viruses. Pigs have their own versions of coronaviruses that are the cause of Porcine Epidemic Diarrhea (PED) and Transmissible Gastroenteritis (TGE). However, just like in cattle, the coronaviruses in pigs are different and there is no evidence that pigs can get infected with SARS-CoV-2 or that they can transmit and spread it.

Should I worry about my pets?

At this time, there are also no reports that pets can get infected with or transmit SARS-CoV-2. However, the CDC cautions to restrict contact with pets while you are sick from Covid-19 because there is still a lot we don't know about this new virus.

Would the coronavirus vaccine we have for cattle work in people?

Unfortunately, the corona virus vaccine for cattle would not work for people in the current pandemic because of the difference in strains. In fact, intentional or unintentional injections of animal vaccines in people can have adverse effects such as toxic inflammation or allergic reactions and must be avoided.



Additional resources

It is hard to escape information about Covid-19 during this time. While there is a lot of information out there, not everything may be accurate. A reliable and up to date source is the CDC webpage including a page about animals:

<https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/animals.html>. As time goes by, we may find out more about the source of the virus and other important facts, so check back occasionally for the latest information and recommendations.



Our Mental Health During Shelter in Place

Mental health receives more attention than it used to, and for a good reason. As an introvert, I am perfectly content to stay in my little cocoon, get caught up on computer work, and enjoy a slower pace to life for a short period. I do miss my connection to many people, including the great families I have the privilege to work with, but I really don't mind the shelter in place order. I do have extrovert friends who feed off the energy of being around people, different people, not just their family members. Some of those extroverts live by themselves, which makes me more concerned for them and if they are handling sheltering in place well or becoming depressed. Combined with the huge unknowns we are all living through with the economy, dropping cattle prices, the stage is set for mental health concerns and the headlines have been dotted with suicides already. The dairy industry statewide has had more than their fair share of suicides in the past as milk prices have plummeted along with rising feed costs and debts. The California Dairy Research Foundation along with the California Dairy Quality Assurance Program and UC Cooperative Extension have compiled resources, as well as, a presentation about mental health. Please take a few minutes to check out this site and watch all or part of the webinar. The information may not pertain to you, but there may be someone you know, in or out of animal agriculture, who just might benefit from the information.

<http://cdrf.org/home/checkoff-investments/cdqap/dairy-mental-health-webinar/>

Livestock Production and Environmental Footprint

Life Cycle Analysis (LCAs) are created for products to try and determine the impact something has on the environment, all the way from cradle to grave. For livestock production, this means from when the

calf/lamb/kid/piglet hits the ground until the steak/chop reaches the consumer's plate. LCAs are supposed to take into consideration all of the inputs, so this effort combines air quality, carbon footprint, and water use. Animal agriculture is not easy to confine within one analysis since there are so many different decisions that are made regionally (consider the Modoc County vs Stanislaus County vs Kern County differences for grazing), let alone annual differences due



to weather conditions. An effort has been made to try and capture regional differences across the United States over a five-year period. Results so far have backed up much of what Dr. Mitloehner, our UC Air Quality Specialist, has been stating from

his research. Beef cattle production accounts for 3.3% of all greenhouse gases in the U.S. All of agriculture accounts for 9%, and transportation and electricity generation account for 56%. Fossil energy use including in animal production accounts for less than 1% of total national consumption. And cattle are only consuming 2.6 pounds of grain per pound of beef cut weight (butchered carcass weight). Not surprisingly irrigated crops account for 96% of water use for feed, nationally. For those of you who have heard Dr. Mitloehner speak, a message he emphasizes is use of social media and sharing information like this widely. (Data sources: Environmental footprints of beef cattle production in the United States by C. Alan Rotz, Senorpe Asem-Hiablíe, Sara Place, and Greg Thoma in the *Agricultural Systems* journal). To provide you with information to advocate, another source of data on livestock and greenhouse gases is Dr. Mitloehner's new CLEAR Center – Clarity and Leadership for Environmental Awareness and Research at UC Davis. The website has a wealth of information, and the Environment and Livestock Explainers section has great articles covering basics such as what is carbon sequestration, methane, greenhouse gas emissions and how cattle produce methane (no, it is not what everyone reports), if meat is bad for the environment, fossil fuels vs animal agriculture, and how a digester affects methane emissions. You can also read Dr. Mitloehner's blog, and if you are on Twitter, be sure to following him @GHGGuru, and of

course share his tweets with your followers to spread the news. The University has research showing the true impact animal agriculture has on the environment, now we need help to spread information to the public so they can make informed decisions. A great visual Dr. Mitloehner uses to demonstrate how much land ruminant animals use can be found in the 2020 Summit section of the California Rangeland Conservation Coalition's website: www.carangeland.org. He is the first speaker and you can download the "Paper Folding Illustration" then follow along with his YouTube video for instructions.

Many of us find some extra time on our hands right now, so use it to brush up on issues that face your industry and become an advocate yourself.

Range Camp

COVID-19 has affected virtually every aspect of our lives this spring and it appears that it will continue to do so for most of the summer, especially for our kids. I help organize a Range Camp for High School- aged kids every summer, we had to make the hard decision to cancel our week-long camp. There were too many unknowns for a June camp. However, we are going to use technology to our advantage and organize a set of videos on some of the topics covered each year. These will be available free to everyone. We are still finalizing the topics that will be used, but each video will be under 5 minutes and most will have an activity that can be done in your backyard, whether you have 1,000 acres or 200 square feet. The audience will be high school-aged kids, but younger kids may also find something interesting in the videos. We will be sending the videos to local high school biology and FFA teachers in hopes that our material may be used in schools.

Increasing the knowledge base of the many benefits provided by working rangelands is a goal many of us have. We hope this opportunity will increase our efforts. Range Camp is traditionally held from Father's Day to the following Friday and we have already reserved our space at the University's Elkus Ranch for 2021.



Livestock Lines

Stanislaus & San Joaquin Counties



By Theresa Becchetti
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Look What's Inside:

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