

Golden State Dairy Management Conference

November 18, 2024

Stanislaus County Ag Center – Harvest Hall
3800 Cornucopia Way, Modesto, CA
11:00 am – 3:30 pm

California research to address California dairy needs

We’re excited to welcome **Corey Geiger**, Lead Dairy Economist of CoBank’s Knowledge Exchange as our keynote speaker to discuss dairy’s bright future.

Scientific sessions will provide research updates from University of California Farm Advisors, Specialists and Faculty.



Scan the QR code (or visit <https://ucanr.edu/goldenstatedairy>) for conference details, including the full agenda, registration link and sponsorship opportunities.

The UC Golden State Dairy Management Conference occurs every other year. We hope to see you in Modesto this November!

Questions: jmheguy@ucdavis.edu or 209-525-6800

Register early for the best rate!

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Minimizing HPAI Risk on Your Dairy: Key Practices to Protect Your Herd

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Highly Pathogenic Avian Influenza (HPAI, a.k.a., H5N1) has been recently confirmed by testing in California dairy farms. It has been six months since the first outbreak of HPAI in Texas cattle, but there is still much to learn about this disease. To reduce risk, it's important to implement biosecurity measures. Current protocols should be revised, and an updated outbreak action plan prepared. Milk remains the primary source of virus shedding. The National Milk Producers' Federation [website](#) provides many resources on biosecurity guidelines. Here are some additional considerations:

Animal Movement. Several HPAI outbreaks (nation-wide) were linked to bringing infected cattle into the herd. To minimize the risk of HPAI:

- Avoid bringing animals from states with HPAI outbreaks or farms of uncertain health status (no biosecurity protocols, no testing).
- Quarantine animals at arrival - interstate animal transport requires testing for HPAI in at least 30 cows per group before they can be moved. Because not all animals are tested, new arrivals should be quarantined. Quarantine pens should be designed so cows do not have contact with other cows from the herd. During quarantine cows should be observed for signs of illness such as nasal discharge, fever, lack of appetite, or abnormal milk (i.e., colostrum-like). This also applies to animals brought to the fair or that commingled with animals from other herds.
- Test animals that are suspected of HPAI or have been potentially exposed. Testing of pooled milk samples (if lactating) or nasal swabs (if non-lactating) by a National Animal Health Laboratory Network (NAHLN; Davis, California) lab can detect viral genetic material with PCR (test that detects genetic material of virus), providing results within days. Check with your veterinarian for testing recommendations.

Some farms affected by HPAI did not report new animal introductions 30 days prior to the outbreak. This suggests other potential virus carriers, such as workers, visitors, local wildlife, pets, or vehicles/equipment. Consider the following to reduce HPAI in your herd:

Safeguarding Workers. Workers, visitors, shared personnel, and consultants should:

- Keep up with personal hygiene. This includes regular showers, nasal and ocular hygiene. They should wear clean clothes and boots every day (if possible, do not take those outside the farm).
- Wear personal protective equipment (PPE) such as goggles, gloves, face masks, face shields, regular coveralls, disposable coveralls, aprons and shoe covers. Red and watery eyes are common symptoms of HPAI, goggles may provide protection. PPE is most important in high-risk positions [e.g., treating sick cows, milking in the hospital pen, handling dead animals (cattle, goats, cats, birds)]. Consider that PPE, like face masks, may be uncomfortable in extreme heat for long periods.
- Teach employees how to remove and dispose of PPE. Ensure workers in high-risk positions (i.e., hospital milkers, hospital treaters) do not interact with other workers until they remove their contaminated attire.
- Social interactions. Train workers on the danger of interacting with employees from farms undergoing an outbreak, even when their acquaintances do not feel sick. Recently (Sep 6th), the [first HPAI](#) human case not linked to animal transmission was reported.
- Use caution when handling milk. Reduce milk splashing in the milking parlor. Workers should not touch their faces with gloves contaminated with milk. Milk spilled on the floor of the parlor, milk house, or maternity areas should be cleaned immediately.
- Place footbaths at various farm entrances. Limit unnecessary worker and visitor interactions with cows.

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- Visiting several farms a day: Use disposable coveralls and a clean pair of boots at each dairy. Disinfect/clean your equipment/vehicle. In between farms, thoroughly wash your hands and face (nose and eyes).
- Free PPE: County public health emergency preparedness branches have distributed free PPE; check with your office for future distribution schedules.

Wildlife and Peri-Domestic Animal Control: Although no conclusive evidence links wild birds to HPAI transmission, limiting wildlife and farm pet (cats) contact with your herd is advised, especially for dairies near an outbreak. Some farmers have reported finding dead farm cats in the weeks leading up to an HPAI outbreak. Train workers to look out for non-farm dead animals and teach them how to dispose of them safely and communicate findings to the manager.

Early Identification.

- Engage with breeders, feeders, feed-pushers, and hospital pen workers to watch for clinical signs; they play a key role in early outbreak detection. If your cows wear rumination collars or you track daily milk yield, use that data to identify health alerts.
- Detect HPAI early through the voluntary [USDA-APHIS](#) free weekly bulk tank surveillance program. The main goal of this program is to reduce the spread to nearby dairies and to give affected farms some extra time to prepare before clinical signs appear. After three weeks of no viral genetic material in the milk, your herd will be classified as a "monitored unaffected herd," allowing animal movement without further testing.

We are learning about the importance of early surveillance as two states have mandates: 1) Iowa (July 1st) mandates intensive bulk tank milk testing if dairy farms are within a 12.5-mile radius of an infected poultry flock; 2) Colorado (July 22nd) mandates all licensed dairies submit a weekly bulk tank sample for HPAI testing.

We are still learning about HPAI, and recommendations on how to prevent the introduction of the virus on dairy farms may evolve as more is understood about the disease. While HPAI can be shed in milk, milk consumption remains safe. Pasteurization has been shown to inactivate the virus effectively. In August, the [FDA](#) published findings from a new study confirming that no live virus was present in pasteurized milk or dairy products. The Centers for Disease Control and Prevention (CDC) and the FDA have long-standing recommendations that consumers should avoid consuming raw milk or dairy products made from raw milk, which remains important during an HPAI outbreak.

Assessing Navel Size Variability in California Dairies

Yael Alonso-López – UC Davis, Grace Jardon – South Dakota State University, Noelia Silva-del-Río – UC Davis & UC ANR, Daniela Bruno – UC ANR & Rúbia Branco-Lopes – UC ANR

Navel disease can lead to serious complications, such as liver and kidney abscesses, septic arthritis, peritonitis, and even death. The umbilical cord connects the cow to her fetus, allowing the exchange of nutrients, oxygen, and waste products. After calving, the umbilical cord dries within 2 to 5 days, then detaches and falls off. Before the cord is fully dried, it can become a gateway for pathogens to enter the calf's body, potentially leading to infections. Earlier literature suggested that 1.3% to 14% of dairy calves develop a navel infection, but more recent studies indicate a higher incidence (~28%).

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California study. We aimed to describe navel size variability and potential navel disease in calves raised in the same calf ranch but sourced from 9 different dairies located in the San Joaquin Valley. The study included Holstein (n = 136) and Crossbred (n = 178) calves [female (n = 192) and male (n = 122)], ranging from 1 to 10 days of age. Measurements of navel diameter were performed with a digital caliper. Following criteria from previous studies, we defined navel disease based on its diameter and classified it as follows: normal (≤ 0.51 in), uncertain (>0.51 to 0.78 in) and abnormal (>0.78 in).

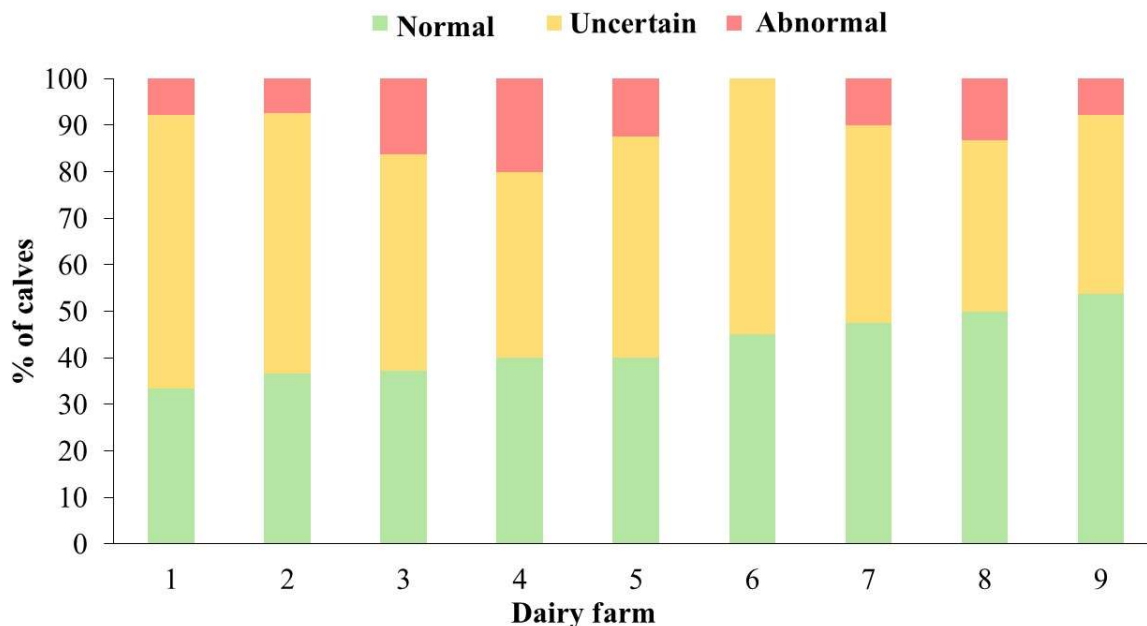


Fig. 1. Distribution of navel size (an indicator of navel disease) in calves raised in a single calf ranch, with each bar representing a different source dairy. Navel size was classified according to the following categories: normal (≤ 0.51 in), uncertain (>0.51 to 0.78 in), and abnormal (>0.78 in).

Results. Out of the 314 calves, 131 (41.8%) had navel size classified as normal, 151 (48.0%) uncertain, and 32 (10.2%) abnormal. The distribution of navel size of calves from the 9 source dairies is shown in **Fig 1**. The proportion of calves classified with normal navel size per farm ranged from 33.3 to 53.8%, whereas those with abnormal navel size ranged from 0 to 20.0%.

Take-home message. This study identified important variation in the distribution of navel disease classification between source dairies, suggesting that maternity-specific practices may affect navel health.

Remember – industry-recommended practices for navel health include:

- Maintain clean and dry maternity area.
- Disinfect the umbilical cord shortly after birth.
- Keep calves in a clean, dry environment until the umbilical cord has dried.
- Use clean navel dip cups and scissors.

For more detailed information on best practices for navel care, refer to our previous newsletter article, "[Keeping up with navel infection.](#)"

Bovine Respiratory Disease in Calves: Risks and Management Solutions

Betsy Karle- UCCE Sacramento Valley & Northern California &
Sharif Aly- UC Davis Veterinary Medicine Teaching & Research Center

As the seasons change, we oftentimes see an uptick in calf health issues, with pneumonia and other respiratory ailments requiring additional attention and resources. Several years of UC research efforts have yielded practical management solutions to help mitigate some of the challenges associated with bovine respiratory disease (BRD). Detecting disease early improves treatment outcomes and animal well-being. Working with your herd veterinarian to have prevention and treatment protocols in place is imperative. Protocols should be herd specific and employees should be trained to identify which animals need to be treated. The California BRD Scoring System (ucanr.edu/cabrd) is a useful tool for identifying calves with respiratory disease and was designed to be an efficient solution to quickly identify animals that need to be treated. The system uses six clinical signs, each categorized as normal or abnormal: nasal discharge, eye discharge, cough, fever, breathing difficulty/rate, and ear & head position. If the sum of points is 5 or more, the calf is likely positive for BRD.

California BRD Scoring System	
Clinical Sign	Points (if abnormal)
Eye Discharge	2
Nasal Discharge	4
Ear Droop or Head Tilt	5
Cough (spontaneous)	2
Breathing Difficulty/Rate	2
Fever*	2

*Rectal temperature only required if sum of score of other signs = 4
BRD Positive if Score \geq 5 points

Fortunately, we have identified many management practices that can mitigate the incidence of BRD and help reduce unnecessary use of antibiotics. Some of the most effective BRD management practices from our studies are:

- Vaccinating cows
- Clean and dry maternity pens
- Testing colostrum quality
- Pasteurizing milk fed to calves
- Feeding > 4 quarts of milk daily
- Dust control
- Secondary protection from elements (shade cloth/roof over hutches)
- No flush or freshwater only flush under hutches



In herds where BRD is a challenge, implementing positive management changes can have positive economic impacts and help prevent antibiotic resistance. Because it is a complex disease and management practices are variable across the industry, producers are encouraged to use the University of California BRD risk assessment app (see page 3 of the [December 2020 newsletter](#) for more info) to monitor BRD prevalence and evaluate the effectiveness of herd management practices. Our research emphasizes that a focus on the foundation of calf health and attention directed at prevention of disease is worthwhile and necessary.

Picture: Drooping ears indicate a calf is likely positive for BRD and should be treated according to herd protocol.