CDQAP Advisory: Heat Stress & Mortality Management

July 10st, 2026

The National Weather Service extended forecast into next week includes parts of the Central Valley with daytime highs between 95°F and 105°F. Overnight lows in many areas may remain in the upper 60s to mid-70s, temperatures that don't provide optimal nighttime thermal recovery of livestock.

Cattle in direct sunlight, including those in uncovered dry pens, are particularly at risk of heat stress. In addition, in-utero heat stress during the dry period can negatively effect fetal development. This promotes monitoring not only milking cows, but dry cows bred with either dairy or beef sires as well.

Producers are also understandably concerned about the effects of high environmental temperatures on both their livestock and their employees.

Provided below are resources that might be helpful to producers during the upcoming heat wave. Also included is information on what to do if your rendering service is disrupted.

Preventing & Managing Heat Stress in Dairy Cows

Cows are more sensitive to heat stress than humans, with production losses (at low humidity) starting in the low 80 degrees. *Water intake may double during times of heat stress* and water should always be available free choice. Water consumption can also be encouraged by water troughs which are shaded and easily available after exiting the parlor, when cows consume half their daily intake.

Detect heat stress by counting respiration rates:

- **Normal respiration rate for lactating dairy cattle is less than 40 breaths per minute.**

- **Severe heat stress is evident if five cows out of 10 have respiratory rates exceeding 100 breaths per minute. Such an observation should trigger emergency action.**

Minimize impacts of heat stress:

- **Be sure water is available free choice.**

- **Provide shade over clean water troughs at exit from the milking parlor (cows consume half their daily water intake here).**

- **For corral cows, provide adequate shade which reduces heat load of cattle by 30 to 50%. This remains the most cost-effective heat-stress mitigation method available.**

- **Check nozzles on sprinklers/soakers or misters/foggers to be sure they are functioning correctly. Water applications to livestock leverage heat stress reduction which is provided by shades.**

- **Sort cattle during cool morning hours.**

- **Schedule vaccinations *after* the heat event and in the morning. Vaccinations can induce fever and other metabolic changes making it more difficult for the cow to respond to environmental heat stress.**

- **Emergency action may include installation of temporary shade structures and/or soaking lines.**

- **Now is a good time to perform your monthly emergency generator test. Power can be interrupted due to Public Safety Power Shutoffs (PSPS).**

Detailed information on management of both routine and emergency heat stress in dairy cattle can be found at CDQAP's heat stress page.

Preventing & Managing Heat Stress in Dairy Employees

Heat stress can affect not only cattle but employees as well. Environmental heat stress will not impact all individuals in the same way. Age, physical condition, use of medications, ambient temperature, wind, exertion, alcohol use, acclimatization, and water consumption all contribute to an individual's response to heat stress.

A 150-pound man working moderately in warm weather can lose about 3/4 quart of water -- or 1 percent of his body weight -- per hour.

- **Outdoor employees should be encouraged to drink water, at least one quart per hour, or about one (8-ounce) cup every 15 to 20 minutes.**

- **Work with farm managers to schedule hot or high exertion jobs for the cooler part of the day.**

- **Acclimatize new employees to high-heat conditions. Military studies demonstrate it may take one to three weeks for non-acclimatized personnel to maximize their ability to sweat and cool themselves.**

- **Provide shade and scheduled breaks. Employees should not wait until they feel sick to cool down.**

- **Monitor employees for signs of heat exhaustion or heat stroke. Such symptoms can start with fatigue, headache, loss of concentration, dizziness and nausea and progress to confusion, slurred speech and fainting.**

- **Medical attention should be provided for a worker experiencing heat illness. Symptoms of frank heat stroke (confusion, loss of consciousness, seizures) indicate a life-threatening event.**

- **Research has demonstrated the most effective emergency first aid treatment (while awaiting medical services) is total emersion in cold water (bath tub, kiddie pool) or continuously soaking the patient's entire body with cool running water, such as from a hose or shower.**

- **Water has some 20 times more heat conductive capacity as air, so total emersion/soaking treatment is superior to the sole use of air conditioning, fans or ice packs.**

California employers are required to provide employee training on heat illness, access to both water and shade for periodic breaks and a written heat illness prevention plan. Cal-OSHA's heat illness prevention webpage also provides considerable information including video links, pocket guides in English and Spanish and a calendar of training courses. Additional guidance is available from the University of California's Heat Illness Prevention webpage.

Mortality Management During Heat Events

Heat events stress not only dairy workers and cattle, but rendering equipment and logistics as well. CDQAP and industry trade groups are working hard with CDFA to develop short-term and long-term solutions to rending service disruptions.

CDFA works closely with the rendering companies during extended heat waves to monitor their status and provide frequent updates. Currently all three major rendering companies are anticipating normal operations during the event.

If rendering service disruptions *do* occur, producers are advised to contact both their trade organization and CDFA's newly created *Rendering*

Disruption Emergency Call Number **at 916-900-5261. This number is operational and calls to it are forwarded to CDFA on-duty staff.**

Using this emergency call number as a point-of-contact facilitates collection of field information, thus assisting response coordination between agencies.

Industry partners with additional questions related to heat events or other dairy emergencies should contact Dr. Payne at 530-304-9306 or mpayne@ucdavis.edu.