CDQAP Quality Assurance Update - June 2021

Dairies and Drought

There's no silver bullet, but there may be actions you can take to prepare for the future.

By Dr. Michael Payne, UC Davis, School of Veterinary Medicine and Director, CDQAP

Although not yet as punishing as last decade's 5-year drought, more than 85% of the state is in *severe drought*. California's snowpack is virtually gone. Water deliveries have been slashed or suspended altogether. For California dairy producers, water scarcity, water uncertainty, periodic drought, and reduced water allocations are the new normal for the foreseeable future. Depending on a producer's location, facilities, and innovation, however, there may be avenues which could help mitigate some of the worst consequences of both future droughts and future groundwater regulations.

University Drought-Cropping Resources

The University of California system has consolidated all of its online drought information links into a single searchable drought homepage. Because the largest use of water on a dairy is for irrigation, producers might be particularly interested in white papers and videos addressing drought management of forage crops such as corn, alfalfa, and alternative crops, such as sorghum.

University of California, Agriculture and Natural Resources
California Institute for Water Resources

Emergency Relief

Two of USDA's Farm Services Agency's (FSA) programs may be applicable to dairies. The Livestock Forage Disaster Program (LFP) provides payments to livestock producers experiencing drought-related losses on non-irrigated grazing pastures. The Noninsured Crop Disaster Assistance Program (NAP) provides insurance when natural disasters result in lower yields. FSA also has provisions for hauling drinking water to livestock. This type of support however is typically reserved for rangeland animals whose sole sources of drinking surface-water, such as ponds or streams, have run dry.

Infrastructure Improvements

USDA's Natural Resource Conservation Service EQIP program is focused on preparing the farm before drought strikes. A list of specific water conservation practices supported by California's NRCS is some 35 items long. NRCS maintains different payment schedules, but cost-share typically results in 25% to 80% of a project paid for by USDA. The programs are numerous and complex and producers will need assistance in identifying projects that fit their farms. Location and contact information for both local FSA and NRCS offices can be found using USDA's California Service Center Locator site.

USDA NRCS
U.S. Department of Agriculture
Natural Resources Conservation Service

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Did You Miss It?

By Deanne Meyer, Ph.D., Livestock Waste Management Specialist, UC Davis, Department of Animal Science, UC ANR

The Golden State Dairy Management Conference was online this year! The conference presentations are posted and available to watch. Sessions focused on nutrition, animal health and management, crop production, and priority nitrate management zones. Each topic area included three speakers presenting ten minutes of information followed by a question and answer period. Feel free to reach out if you have suggested topics for future conferences.

Golden State Dairy Management Conference

Watch the Recordings

Available at https://ucanr.edu/sites/CAdairyconference/Agenda

Feeling Stressed Out? Overwhelmed? Mental Health Resources Are Available

Whether it is managing employees or price fluctuations or other issues, there is never a shortage of stressors in the dairy industry. If you, your employees, or someone else you know needs support, the CDQAP has resources to help. Visit our web link below.

Find and Share Resources

Available at https://cdqap.org/mental-health/

CDQAP's Drought Corner

USDA has announced $41.8 million in drought assistance EQIP funding. The application window however is narrow with a July 12th 2021 deadline. Interested producers should contact their local NRCS office.

Dairies and Drought *continued*

Manure Subsurface Drip Irrigation

As described in this video, one of the most recent conservation practices approved by NRCS is the use of Subsurface Drip Irrigation for lagoon water. In a California study organized by Sustainable Conservation, fields with silage corn on average saw a 2.5% increase in yield with a 35% reduction in water used, compared to control fields using flood irrigation.

With installation costs estimated at about $3,400 per acre, the sticker price can be daunting. NRCS-EQIP contracts however typically pay for about 80% of the costs. At a water cost of $75 per acre foot, with USDA funding, SusCon estimates a Return-On-Investment of $97 per acre. Without EQIP cost-sharing, the technology is estimated to return a positive investment when water costs reach about $210 per acre foot.

Subsurface lagoon water drip irrigation vs. flood irrigation of silage corn (Sustainable Conservation).

Groundwater Recharge for the Future?

With the pending implementation of the Sustainable Groundwater Management Act (SGMA), regions most severely impacted by groundwater overdrafts are developing protection strategies which include water budgets. Groundwater recharge provisions for orchards, row crops, and even dairy farms are already being written into some local plans.

One option local authority may pursue is allowing farmers to buy surface water during winter flooding at a nominal rate and apply it to either active farmland or fallowed fields. Once purchased and applied, the water now belongs to the farmer who is simply "banking" it in the local aquifer, ready for "withdrawal" pumping during the dry months, when the cost of water is much higher or unavailable. Groundwater recharge is not a strategy that will work for all farmers. Issues related to availability, conveyance, geologic conditions and legacy nitrate may have to be addressed.

Consumer Outreach and Education

It's important during droughts to remind consumers how dairies work to conserve water. Fortunately, there are a number of dairy organizations developing outreach in consumer accessible formats. The CMAB recently released dairy water stewardship tiles (mini-infographics) which are easily distributed through a variety for social media platforms. They include California water use, dairy water use, and by-product feed water savings. One of Dairy Cares' most recent publications explains how dairies are using a variety of technologies to conserve water. Western United Dairies #GreenCow project documents how California dairy families are leading the world in environmental sustainability, including water conservation.

For a complete discussion of all the resources discussed above, visit CDQAP's Dairies and Drought webpage.

Drought Resources

Available at https://cdqap.org/ruminations/dairies-and-drought