



20
YEARS OF
IMPACT

CALIFORNIA DAIRY
Quality Assurance
PROGRAM

CDQAP Quality Assurance Update - January 2022

Antibiotic Stewardship on Track on California Dairies

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

The federal Food and Drug Administration is poised to [require nation-wide veterinary oversight](#) of the use of medically important antibiotics in all livestock. The new requirement will be enacted probably by mid-2023. In part this means that regardless of the type of livestock or poultry being raised, farmers wanting to use antibiotics that are also used in human medicine will need a prescription from their herd or flock veterinarian.

While the change may be important in other states, it won't affect producers in California. Since 2018, with the passage of [Senate Bill 27](#), California has already required livestock producers to consult with their herd veterinarians on antibiotic use. In fact, rather than concerning news, this new national initiative by FDA not only levels the regulatory playing field across the country, it also highlights the progress the California's livestock industries have made over the last four years.



California's Leadership on Antibiotic Stewardship

At the heart of the state's effort to preserve antibiotic effectiveness is CDEA's [Antimicrobial Use & Stewardship](#) (AUS) Program. Consisting of veterinarians, epidemiologists and specialists, the program addresses the complex issue of antibiotic resistance on a variety of fronts. This includes data collection of antibiotic sales, monitoring development of drug resistance, surveys of industry practices, funding research on antibiotic alternatives and industry outreach.

In partnership with CDEA, California producers have led the nation in adaption of practices which help preserve the effectiveness of antibiotics for humans and livestock alike. Even before the implementation of the new regulations, 92% of the state's dairy producers already relied on their herd veterinarian for antibiotic guidance. In the years subsequent to SB 27, California dairy farmers

Continued

AMMP Webinar on Compost Pack Barns: February 2 at 4:00 pm

Additional AMMP funding is anticipated in late February. Dairy producers have successfully reduced manure flow to lagoons by installing and managing compost bedded pack barns. Join us for a webinar to explore a case study. Ask questions of dairy producers who have implemented this practice with Alternative Manure Management Program funds.



February 2: 4 - 4:30 PM, FREE for Dairy Producers
[Register Here](#) or by using the QR Code above.
View past AMMP webinars on [CDQAP's website](#).

Hold the Date: Golden State Dairy Management Conference

The University of California Golden State Dairy Management conference will take place on Wednesday, March 23 at the Stanislaus County Ag Center. Stay tuned for more information.



California Dairy Sustainability Summit: April 12-14, 2022

The next virtual California Dairy Sustainability Summit will take place online on April 12-14. Registration for dairy farmers is \$25 and is now open. Talk to your trade organization or field representative about potential opportunities for complimentary registration. Check out the growing speaker roster and details at [cadairysummit.com](#).



CDQAP Certified Facilities:

Confirm Your Water Board Fee Invoice Includes Discount!

Annual invoices have been mailed from the State Water Quality Control Board for the Dairy General Order. CDQAP certified facilities in good standing enjoy a 50% discount in fees. A small percentage of certified facilities were not credited for the discount in their invoice this year due to a computer error. Water Board staff are working hard to resolve the problem. For affected producers, revised invoices will be mailed. If your facility is CDQAP certified, double-check your invoice before mailing payment to be sure your invoice includes the "CAF-REDUCTION" credit. If your facility did not receive the "CAF-REDUCTION" credit in your invoice, please wait for the revised invoice before paying fees.

STATE WATER RESOURCES CONTROL BOARD INVOICE DETAILS		
FACILITY ID (MISC):	ORDER NO. 17-00134122	INVOICE NO. 140-015050
		BILLING PERIOD: 07/01/21-06/30/22
		REGION: 07
TO	DESCRIPTION	AMOUNT
CONFINED ANIMALS FACILITIES		18,028.00
Fee Base: 3897 Mature Dairy Cattle		
10A		18,028.00
CAF-REDUCTION		-9,014.00
Fee Base: Invoice Credit		
TOTAL AMOUNT DUE		\$ 9,014.00

Antibiotic Stewardship *continued*



have [reported](#) increased use of alternatives to antibiotic drugs, increased sampling for disease diagnosis and changes to their practices in order to control and prevent disease outbreaks.

Testing for Resistance on the Farm

These efforts seem to be working. Of particular interest to dairy veterinarians is CDFA and USDA data on pathogen sensitivity to various antibiotics. [Testing](#) of some 4,329 isolates from dairy cow manure, for instance, indicated a low rate of antibiotic resistance to drugs commonly administered to adult dairy cows. CDFA continues to collect and summarize antibiotic susceptibility data from livestock in California, to assist producers and veterinarians in selecting the lowest cost drug which is still effective.

There are some caveats however when using antibiotic susceptibility testing for animal pathogens. The older susceptibility testing method, the Kirby-Bauer disk assay, is correlated to human antibiotic blood concentrations, and has little relevance to drug concentrations in the udder achieved by intramammary mastitis tubes. In addition, even for

therapies which testing indicates the bacteria should be sensitive, there may be individual cases that fail to respond, like Staph cows that have abscesses or significant scar tissue.

In order to address these human/animal disconnects, CDFA is referencing animal-specific interpretive [data](#) generated by the [Clinical and Laboratory Standards Institute](#), CLSI. This technology utilizes the gold standard of sensitivity testing, Minimum Inhibitory Concentration (MIC). For more information on California-focused livestock pathogen sensitivity, [veterinarians can sign up](#) to have information delivered directly to their email.

Return on Investment for the Dairy

Antibiotic stewardship isn't just about helping protect antibiotic use in human medicine. Careful selection of which antibiotics are used on the farm can be a powerful tool in preserving efficacy of treatments and reducing treatment costs on the dairy as well. As described in this [video from CDQAP](#), using periodic sampling from mortalities, the herd veterinarian can determine which strains of bacteria are causing disease and which antibiotics they are sensitive to. Picking the "right drug for the right bug" not only assures treatment will be effective but also allows vets to select the least costly treatment. There's no point, for instance, in treating weanling pneumonia in a calf with a later-generation cephalosporin, costing several dollars a day, if the bacterial strain is also sensitive to a tetracycline costing only pennies each day.

New Mastitis Research

Interest in reducing both the cost of mastitis and antibiotic use has led to renewed focus on Selective Dry Cow Therapy (SDCT), a management practice where only infected or at-risk cows are treated. Recent [research](#) using data from California dairies estimated that following implementation of SDCT, a 29% reduction of antibiotics used in dry cows could be achieved with no adverse economic impact to the producer. Producers are cautioned however that not every dairy is a good [candidate](#) for SDCT. Producers should perform a complete [review](#) of their mastitis management with their herd veterinarian before the implementation of an SDCT program.

How much does a case of clinical mastitis cost a California producer? New [research](#) from UCD estimates a single case of clinical mastitis on average costs about \$295, with the greatest losses due to decreased production and discarded milk. A customizable mastitis cost [calculator](#) is available.

Resources on Antimicrobial Stewardship

For producers interested in learning more about antibiotic stewardship there's a wealth of information available on-line. For California producers here are some good places to start:

- [Antibiotic Resistance and Dairy Producers Videos](#): Produced by CDQAP and UCD, this series of four short videos explain clearly and graphically what antibiotic resistance is, why producers have a stake in it and how to combat it.
- [Frequently Asked Questions](#): Produced by CDFA's Antimicrobial Use and Stewardship (AUS) program, this 2-page fact sheet explains the basics of California's plan to address antibiotic resistance in livestock.
- [Antimicrobial Stewardship Planning Workbook](#): Produced by CDFA's (AUS) program, this 9-page workbook is one way to open discussion between you and your veterinarian to review your drug use program and get started reducing drug use and therapy costs.