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California Dairy Newsletter

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Antibiotics on Dairies: Change is Coming

Betsy Karle, UCCE Northern Sacramento Valley

The landscape of pharmaceutical use on dairies is changing. Federal regulation that will require veterinary oversight for feeds, including milk replacer, containing medically important antibiotics (those that are also used in human medicine) will be fully implemented by January 1, 2017. Locally, the California Legislature is actively pursuing regulation that will eliminate over the counter (OTC) use of medically important antibiotics. What can you do now to prepare for these inevitable changes?

- Evaluate any non-prescription antibiotic use with your veterinarian. Are you using these products exactly as indicated on the label? If not, they are being used "off-label" and need a prescription label specifying the appropriate use and withdrawal.
- Evaluate management practices, especially in calves, fresh cows and the hospital pen. Are there changes that could be made to improve conditions that would have positive effects on animal health?
- Ensure accurate diagnoses. Be sure that anyone responsible for diagnosing animals has proper training and diagnostic tools.
- Update and implement treatment protocols. Ensure optimal compliance with protocols by posting them in a visible and convenient location in the native language of those responsible for administering the treatment.
- Communicate with employees and commit to ongoing training about the importance of using medicines according to the label.
- Assess your record keeping system. Is it easy to record information and access records of previous treatments?

Ceftiofur, penicillin, and sulfa drugs in dairy animals continue to top the tissue residue list and are being watched closely. We know that the issue of antibiotic use in food animal production isn't going away and need to be prepared to use pharmaceuticals differently than we have in the past. UC Cooperative Extension is and will continue to examine how we use medicines on dairies and what management practices may help reduce the need for antimicrobials. Start the conversation with your veterinarian now about how to define new strategies and implement new procedures, and you'll be ready for changes to come.

2014 Corn Silage Audit

Jennifer Heguy, UCCE Merced, Stanislaus & San Joaquin Counties
Noelia Silva-del-Rio, UCCE Dairy Herd Health Specialist

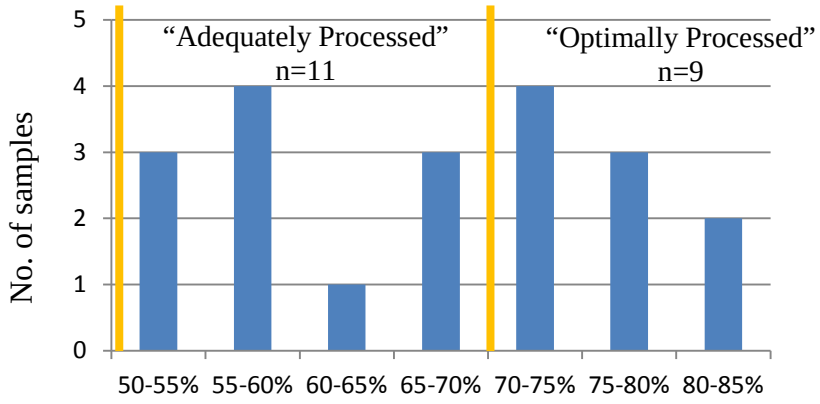
In summer 2014, we visited twenty San Joaquin Valley dairies during corn silage harvest, and sampled and composited five, consecutive truckloads of corn silage for nutrient analysis. **Table 1** includes the summarized nutrient results. Herd size ranged from 350 to 5,250 cows (median=1800), and structures were primarily wedge piles (n=14), with fewer bunkers (n=3) and drive-over piles (n=3). Delivery rate varied; the five truckloads of corn were delivered in as little as eight minutes and in as many as 64 minutes. Twelve dairies utilized one packing tractor, seven dairies had two packing tractors, and one dairy packed with three tractors. Only two dairies did not utilize custom harvesting services.

Table 1. Nutrient composition of chopped corn (n=20) taken at harvest.

		% of DM					
	DM	**CP**	**ADF**	**NDF**	**Starch**	**NFC**	**Ash**
AVG	35.9	7.7	24.4	41.0	30.2	43.6	5.4
MEDIAN	35.9	7.8	24.9	42.3	29.0	43.2	5.4
MIN	31.2	6.2	20.2	35.2	23.3	36.6	4.2
MAX	40.3	8.8	28.3	46.7	36.7	50.7	6.8
STD	2.5	0.6	2.1	2.8	3.6	3.1	0.7

Corn silage processing score (CSPS) was also analyzed using the composited forage (**Figure 1**); nine samples were optimally processed (CSPS >70%) and eleven samples were adequately processed (CSPS between 50% and 70%). Corn silage processing score ranged from 50.7% to 82.2%. Even though all dairies kernel processed, and no samples were inadequately processed (CSPS < 50%), there is still room for improvement.

Figure 1. Corn silage processing score of chopped corn (n=20) taken at harvest.



Corn silage processing score is useful to gauge how the chopper performed and to plan for subsequent harvests, but unfortunately does not provide timely information to monitor, and make adjustments, during harvest. In a recent survey of dairy producers using custom choppers (n=138), 13% felt that chopping and processing either needed improvement or was not satisfactory, and 92.5% of producers (n=134) monitored kernel processing during harvest. Regularly checking the degree of kernel processing on-farm, throughout harvest, will allow for adjustments and improvements in kernel processing. Due to the large range in CSPS observed, we recommend hourly inspection of the delivered material, and open communication with the chopper to meet your harvesting goals.

UC Cooperative Extension Helping you Achieve a 50% Discount on Water Board Fees Through CDQAP Certification

Deanne Meyer, Ph.D. - UCCE Livestock Waste Management Specialist, UC Davis

It's the time of year again where the California Dairy Quality Assurance Program (CDQAP) goes through and checks the list of dairies certified in the Environmental Stewardship module of CDQAP. Why? To be sure every dairy eligible for the 50% fee discount on Water Board fees gets the reduction.

The University of California Cooperative Extension (UCCE) is a proud partner with industry organizations, regulatory agencies, and non-regulatory groups that form the CDQAP. The program works to assemble and provide up-to-date information for dairy producers on environmental stewardship and offers third-party verification for regulatory compliance. Workshops and compliance assistance tools are deployed when needed to provide information to operators regarding updated regulatory requirements.

Regulatory fees associated with Waste Discharge Requirements are based on the number of mature dairy cattle (milking and dry) at a facility. The current (2014-2015) fee schedule is available:

http://www.waterboards.ca.gov/resources/fees/docs/fy1415_fee_schedule.pdf

2014-2015 Fee Schedule for Dairy Waste Discharge Requirements in California		
Number of Animals	Fee	50% Discount
3,000 or more	$13,248	$ 6,624.00
1,500 to 2,999	$ 8,279	$ 4,139.50
700 to 1,499	$ 3,974	$ 1,987.00
300 to 699	$ 1,987	$ 993.50
Less than 300	$ 994	$ 497.00

How does the certification process work?

Certification in Environmental Stewardship is a three step process:

1. Education
2. On-farm planning
3. Third-party evaluation

Producers attend CDQAP educational classes in both water and air requirements in the San Joaquin Valley and water-only for non-San Joaquin Valley producers. The UCCE works in collaboration with CDQAP to offer classes. Producers work with their consultants to ensure that all on-farm planning and record-keeping is complete and up-to-date. An on-farm evaluation is conducted to verify that required documentation is present (water and air regulatory requirements) for compliance purposes. A visual analysis of the facility (fields, valves, pumps, ponds, etc.) is done. As part of the certification process producers are obligated to notify CDQAP if there are any regulatory concerns in subsequent years.

Organized regulatory compliance information makes evaluations go more smoothly. All paperwork needs to be available when the evaluator arrives. Evaluations are conducted on a first come, first served basis. Producers waiting until September to start the process will likely be the first done for the following fiscal year. Interested producers can call to request a CDQAP third-party evaluation at (530)574-0524.

Some Helpful Hints on Growing Forage and Grain Sorghums: Do's and Don'ts

Dr. Jeff Dahlberg, Director UC-ANR Kearney Agricultural Research and Extension Center

Sorghum [*Sorghum bicolor* (L.) Moench] is a member of the grass family, which includes grain sorghum, forage sorghum, sweet sorgos, broomcorn, and Sudangrass and it is also closely related to Johnsongrass [*S. halepense*], a major weed pest. Grain Sorghum is commonly referred to in California as milo, corn, and "gyp" corn. The history of grain sorghum in California dates back to 1874, when a small consignment of white and brown Durra was brought from Egypt. Planted in the interior valleys, these introductions demonstrated their ability to withstand the hot, dry summers and soon became established as a crop. The vast majority of California's grain sorghum is grown under irrigation. According to USDA National Agricultural Statistics Service (NASS) it was planted on 7.1 million acres in the United States in 2014 and this is predominately dryland farming. The last reported planted acres in California were 2008, when 47,000 acres were planted. Grain sorghum yields in 2007 and 2008 were 85 and 95 bushels per acre, which compared to the national average of 73.2 and 65. Although there are exceptions, double-crop grain sorghum normally yields less that "full season" single-crop plantings.

It is important to understand the growth stages of sorghum as each stage represent critical timeframes for such management decisions as irrigation, insect control, and fertility. Sorghum is traditionally divided up into various maturity classes ranging from early to late. **Don't** plant the wrong maturity. This is true for both grain and forages. If you plant a late maturing grain or forage sorghum, you might run into issues in the fall when you are planning to harvest the grain or forage and it might not dry down to appropriate moisture levels for harvesting. **Do** understand maturities and what they represent. Maturity designations are simply an estimate of when sorghum will flower, so an early maturing grain or forage hybrid will be something that might flower between 52-58 days after emergence. A late maturity might flower 62 days or later. In forages, a photoperiod sensitive or PS sorghum will not normally flower in the US until late November. So it is important to understand what type of sorghum maturity you should be planting as this will impact when you might harvest the crop. Follow your seed dealer's recommendations for when to harvest grain or forage sorghum to maximize your grain or forage quality.

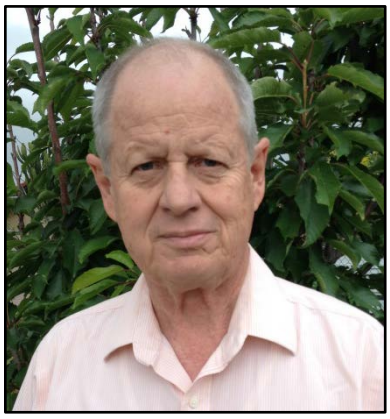
Grain sorghums are of tropical origin and reach maximum development in regions having high temperatures and relatively low humidity during the growing season, perfect for California. Experiments and observations indicate that they can be grown successfully in all interior valleys, but production has not been good in coastal regions subjected to cool ocean breezes or at elevations above 5,000 feet. Grain sorghum may be grown on a wide range of soil types. Best performance can be expected on medium-textured soils, but with good management sandy and very heavy soils can produce high yields. Sorghum is more tolerant to sodic (alkali) and saline soils than are most field crops including corn. Soils containing high levels of soluble salts can be injurious to sorghum germination and can prevent stand establishment. With proper management, many fields having these soil problems can produce satisfactory yields. **Don't** plant sorghum into cool soil temperature or low pH. Optimum soil temperatures for sorghum are around 60º F and neutral to basic soils. Sorghum will not do well in low pH soils, typically below 5. **Do** plant sorghum when soil temperatures are consistently above 60º F and the risk of a freeze has passed.

Remember, grain and forage sorghums should not be planted like wheat or other small grains. One of the biggest mistakes farmers can make it to over plant sorghum. This will impact its' ability to withstand drought and can have a negative impact on yields. **Don't** plant using pounds per acre. Seed in sorghum varies

tremendously, so understand how many seed per pound are in sorghum, which should be on the label. Seed number can range from anywhere from 12,000 to up to 18,000 seed per pound, so planting a sorghum field thinking pounds per acre can severely impact your final plant counts. **Do** plant using plants per acre. Follow your seed company's recommendations and look for their targeted plants per acre suggestions as a rule of thumb. This is true for both grain and forage sorghums.

Nitrogen application is always a concern with any crop. Sorghum has been talked about a low input crop, but many farmers might mistake this as meaning that sorghum needs little or no N. For grain sorghum, fertilization requirements are similar to corn, while forage sorghums are a bit different. **Do** apply adequate N rates to optimize grain yields, whether you are planting a dual purpose grain sorghum for forage or a hybrid grain sorghum. It takes roughly 1.2 lbs of N for every bushel of grain yield. If you put 50 lbs N down, don't expect 150 bushel yields. **Don't** put too much N down on forage sorghums. This can lead to rapid growth and potential lodging issues. According to research out of the Univ. of Arizona, approximately 125 lbs of N is sufficient for forage sorghums.

Dairy Advisor, Nyles Peterson, Retired After 35 Years of Service with UCCE



After 35 years with the University of California Cooperative Extension, Nyles Peterson has retired from his position as Dairy Advisor and County Director. Over the years, Nyles worked with dairies in San Bernardino, Riverside, Los Angeles, Imperial and San Diego counties.

Nyles served the dairy industry in Southern California during a time of dramatic change. When he started in 1980, there were more than 400 dairy operations. Financial pressures and housing demands cut the number down to less than 100 today. Nyles was at the helm when a new disease of cattle made its first U.S. appearance at a dairy in San Bernardino County, and enlisted the help of a UC Davis veterinarian who diagnosed hairy foot wart, an extremely contagious condition caused by bacteria that can lead to lameness and early culling. Nyles also worked closely with UC ANR Cooperative Extension specialists at UC Riverside to help dairy operators manage stable flies, one of the most serious pests of confined livestock in the U.S.

In retirement, Nyles plans to stay in the San Bernardino area and take frequent trips to visit family in other parts of the country.

Thank you, Nyles, for your dedication to the producers of Southern California and the California dairy industry.