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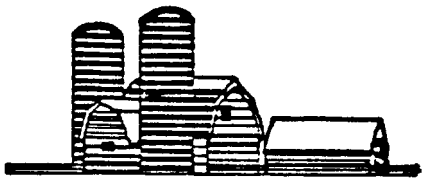
21st Century Dairying



A dairy newsletter for Fresno and Madera Counties

July 2004

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Opportunity to Complete Environmental Stewardship Short Course-*Classes offered in Modesto and Tulare in July*

The California Dairy Quality Assurance Program (CDQAP) Environmental Stewardship Short Course for dairy producers will be offered in two locations this month: Modesto and Tulare. This course is the first step for producers interested in environmental stewardship certification. The short course consists of three 2-hour classes. If you attended some but not all of the classes previously, you do not have to attend all three classes to complete the series – only those that you missed. Contact your local UCCE Dairy Advisor, trade association or creamery representative if you can't remember which part you still need to finish. These are the same classes we've been doing since 1998. Previous attendees are welcome back. Please remember to bring your binder if you have one.

The short course focuses on legal obligations of dairy operators related to water quality requirements (Federal, State, local). Course contents include review of regulations, risk assessment documents, pond storage needs, general manure management, and introduction to nutrient content of manure. Producers will be provided with information to develop emergency manure management and water pollution prevention plans specific to their dairies.

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A new permit is anticipated from the Regional Water Quality Control Board for dairy facilities soon (fall 2004). Once it is implemented, many if not all dairies in the Sacramento and San Joaquin Valleys will need to get a permit. There will be an annual fee for this permit. Producers who complete environmental stewardship certification (which includes completion of the Environmental Stewardship Short Course and a follow-up, on-site visit to the dairy by an independent, third-party evaluator) are eligible for special benefits. Benefits include a 50 percent discount on water quality permit fees and a free roadside sign that displays to neighbors and passers-by that the dairy has been "environmentally certified". Over 200 dairies in the state have completed this certification process, and many others are well underway. More information about the process is available on the California Dairy Quality Assurance web site http://www.cdqa.org . You may also wish to visit with local producers in Kings and Tulare who have certified to get their perspectives. Following are the class dates, times and locations. **In order to plan for meeting arrangements, materials, etc., please call Gerald Higginbotham at 559-456-7558 to indicate which classes you want to attend.**

Modesto – July 7th and 8th at the Stanislaus Ag Center, 3800 Cornucopia Way

Class 1 July 7th 1 to 3 PM
Class 2 July 8th 10 AM to noon
Class 3 July 8th 1 to 3 PM

Tulare – July 20th and 21st at the UC Cooperative Extension Office, 4437 Laspina St.

Class 1 July 20th 1 to 3 PM
Class 2 July 21st 10 AM to noon
Class 3 July 21st 1 to 3 PM

Intramammary Use of Ceftiofur

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Ceftiofur is an antibiotic approved for treatment of respiratory disease, metritis and foot rot in beef and dairy cows. The product approved for use in dairy cattle is marketed by Pfizer under the trade name Naxcel. This product is approved for IM or SQ administration only. When used according to label instructions, the drug concentration in milk will not exceed the FDA tolerance or legal limit. This antibiotic has a zero day withdrawal time for both meat and milk. Another ceftiofur formulation has been approved for use in swine and its use in dairy cattle would be extra-label.

Under the direction and label of a veterinarian, ceftiofur is occasionally used for treatment of mastitis and given by intramammary infusion. Needless to say, this is an extra-label use of this antibiotic as it is an off-label treatment. FARAD (Food Animal Residue Avoidance Databank) reports that the use of ceftiofur by intramammary infusion will result in levels in the milk that exceed the tolerance limits and may result in a milk residue violation.

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A recent study[1] reported the results of a trial in which 5 mature Holstein cows producing between 40-60 lbs of milk per day were infused with ceftiofur into the mammary gland. At the time of intramammary infusion, the cows were showing signs of clinical mastitis. Each cow was given 300 mg (6 ml) of ceftiofur in two quarters by intramammary infusion. This was repeated again 12 hours later at the next milking. Milk samples were collected from all four quarters at 12 hour intervals for 10 days after the second treatment.

During the 10 day sampling period, no ceftiofur was found in the milk from the untreated quarters. Milk from the treated quarters had ceftiofur concentrations above the tolerance limit for up to 7 days following the last infusion. Higher producing cows in the study clear the antibiotic somewhat faster compared to the lower producing cows. This may indicated that cows with mastitis that results in low milk flow may require even longer periods of time to clean the antibiotic following intramammary infusion.

Be sure to keep in mind that intramammary infusion of ceftiofur can only permitted under the direction of a veterinarian following the regulations for extra-label antibiotic use. It is the responsibility of the veterinarian to provide an appropriate milk withdrawal time for this extra-label use. Failure to consider the extended presence of ceftiofur in the milk of low producing cows or those being treated with mastitis, may produce an milk residue violation. It seem reasonable to test the milk from low producing cows (less than 30 lbs per day) at the end of the suggested 7 day withdrawal period to insure that a milk residue violation will not occur.

[1]Smith FW, Gehring R, Riviere J, et al. Elimination kinetics of ceftiofur hydrochloride after intramammary administration in lactating dairy cows. *JAVMA* 224: 1827-1830, 2004.

BSE Testing

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The USDA will expand the BSE, mad cow, testing and intends to examine 220,000 cows during the next 18 month period. The cost of the program will be $70,000,000. About 35 million cattle are slaughtered each year in the US. Even with this large increase in the number of animals to be tested, many foreign countries are reluctant to ease the ban on US beef imports.

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The majority of the animals to be tested will be considered to be highly likely to have BSE. These animals will have clinically apparent brain disorders, be unable to stand on their own or be deemed unfit for human consumption for other reasons. Many of these animals will come from livestock presented for slaughter; however, tissue samples will also be collected by practicing veterinarians from animals that die on the farm. CDFA veterinarians will be collecting samples from animals sent to rendering plants as well. From this number of cattle, about 20,000 apparently healthy animals over 30 months of age will also be tested.

There will be laboratories in 12 states that will be doing the testing on the brains and spinal cords. These labs will use a rapid test for screening the samples. The anticipated turn-around time for diagnosis is less than 72 hours. Any samples thought to be BSE will be sent to the National Veterinary Service Laboratory (NVSL) in Ames, Iowa for confirmation. Final confirmation will require 4-8 days. The USDA expects that some samples will be BSE-suspects on the rapid tests; however, this does not necessarily mean that the animal has BSE.

There is some concern about how the results of testing will be handled as the delay between collecting the samples at the slaughterhouse and release of non-BSE carcasses may be a burden for high-volume plants. At this time, the USDA plans to have the results from the rapid-test labs sent to NVSL and then released to the slaughterhouses. Suspect carcasses must be held at the plant until released as BSE-free.

The bottom line is that the USDA will be testing many more cattle for BSE as suggested by the USDA panel of international experts. The cattle to be tested will come from animals that are highly suspect for BSE as well as animals that appear normal and healthy. While there may be little notice at the dairy, the slaughterhouses may have some initial difficulties due to delays in release of BSE tested carcasses. Renderers may also have some beginning pains as heads from dying animals will be collected from their facilities. Hopefully with this increase in testing, countries that import our US beef will again fully open their import doors.

Effects of Artificial Insemination vs. Natural Service Breeding on Production and Reproduction Parameters in Dairy Herds

The objective of this study was to determine the effects of various combinations of artificial insemination (AI) and natural service (NS) breeding on production and reproduction parameters using Dairy Herd Improvement herd summary information.

Data was collected from herds in the north, mid-south and southern regions of the United States. DHI herd summary record for 1999, 2000, 2001, and 2002 were obtained from Dairy Records Management Systems. Herds were categorized according to percentage of natural service usage as follows: 1=0%, 2=1-20%, 3=21-89%, and 4=90 to 100%.

Among the research findings, their results showed total milk yield was significantly greater for herds breeding primarily by AI and declined as the percentage of NS sire usage increased. The percentage of cows in milk is an indication of overall reproduction efficiency and is affected by the percentage of cows leaving the herd, calving interval, and days dry. In this study, herds breeding primarily by AI had the greatest percentage of cows in milk, and herds breeding primarily by NS had the least value.

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The authors conclude that many producers have the perception that natural service sires improve estrus detection and overall reproduction efficiency. In this study, overall reproduction efficiency, as measured by percentage of cows in milk, favored herds breeding 100% AI and declined as natural service sire use increased. Herd milk yield was significantly greater for AI breeding herds and declined with increased use of natural service sires. Superior genetics of AI sires accounts for at least a portion of the greater mild yield. Even herds which limit natural service sire to a "clean-up" role are at a disadvantage compared with AI herds in both repoduction and producation efficiency.

Source: The Professional Animal Scientist, Vol. 20 (2004): 185-190.

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