

# Dairy News

December 2016

[www.dairylandvet.net](http://www.dairylandvet.net)



*Another year has come to an end and we at Dairyland Veterinary Service would like to extend best wishes for a happy holiday season for you and your families. We also would like to thank you for your continual business and support. We are looking forward to 2017 where we will continue to strive to provide the best possible service for our clients!*

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## Veterinary Feed Directive (VFD)

The new Veterinary Feed Directive (VFD) will start January 1, 2017 regarding antibiotics in feed and in water. At Dairyland Veterinary Service we have the software in place to generate the directive forms for the animal owner, feed mill, and veterinarian. Copies (paper or computer) will need to be kept for 2 years by all 3 parties. The software program will save them for 3 years electronically. The program alerts the veterinarian when any new feed directive is due and we will notify the owner ahead of the due date. Only one individual animal or production group will appear on one VFD. The same animal or production group cannot appear on one VFD more than once. The individual VFD's are signed by your veterinarian of record (VOR), not by the clinic.

All antibiotics made to be used in water will not require a VFD but will now be prescription. Their use is mainly in hog and poultry anyway. Some feeds that will now need a VFD include Aureomycin, AS-700, and milk replacers with antibiotics in them. Ionophores (Rumensin, Bovatec, Deccox), dewormers and amprolium (Corid) will not need a VFD, as these are not antibiotics, but may come in a feed. Also some combinations of feed antibiotics and ionophores may not be allowed according to their label. An example would be feeding Aureomycin with Rumensin, or AS-700 with Rumensin. But Aureomycin or AS-700 can be fed with Bovatec. Work with your veterinarian on these issues. The FDA is giving us time and some leeway to work through many of these issues in the first year (2017). We do have one exemption for the use of topical oxytetracycline for treatment of heel warts on individual animals. The foot trimmers can get the prescription forms from the owner's veterinarian. This is not a VFD but a prescription. There is a 24 hour meat and milk hold.

The VFD does not list grams of antibiotic per ton of feed. The amount to be sold at the mill for an individual animal production group is calculated by the number of animals, duration of treatment and dosage per head per day by the veterinarian on the VFD, for the mill. The VFD is not a prescription therefore use must follow the label. The FDA will also be randomly auditing farms, mills, and vet clinics thru their federal inspectors.

Please contact Dairyland Veterinary Service or talk to your veterinarian if you have any questions.

# Sulfur Toxicity in Cattle

Sulfur is an essential nutrient in cattle. Sulfur is part of the amino acids methionine and cysteine. The B-vitamins thiamine and biotin also contain sulfur. Rumen microbes require sulfur for their normal growth and metabolism.

Like so many other times, too much of a good thing can cause problems. The same is true for sulfur. Excess sulfur (greater than 0.40% of diet dry matter) can cause toxicity. When sulfur is ingested in excess, rumen microbes produce too much hydrogen sulfide from it, which is absorbed across the rumen and interferes with cellular energy production. Since the brain has a high requirement for energy production, it is one of the most affected body systems. It causes a disease called Polioencephalomalacia (PEM) which is characterized by blindness, ataxia, recumbency and seizures.

Sulfur associated PEM occurs in 2 forms. The acute form which can be lethal and a subacute form which is characterized by visual impairment and ataxia. There may also be twitching of the ears and facial muscles. Cattle usually recover with minor neurological impairment. Subacute sulfur toxicity can reduce feed efficiency and water intake which may make them more susceptible to heat stress in the summer. Subacute sulfur toxicity has been linked to respiratory distress, pulmonary edema and heart failure. This may be from hydrogen sulfide gas in the rumen being belched up and inhaled into the lungs.

When sulfur toxicity is suspected, total sulfur intake should be calculated. This includes all feeds and water. Some feeds, especially co-products from the grain of wet or dry milling industry may be high in sulfur. Sulfur in the water is in the sulfate form, which is one-third sulfur. Various compounds such as Monensin increase the amount of hydrogen sulfide produced from the sulfur in feed and water especially if there is concurrently subacute acidosis. If you suspect you may have sulfur toxicity, discuss it with your veterinarian to decide how to approach the problem.

- Dr. Bill Koffman

## References:

Wagner, J.J. Sulfur Toxicity in Feedlot Cattle.

Iowa State University. Sulfur Toxicity

Merck Manual. Overview of Polioencephalomalacia

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