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News

Veterinary Feed Directive (VFD)

The Food and Drug Administration (FDA) has amended the new animal drug regulations to implement the veterinary feed directive (VFD) drugs section of the Animal Drug Availability Act of 1996. The final rule becomes effective on October 1, 2015. Also, the FDA revised Guidance for Industry #120, Veterinary Feed Directive Regulation.

The VFD drugs are those intended for use in animal feeds, and they are no longer to be used for production uses such as enhancing growth or improving feed efficiency. Use of VFD drugs are permitted only for therapeutic uses under the professional supervision of a licensed veterinarian. Affected drugs are those considered as medically important which means "important for human medicine and used by both animals and humans" (e.g., penicillins, cephalosporins, quinolones, fluoroquinolones, tetracyclines, macrolides, sulfas, glycopeptides).

The VFD final rule continues to require veterinarians to issue all VFDs within the context of a veterinarian-client-patient relationship (VCPR) and specifies the key elements that define a VCPR. These key elements include that the veterinarian engage the client (i.e., animal producer or caretaker) to assume responsibility for making clinical judgments about patient (i.e., animal) health, have sufficient knowledge of the animal by conducting examinations and/or visits to the facility where the animal is managed, and provide for any necessary follow-up evaluation or care. The final rule will require veterinarians to follow state-defined VCPR requirements.

For Ohio, a veterinary-client-patient relationship exists when all of the following conditions have been met:

(A) A veterinarian assumes responsibility for making clinical judgments regarding the health of a patient and the need for medical treatment, medical services, or both for the patient, and the client has agreed to follow the veterinarian's instructions regarding the patient.

(B) The veterinarian has sufficient knowledge of the patient to initiate at least a general or preliminary diagnosis of the medical condition of the patient. In order to demonstrate that the veterinarian has sufficient knowledge, the veterinarian shall have seen the patient recently and also shall be acquainted personally with the keeping and care of the patient either by examining the patient or by making medically appropriate and timely visits to the premises where the patient is kept.

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(C) The veterinarian is readily available for a follow-up evaluation, or has arranged for emergency coverage, in the event the patient suffers adverse reactions to the treatment regimen or the treatment regimen fails.

The OVMA Drug Oversight Task Force has created a VCPR template available at www.ohiovma.org or the Veterinary Extension [website](#).

[ACCESS INFORMATION FROM FDA...](#)

Research

Rodrigues, M. C., Cooke, R. F., Marques R. S., Cappelozza, B. I., Arispe, S. A., Keisler, D. H., & Bohnert, D. W. (2015). **Effects of vaccination against respiratory pathogens on feed intake, metabolic, and inflammatory responses in beef heifers.** *Journal of Animal Science*. Advance online publication. doi: 10.2527/jas2015-9277

BACKGROUND: Vaccination against pathogens that cause bovine respiratory disease (BRD) is common; however, performance can be reduced during the two weeks following vaccination. The authors hypothesized that performance losses of BRD-vaccinated cattle could be from circulating leptin concentration, including leptin synthesized by leukocytes.

PURPOSE: The objective was to evaluate intake, metabolic, inflammatory, and acute phase responses in beef heifers vaccinated against pathogens that cause bovine respiratory disease.

RESULTS: Mean serum tumor necrosis factor alpha, haptoglobin, cortisol, insulin, and leptin concentrations were all greater in vaccinated calves compared to the control group.

CONCLUSIONS: The authors concluded that vaccinating beef heifers against BRD pathogens decreased forage and total DMI during the 2 days following vaccination in Exp. 1, which can be associated with transient metabolic, inflammatory, and acute-phase responses elicited by vaccination in Exp. 2.

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Hedlund, L., & Løvlie, H. (2015). **Personality and production: Nervous cows produce less milk.** *Journal of Dairy Science*. Advance online publication. doi: 10.3168/jds.2014-8667

BACKGROUND: Behavior and response to environment can have important welfare and production implications for production animals. Animal personality or disposition is an emerging research area, and the relationship between personality and milk production in dairy cattle remains unclear.

PURPOSE: The objective was to investigate relationships between animal personality (i.e., consistency in behavioral responses, also called temperament) and milk production in dairy cows. This study scored behavioral variation during milking (stepping and kicking), exposure to novel objects (neophobia), and social isolation (vigilance and vocalization).

RESULTS: Overall, cows that stepped more during milking or spent more time facing the herd during social isolation produced less milk in their first lactation. Cows that vocalized more during isolation had lower current milk production. Variation in other behavioral responses showed limited relationships with milk production.

CONCLUSIONS: The results support a relationship between behavioral responses and milk production, where cows showing signs of nervousness produce less milk. However, observed relationships are dependent on the milk measure used, behavior, and breed investigated, supporting that the relationship between behavior and production traits is not straightforward.

[ACCESS THE ARTICLE...](#)

Wolf, R., Orsel, K., De Buck, J., & Barkema, H. W. (2015). **Calves shedding *Mycobacterium avium* subspecies *paratuberculosis* are common on infected dairy farms.** *Veterinary Research*, 46(1), 71. doi: 10.1186/s13567-015-0192-1.

BACKGROUND: Control programs for *Mycobacterium avium* subspecies *paratuberculosis* (MAP) typically focus on interrupting direct and indirect contact between likely shedding adult cows and highly susceptible calves. There is a need for research estimating proportions of MAP-shedding young stock in various age groups. Furthermore, detection of MAP in group housing pens would provide strong evidence for MAP contaminated environment as a risk factor for MAP infection in young stock.

PURPOSE: The objectives were: 1) to estimate prevalence of MAP shedding young stock in MAP-infected dairy herds, and identify predictors for test-positive young stock; and 2) to estimate proportions of MAP-contaminated young stock group housing and air spaces, and identify predictors for test-positive pens.

RESULTS: Overall, 8.1, 1.2 and 2.0% of cattle were positive on IS900 qPCR, F57 qPCR and bacterial culture, respectively. Young stock housed on farms with culture-positive environmental samples collected from adult cow housing and manure storage had higher odds of testing IS900 qPCR-positive than young stock housed on farms with only negative environmental samples. Furthermore, 14% of collected environmental samples, but no dust samples, were test-positive. Age of cattle in the pen was a significant predictor for environmental sample results.

CONCLUSIONS: The authors concluded that excretion of MAP by young stock occurred in MAP-infected dairy herds, with shedders present in all age groups. Young stock excreted MAP bacteria in their feces which provided strong evidence for calves as sources of within-herd transmission of MAP on dairy farms known to be infected with this organism.

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Calendar



A full calendar of all upcoming events and continuing education opportunities offered by the College of Veterinary Medicine is available on the website at <http://vet.osu.edu/>

[Ohio Dairy Health and Management Certificate Program](#)

Module 6 – Economics of Dairy Business
Dec 3-4, 2015
Hilton Garden Inn, Columbus, Ohio
Spots are always available for specific module plan.

[Organic Livestock and Poultry Health Series](#)

This series provides veterinary CE at no-cost.

Upcoming webinars:

Basics of Poultry Health Management
July 27, 2015 (12-1 p.m.)

Improving Milk Quality
August 3, 2015 (12-1 p.m.)

Defining and Monitoring Health Events in Dairy Herds
September 7, 2015 (12-1 p.m.)

Certified Organic Livestock Standards
October 8, 2015 (1-2 p.m.)

Organic Livestock Inputs
October 22, 2015 (1-2 p.m.)

Nutritional Management of Lactating Dairy Cows
November 9, 2015 (12-1 p.m.)

Information presented above and where trade names are used, they are supplied with the understanding that no discrimination is intended and no endorsement by Ohio State University Extension is implied.

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