



OHIO VETERINARY NEWSLETTER

In This Issue

Research

- Utility of snout wipe samples for influenza A virus surveillance in exhibition swine populations
- Effects of tail docking on health and performance of beef cattle in confined, slatted floor feedlots
- Prevalence and clinical outcome of subclinical bacteriuria in female dogs
- Clinical disease and stage of lactation influences shedding of Mycobacterium avium subspecies paratuberculosis into milk and colostrum of naturally infected dairy cows
- Prevalence of ophthalmic disease in blue-eyed horses
- The effect of routine hoof trimming on locomotion score, ruminating time, activity, and milk yield of dairy cows

Research

Edwards, J. L., Nelson, S. W., Workman, J. D., Slemmons, R. D., Szablewski, C. M., Nolting, J. M., & Bowman, A. S. (2014). **Utility of snout wipe samples for influenza A virus surveillance in exhibition swine populations.** *Influenza and Other Respiratory Viruses*. Advance online publication. doi: 10.1111/irv.12270

Swine are an important species regarding influenza A viruses because they can act as a mixing vessel with cell receptor sites for both human- and avian-origin influenza viruses. In particular, exhibition swine are a segment of the industry with greater concern because of the prolonged comingling of pigs and people from a variety of diverse backgrounds. The potential of transmission at fairs/exhibitions poses a risk to both animal and public health. The gold standard method of sample collection involves snaring and inserting a polyester-tipped nasal swab deep into each nostril. The objective of this pilot study was to evaluate the use of snout wipes in exhibition swine as a method which is less intrusive and labor-intensive as well as being less stressful for pigs and displeasing to onlookers. The process of collecting snout wipes simply involves wiping a 2-inch cloth across the snout using a gloved hand. In vitro comparison of material properties as well as current availability in the most appropriate size and packaging resulted in the selection of cotton gauze as the material used for the field study. There were 553 side-by-side comparisons using rRT-PCR of nasal swabs and snout wipes sampled at 29 different agricultural fairs across Ohio and Indiana. There were 36 results not in agreement when using rRT-PCR (sensitivity calculated as 92.9%). When virus isolation was performed there were 42 results not in agreement (sensitivity calculated as 82.9%). Although there is a slight decrease in sensitivity, the authors concluded that this pilot study supports the use of snout wipes as an alternative to the gold standard nasal swabs because of comparable levels of virus detection and the benefits of decreased animal discomfort and ease of use. Additional research is needed involving greater numbers and in other settings.

[ACCESS THE ARTICLE...](#)

Kroll, L. K., Grooms, D. L., Siegford, J. M., Schweihofner, J. P., Metz, K., & Rust, S. R. (2014). **Effects of tail docking on health and performance of beef cattle in confined, slatted floor feedlots.** *Journal of Animal Science*. Advance online publication. doi: 10.2527/jas.2014-7582

Calendar

- ODHMCP
- Organic Livestock and Poultry Health

Location

Department of Veterinary Preventive Medicine

Chair: Dr. William Saville
A184 Sisson Hall
1920 Coffey Road
Columbus, Ohio 43210
saville.4@osu.edu
614-292-1206

Subscribe / Unsubscribe

Contact:
Jeffrey D. Workman, PhD
Extension Program Coord.
workman.45@osu.edu
614-292-9453

<http://vet.osu.edu/extension>

Tail docking is common in confined, slatted floor feedlots to reduce tail tip injuries and lameness and improve performance; however, no known scientific studies have been conducted. The objective of this study was to compare performance, morbidity, and mortality between docked and undocked cattle housed in a confined, slatted floor feedlot. Trial 1 in 2009 involved 140 Angus-cross steers observed for either 144 or 160 days. Trial 2 in 2010 involved 137 calves from Michigan State University (MSU) Experiment Stations and MSU Purebred Beef Research Farm. Trial 3 in 2012 involved 102 Holstein steers. All calves were randomly selected to pens and allowed to acclimate to the environment before the study period began. Pens were randomly assigned as treatment group (docked) or control group (undocked). Information collected included performance data, health data, and carcass data. The treatment groups had tail lesions from the experimental procedure, but all healed by the end of the study. No significant differences were found in performance, health, or carcass quality. Tail docking did not reduce the incidence of overall morbidity, lameness-related morbidity, or mortality in docked cattle. In this study, 81% of docked cattle had post-surgical infection of tail tips while 76% of undocked cattle developed tail tip injuries with 54% developing infection. The authors concluded that tail docking showed no apparent performance or health benefit and alternative solutions to address the issue of tail tip injuries in undocked cattle should be considered (e.g., decreased stocking density, softer flooring).

[ACCESS THE ARTICLE...](#)

Wan, S. Y., Hartmann, F. A., Jooss, M. K., & Viviano, K. R. (2014). **Prevalence and clinical outcome of subclinical bacteriuria in female dogs.** *Journal of the American Veterinary Medical Association*, 245(1), 106-112. doi: 10.2460/javma.245.1.106.

The International Society for Companion Animal Infectious Diseases published guidelines stating that treatment may not be necessary for urinary tract disease in cats and dogs. The guidelines were based on human studies with no clinical evidence in dogs. The purpose of this study was to determine and characterize subclinical bacteriuria in healthy female dogs and examine the prevalence based on life stages. The study used 101 client-owned healthy female dogs that were at least 1 year of age. Data collected included age, breed, sex, reproductive status, body weight, body condition score, clinical history, and physical examination findings. Blood and urine samples were evaluated. Fifty dogs were categorized as young and middle-aged and 50 were categorized as senior and geriatric. There were significant differences between the age categories. Nine dogs out of 101 (8.9%) were found to have subclinical bacteriuria. The bacteria isolated included *E. coli*, *Enterococcus faecalis*, *Staphylococcus pseudintermedius*, and *Streptococcus canis* in middle-aged dogs and *Enterococcus faecium*, and *Klebsiella* spp in senior dogs. At the 3-month follow-up, 1 dog was lost, 4 dogs had persistent subclinical bacteriuria, and 4 dogs had transient bacteriuria. None of the dogs developed clinical signs. The authors concluded that subclinical bacteriuria is nonprogressive, can be either persistent or transient regardless of stage of life, and that antimicrobial treatment may be unnecessary.

[ACCESS THE ARTICLE...](#)

Stabel, J. R., Bradner, L., Robbe-Austerman, S., & Beitz, D. C. (2014). **Clinical disease and stage of lactation influences shedding of *Mycobacterium avium* subspecies *paratuberculosis* into milk and colostrum of naturally infected dairy cows.** *Journal of Dairy Science*. Advance online publication. doi: 10.3168/jds.2014-8204

Mycobacterium avium ssp. *paratuberculosis* (MAP), the causative agent of Johne's disease, can be transmitted to susceptible calves through the ingestion of contaminated milk and colostrum. The objectives of this study were to determine if a correlation exists between stage of Johne's disease or days in milk (DIM) and the amount of MAP shed into milk and colostrum of naturally infected dairy cows. The milk samples were collected for

91 305-day lactation cycles over a period of 12 years from 76 Holstein cows. Cows included in the study were subclinical, clinical, and noninfected controls. MAP shedding in milk and feces was monitored using both culture and PCR. There was a strong correlation between MAP shedding into milk and colostrum by stage of disease. For DIM, the heaviest shedding occurred in colostrum and during early lactation. The heaviest concentration of MAP is shed into milk by those cows in advanced stages of Johne's disease and those in early lactation. The authors concluded that newborn calves nursing just once are experiencing their most likely chance of infection while they're most susceptible, and that pooling colostrum could place many calves at high risk for infection.

[ACCESS THE ARTICLE...](#)

Bergstrom, B. E., Labelle, A. L., Pryde, M. E., Hamor, R. E., & Myrna, K. E. (2014). **Prevalence of ophthalmic disease in blue-eyed horses.** *Equine Veterinary Education*, 26(8), 438-440. doi: 10.1111/eve.12179

The common perception has been that horses with blue eyes have increased frequency of ocular disease. The purpose of this study was to assess the prevalence of ocular disease in horses with blue or heterochromic eyes relative to those with brown eyes. This was a retrospective study in which medical records from the University of Illinois and the University of Georgia were reviewed. Cases seen between January, 2013 and June, 2013 were included in the analysis. They classified ocular disease into 4 categories: adnexa, cornea, intraocular/orbit, or squamous cell carcinoma (SCC) (adnexal SCC was classified as SCC). There were 164 eyes of horses that were diagnosed with ocular disease. Blue-eyed horses were equally distributed among the ocular disease groups and the negative control group. No significant differences were found between blue eyes and brown eyes when comparing adnexal and corneal, corneal and intraocular/orbit, and adnexal and intraocular/orbit. Significant differences were found when comparing the adnexal and SCC, corneal and SCC, and intraocular/orbit and SCC. In addition, blue-eyed horses were not more likely to be brought in for examination for ocular disease. The results suggest that blue-eyed horses are more likely to develop ocular squamous cell carcinoma, but were not more likely to develop other ocular diseases. This study did not consider coat color or periocular pigmentation which could affect the amount of UV light exposed to the eye.

[ACCESS THE ARTICLE...](#)

Van Hertem, T., Parmet, Y., Steensels, M., Maltz, E., Antler, A., Schlageter-Tello, A. A., Lokhorst, C., Romanini, C. E. B., Viazzi, S., Bahr, C., Berckmans, D., & Halachmi, I. (2014). **The effect of routine hoof trimming on locomotion score, ruminating time, activity, and milk yield of dairy cows.** *Journal of Dairy Science*, 97(8), 4852-4863. doi: 10.3168/jds.2013-7576

Lameness and foot disorders are an important production and animal welfare concern in modern dairies. The objective this study was to quantify the effect of preventive hoof trimming on lame (infectious and noninfectious cases) and nonlame cows with regard to locomotion score, ruminating time, activity level, and milk yield. The research was conducted on a commercial dairy farm in Israel with 1,100 cows. There were 288 cows from 6 groups included in the analysis. All cows received professional routine hoof trimming twice per year. The findings of this study suggest that hoof trimming affects both locomotion scores and dairy cow behavior. Immediately after trimming, nonlame cows had poorer locomotion scores while lamer cows improved. This indicates that trimming caused some discomfort or adjustment period for nonlame cows. Trimming affected locomotion for at least 10 weeks. Activity, ruminating-time, and milk-yield returned to baseline values about 1 week following trimming. The authors concluded that the effects of trimming significantly changed locomotion and activity, and were relatively small regarding ruminating time and milk yield. Routine hoof trimming affected cow behavior and performance depending on cow parity, lactation state, and the presence of lesions.

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 2 – Advanced Dairy Reproduction
August 7-9, 2014

[Ohio Farm Science Review](#)

September 16-18, 2014

Please visit the College of Veterinary Medicine Tent located in OSU Central or the [Question the Authorities](#) program for one of the topics pertaining to veterinary medicine.

[Organic Livestock and Poultry Health Series](#)

Webinar - Organic Livestock Inputs
Wednesday, October 1, 2014 at 1:00 pm



THE OHIO STATE UNIVERSITY

**COLLEGE OF VETERINARY MEDICINE
COLLEGE OF FOOD, AGRICULTURAL
AND ENVIRONMENTAL SCIENCES**