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In This Issue

News

Longhorned Tick Recently Discovered in the US

An exotic East Asian tick, also known as the longhorned tick or bush tick, was found on a farm in New Jersey on November 9th. This tick is not known to be present in the U.S.; however, there are records of at least a dozen previous collections of the species on animals and materials presented for entry at U.S. ports.

This tick is a serious pest to livestock (including cattle, horses, farmed deer, sheep, and goats), particularly in New Zealand, as well as wildlife, pets, and humans. Farmers in the area should monitor their livestock for the presence of this tick and decreased growth rates or signs of anemia in the animals. With respect to livestock, the tick is known to transmit a disease called Theileriosis to cattle, which results in severe anemia and possibly death. There are no human health or food safety risks associated with Theileria. This tick also has the potential to spread other bacterial and viral diseases to humans and other animals.

The animals and the property where the tick was found have been treated to eliminate the tick. To determine if the tick has spread to nearby wildlife, ongoing surveillance is being conducted by the NJ Division of Fish and Wildlife, Department of Environmental Protection (DEP) in cooperation with Wildlife Services from the United States Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) and the Southeastern Cooperative Wildlife Disease Study at the University of Georgia.

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Research

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Location

Veterinary Extension Unit

housed within the

Department of Veterinary Preventive Medicine

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Welchman, D., & Brzozowska, A. (2017). **Looking out for avian influenza in backyard and small poultry flocks**. *Veterinary Record, 181*(23), 618-620. doi: 10.1136/vr.j5696

BACKGROUND: Compared to outbreaks in previous years, an unusual feature of the outbreaks of avian influenza (AI) in Great Britain last winter and spring (2016/17) was the involvement of backyard and small poultry flocks. Six of the 13 outbreaks (12 in England and one in Wales) were confirmed in flocks of fewer than 50 birds.

PURPOSE: To describe avian influenza surveillance in backyard flocks in Great Britain. To describe differences in recognizing LPAI (low pathogenicity avian influenza) as opposed to HPAI (high) which causes obvious deaths. Also, to describe possible differential diagnoses.

DESCRIPTION: The clinical signs reported in the flocks varied but included lethargy, birds looking sick, dullness, off feed, cessation of egg production and, in all cases, mortality. In some cases, other signs, including swollen heads, purple or black discoloration of the wattles and comb and nasal discharge, were also seen; in all cases these clinical signs were predominantly seen in the chickens. In contrast, the ducks and geese on the same site were largely clinically unaffected.

CONCLUSIONS: In all six cases of H5N8 HPAI confirmed in small flocks, there was evidence of direct or indirect contact between the poultry and wild waterfowl, which were suspected on epidemiological grounds to have been the source of infection.

ACCESS THE ARTICLE…

Lago, A., Socha, M., Geiger, A., Cook, D., Silva-Del-Río, N., Blanc, C., ...Leonardi, C. (2017). **Efficacy of colostrum replacer versus maternal colostrum on immunological status, health, and growth of preweaned dairy calves**. *Journal of Dairy Science*. Advance online publication. doi: 10.3168/jds.2017-13032

BACKGROUND: Commercially available colostrum replacers are commonly used when maternal colostrum is unavailable, for managerial convenience, to ensure quality consistency at first feeding, or in disease control and eradication programs. Previous studies have not reported a difference in bacteria counts of colostrum replacers compared with maternal colostrum when fed to calves.

PURPOSE: The objective was to determine the effect of feeding a commercially available colostrum replacer versus pooled maternal colostrum on immunological status, growth, and health of preweaned dairy calves.

RESULTS: Absorption of IgG and serum concentration of calves were adequate when fed either colostrum replacer or maternal colostrum, although calves fed colostrum replacers had a decrease in serum IgG and total proteins concentration, had decreased average daily gain, and were slightly lighter at weaning. Only one of the analyzed calves in each treatment group (colostrum replacers and maternal colostrum) had failure of passive transfer. The probability that a calf received contaminated liquid feed at first feeding was reduced for calves fed colostrum replacers compared with calves fed maternal colostrum. Finally, colostrum replacer-fed calves performed similarly in terms of health to calves receiving high quality maternal colostrum.

CONCLUSIONS: Use of colostrum replacers may result in less exposure to bacterial contamination in early life while resulting in acceptable calf performance. Therefore, the colostrum replacers evaluated in this study appears to be a valid alternative to maternal colostrum. Long-term effects of early-life colostrum replacers feeding has not yet been studied.

ACCESS THE ARTICLE…

Smid, A. C., Weary, D. M., Costa, J. H. C., & von Keyserlingk, M. A. G. (2017). **Dairy cow preference for different types of outdoor access**. *Journal of Dairy Science*. Advance online publication. doi: 10.3168/jds.2017-13294

BACKGROUND: Dairy cows display a partial preference for being outside; however, no known research has attempted to test whether freestall-housed cows prefer to access a pasture versus some other outdoor area, particularly during the night when cows show the strongest motivation for outdoor access. In addition, although some research has shown welfare benefits of exercise in an outdoor pack, no studies have investigated whether the behavior of cows while in the barn changes when the cows have access to the outdoors.

PURPOSE: The primary objective was to determine the preference of lactating dairy cows for pasture versus an outdoor sand pack during the night. The second objective was to determine whether feeding and perching (only standing on two front feet in the lying stall) behavior inside the barn changed when cows were provided outdoor access. A third objective was to investigate how lying behavior was affected by providing cows access to different outdoor areas.

RESULTS: Cows spent more time outside in the pasture phase (90.0 ± 5.9%) compared with the sand phase (44.4 ± 6.3%). When provided simultaneous access to both options, cows spent more time on pasture than on the sand pack (90.5 ± 2.6% vs. 0.8 ± 0.5%, respectively). Time spent feeding indoors during the day did not change regardless of what type of outdoor access was provided, but there was a decline in perching during the day when cows were provided access to either outdoor option at night. Lying time in the pasture phase was lower than in the baseline or sand phase. During the nighttime, lying time outside was not different between the sand (55.4 ± 7.9%) and pasture (52.0 ± 7.4%) phases.

CONCLUSIONS: The authors concluded that cows exhibited a preference to spend much of the night outside when provided the opportunity under the relatively mild weather conditions encountered during this study. The preference to be outdoors was greater for a large pasture than for a small outdoor sand pack.

ACCESS THE ARTICLE…

Machado, V. S., & Bicalho, R. C. (2017). **Prepartum application of internal teat sealant or intramammary amoxicillin on dairy heifers: Effect on udder health, survival, and performance**. *Journal of Dairy Science*. Advance online publication. doi: 10.3168/jds.2017-13415

BACKGROUND: Because internal teat sealant (ITS) therapy does not treat existing IMI, it has been used alone for cows with low SCC or in combination with intramammary antibiotic infusion (IA). Many of the studies involved heifer on pasture in New Zealand. It is unclear if the results found with the application of ITS would be similar in higher producing, well-managed animals housed in freestall barns.

PURPOSE: The primary objective was to investigate the effect of prepartum application of internal teat sealant (ITS) or intramammary antibiotic (IA) on postpartum udder health of heifers housed in freestall barns. Intramammary infections have been associated with milk and reproductive losses. In addition to ITS or intramammary antibiotic application potentially affecting udder health, the secondary objective was to evaluate the effect of prepartum application of ITS or intramammary antibiotic on milk yield, fertility, and survivability.

RESULTS: The presence of pathogens in milk at 7 ± 3 DIM was more frequently detected in the CON heifers compared with animals enrolled in the treatment groups. Heifers in IA+ITS group had a decreased incidence of clinical mastitis compared with CON heifers (12.9 vs. 21.4%). Additionally, the incidence of subclinical mastitis was decreased for IA+ITS heifers compared with CON counterparts (20.1 vs. 43.8%). During the first 9 months of lactation, IA and IA+ITS heifers had lower SCC linear scores

compared with ITS and CON counterparts. Although IA+ITS treatment successfully improved udder health, it did not result in better milk yield, fertility, and survivability.

CONCLUSIONS: The authors conclude that ITS alone was not effective in improving udder health of heifers housed in freestall barns, whereas IA alone was effective in decreasing the SCC during the first 9 months of lactation. The best results were achieved when IA was followed by ITS, improving udder health and milk quality by decreasing the incidence of clinical and subclinical mastitis and the SCC linear score throughout the lactation.

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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 Veterinarians Meeting

- January 3-5, 2018
- Marriott Columbus University Area
- Topic: "*Transition Cow Management*" 11 hours of CE

3rd Annual Dairy Cattle Welfare Symposium

Intersection of Best Practices and Sustainability

- May 31 – June 1, 2018
- Hilton Scottsdale Resort & Villas; Scottsdale, Arizona

Save the date.

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