



# OHIO VETERINARY NEWSLETTER

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## News

### FIRST CASE OF CHRONIC WASTING DISEASE CONFIRMED IN OHIO ON PRIVATE PRESERVE

REYNOLDSBURG, Ohio (Oct. 23, 2014) – The Ohio Department of Agriculture and the Ohio Department of Natural Resources today confirmed the first positive case of Chronic Wasting Disease (CWD) in the state in a captive deer operation in Holmes County. The state continues to take quarantine action to control the further spread of the disease. There is no evidence that CWD has affected the wild deer population in the state.

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## Research

Habing, G. G., Kessler, S. E., Mollenkopf, D. F., Wittum, T. E., Anderson, T. C., Barton Behravesh, C., ... Erdman, M. M. (2014). **Distribution and diversity of *Salmonella* strains in shipments of hatchling poultry, United States, 2013.** *Zoonoses Public Health*. Advance online publication. doi: 10.1111/zph.12157

**BACKGROUND:** Non-typhoidal *Salmonella enterica* (NTS) is the leading cause of foodborne hospitalizations and death in the U.S. Although most frequently transmitted through food, zoonotic transmission through direct contact with animals accounts for up to 11% of infections with NTS. Hatchling poultry purchased at retail farm stores have caused illness in people and little is known about the diversity and anti-microbial resistance of NTS in poultry from mail-order hatcheries (wholesale supplier).

**PURPOSE:** The purpose was to characterize the prevalence, distribution of serovars and pulsed-field gel electrophoresis PFGE patterns, and anti-microbial resistance of NTS across farm stores and mail-order hatchery sources.

**RESULTS:** NTS was recovered from 27% (59/219) of hatchling poultry shipment boxes arriving at 36 different stores from a single farm store chain. NTS genotypes associated with multistate outbreaks of salmonellosis in 2013 were recovered from 23 of 219 hatchling shipment boxes. Shipment boxes containing indistinguishable genotypes

## Location

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originated from the same mail-order hatchery in all but one instance. Nineteen per cent (11/59) of isolates were resistant to more than one class of anti-microbial, but only one of 59 isolates was resistant to antimicrobials used to treat NTS infections in people.

**CONCLUSIONS:** This study focused a description of *Salmonella* strains colonizing mail-order hatchling poultry. Additional research is necessary to design effective interventions to further limit zoonotic transmission of *Salmonella*.

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Steiner, S., Neidl, A., Linhart, N., Tichy, A., Gasteiner, J., Gallob, K., Baumgartner, W., & Wittek, T. (2014). **Randomised prospective study compares efficacy of five different stomach tubes for rumen fluid sampling in dairy cows.** *Veterinary Record*. Advance online publication. doi: 10.1136/vr.102399

**BACKGROUND:** For subacute ruminal acidosis, pH measurement of rumen fluid is considered a valid diagnostic test; however, using a stomach tube to obtain the fluid results in variable and unpredictable positioning within the rumen, and the possible contamination of samples with saliva rich in bicarbonate which may result in incorrect measurements. Five stomach tubes were tested: (1) tube designed by Dirksen (Eisenhut-Vet AG); (2) tube designed by Geishauer (Ruminator, Profs Products); (3) tube designed by Hamburger (Flora, Profs Products); (4) tube 4 (Selekt Rumen Fluid Collector, Nimrod Veterinary Products); and (5) a self-made stomach tube (simple water hose combined with a metal mouth gag).

**PURPOSE:** The first objective was to evaluate and compare the performance of five stomach tubes for rumen fluid sampling with regards to their technical reliability, the suitability for daily use, the accuracy of the obtained samples and the acceptance by the animals. Second, the results of the samples obtained using stomach tubes were compared with the indwelling rumen pH sensor and the samples which were obtained via the rumen fistula at the same time from identical sites.

**RESULTS:** The pH-values of samples taken with four of the tubes (Dirksen, Geishauer, tube 4, and water hose) did not show significant differences to samples taken via rumen fistulas. Mean differences ranged between -0.02 and +0.09. Samples taken with tube 4 and the water hose also showed no significant differences to pH-sensor measurements.

**CONCLUSIONS:** The authors concluded that tube 4 seems to be the best probe for work in the field. It is a good alternative to rumenocentesis if farmers have health concerns, or collecting larger amounts of rumen fluid if special analyses are needed. It was well tolerated by the animals, and sampling times were short. Examination of several animals in a group, as recommended for the diagnosis of subacute ruminal acidosis, is possible. If sampling is done by well-trained staff in accordance with the instruction manuals, the contamination of rumen fluid by saliva can be avoided.

[ACCESS THE ARTICLE...](#)

Botaro, B. G., Cortinhas, C. S., Dibbern, A. G., Silva, L. F., Benites, N. R., & Dos Santos, M. V. (2014). **Staphylococcus aureus intramammary infection affects milk yield and SCC of dairy cows.** *Tropical Animal Health and Production*. Advance online publication. doi: 10.1007/s11250-014-0683-5

**BACKGROUND:** Little is known about the extent of changes at the udder and at the quarter level that occur in milk composition during mastitis, as the majority of reports focused on cow composite and bulk tank milk changes due to the disease. Furthermore, few studies have established the relationship between the causing pathogens, production, and composition of milk.

**PURPOSE:** The purpose was to evaluate the effect of subclinical mastitis caused by *S.*

*aureus* at dairy cow mammary quarter level on milk production and its composition.

**RESULTS:** Forty-three cows were considered for this study as a result of the *S. aureus* subclinical intramammary infection status screening. Fourteen quarters were *S. aureus* infected out of 172 sampled in total. Nine *S. aureus*-infected quarters were located in the rear half of the cows while five were front ones. These were then pairwise compared to their *S. aureus*-noninfected, opposite hand-side ones of the same half of a given cow, totaling to 14 comparisons.

**CONCLUSIONS:** The authors concluded that *S. aureus* subclinical mastitis at quarter level has increased milk somatic cell counts, but not lactose, fat, and protein contents. However, the infection decreases milk production and fat yield of infected quarters. Production losses due to *S. aureus* subclinical infection in the mammary quarter do not seem to be related to its position within a cow.

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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 3 – Basic Dairy Cattle Nutrition  
December 4-6, 2014

Module 4 – Advanced Dairy Cattle Nutrition  
March, 2015 (TBD)

Modules 3 and 4 of this cohort will be focused on nutrition. Space is still available under the specific-module option.

### [Organic Livestock and Poultry Health Series](#)

Webinar – Basics of Poultry Health and Management  
Thursday, October 30, 2014 at 1:00 p.m.

Webinar – Internal Parasite Management in Pasture-Based Sheep and Goat Operations  
Monday, November 3, 2014 at 1:00 p.m.

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The *Ohio Veterinary Newsletter* began in October of 1974 as a way for Veterinary Extension to relay relevant information to practicing veterinarians in Ohio. The aim is to communicate pertinent news from the Veterinary Extension Unit; unbiased, research-based information with practical relevance for veterinary practitioners working in food animal, equine, and shelter medicine; and a calendar of upcoming opportunities. Please feel free to provide your feedback and let us know what information is most helpful to you and your practice.

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