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# OHIO VETERINARY NEWSLETTER

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## Research

Bowman, A. S., Nolting, J. M., Workman, J. D., Cooper, M., Fisher, A. E., Marsh, B., & Forshey, T. (2015). **The inability to screen exhibition swine for influenza A virus using body temperature.** *Zoonoses and Public Health*. Advance online publication. doi: 10.1111/zph.12201

**BACKGROUND:** Animal health officials have hypothesized that body temperature could be used to screen pigs for subclinical influenza A virus (IAV) infections at agricultural fairs. Furthermore, to avoid the time and stress from using the gold standard rectal thermometer, infrared thermometer use has been suggested as a practical, non-invasive method for body temperature measurement in swine.

**PURPOSE:** The objective was to assess the use of swine body temperature measurement, as recorded by infrared and rectal thermometers, as a practical method to screen for IAV infections in swine at agricultural fairs.

**RESULTS:** Infrared Thermometers were used to record the body surface temperature of 1,092 pigs at the time of IAV nasal swab collection at the end of the exhibition period of 55 agricultural fairs (19.4% positive). The difference in mean infrared body temperature measurement of IAV-positive and IAV-negative pigs was 0.83°C. Rectal Thermometers were used to record body temperature of 1,948 pigs at time of snout wipe collection immediately prior to the unloading of the animals at a single large swine exhibition (2.4% positive). The mean rectal temperatures differed by only 0.19°C between IAV-positive and IAV-negative pigs.

**CONCLUSIONS:** The authors concluded that the high degree of similarity in the body temperature measurements between the IAV-positive and IAV-negative pigs made it impossible to set a diagnostically meaningful cut point to differentiate IAV status of the individual animals. The data indicate that body temperature measurement cannot be used to accurately screen exhibition swine for IAV.

[ACCESS THE ARTICLE...](#)

Maquivar, M. G., Barragan, A. A., Velez, J. S., Bothe, H., & Schuenemann, G. M. (2015). **Effect of intrauterine dextrose on reproductive performance of lactating dairy cows diagnosed with purulent vaginal discharge under certified organic management.** *Journal of Dairy*

## Location

Department of Veterinary  
Preventive Medicine

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

## Subscribe

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

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

Science. Advance online publication. doi: 10.3168/jds.2014-9081

**BACKGROUND:** No antimicrobial is approved in the U.S. for treatment of clinical endometritis (CE) or purulent vaginal discharge (PVD) in dairy cattle. A recent study showed that the use of a hypertonic solution (e.g., 50% dextrose in water) improves clinical cure of lactating dairy cows with CE compared with untreated control cows under conventional management.

**PURPOSE:** The first objective was to determine the effect of PVD on reproductive performance of lactating dairy cows under certified organic management. The second objective was to compare the response to treatments (clinical cure and resumption of the postpartum estrous cycles 14 d post-therapy) in lactating dairy cows diagnosed with PVD and treated with an intrauterine infusion of a hypertonic solution of 50% dextrose (DEX) compared with untreated control (CON) cows.

**RESULTS:** Treatment with DEX increased the proportion of cows with clear vaginal discharge (clinical cure) and cyclicity 14 days post-therapy compared with CON cows. Pregnancy per AI for DEX ( $29.2 \pm 2\%$ ) cows was significantly greater than that for CON ( $22.5 \pm 2\%$ ) cows. Cows without PVD had a greater proportion of cycling cows (65.6%) and PAI (37%) with reduced pregnancy losses (5.7%) compared with DEX or CON cows.

**CONCLUSIONS:** This randomized clinical study using certified organic production systems showed that administration of DEX alone improved clinical cure, resumption of postpartum estrous cycle, and the subsequent reproductive performance of PVD cows compared with untreated CON cows. It is important to note that lactating dairy cows can achieve acceptable performance (conception rate and milk yield) without using reproductive hormones, as shown for those cows that did not develop uterine infections.

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Chizzotti, M. L., Machado, F. S., Valente, E. E., Pereira, L. G., Campos, M. M., Tomich, T. R., ...Ribas, M. N. (2015). **Technical note: Validation of a system for monitoring individual feeding behavior and individual feed intake in dairy cattle.** *Journal of Dairy Science*, 98(5), 3438-3442. doi: 10.3168/jds.2014-8925

**BACKGROUND:** There is increasing demand for monitoring feed intake and behavior in dairy and beef cattle for both management and research purposes. The Intergado monitoring system (Intergado Ltd., Contagem, Minas Gerais, Brazil) determines individual feeding behavior and feed intake in cattle; however, no data have been published that validate this system for lactating dairy cattle.

**PURPOSE:** The objective was to validate the feeding behavior (bin-visit duration) and feed intake data collected from the Intergado system by comparison to time-lapse video recordings and manual feed intake measurements.

**RESULTS:** Cows were fitted with an ear tag containing a unique passive transponder and provided free access to 12 feed bins. The system documented the visit duration and feed intake by recording the animal ID number, bin number, initial and final times, and the difference between feed weight at start and end of each feed bin visit. Data was compared to video and manual measurements. The Intergado system presented high values for specificity (99.9%) and sensitivity (99.6%) for cow detection. The visit duration and feed intake per visit collected using the electronic monitoring system were similar to the video and manual weighing data, respectively. The difference between the feed intake measured manually and the sum of the electronically recorded feed intake was less than 250 grams.

**CONCLUSIONS:** The authors concluded that the Intergado system provides a reasonable monitoring system for feeding behavior and feed intake by freestall-housed dairy cows.

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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/>

## Dairy Reproduction & Genomics Workshop

May 7, 2015 (9:30 a.m. – 3:00 p.m.)  
Der Dutchman Restaurant, Plain City, Ohio  
Registration is free and lunch will be provided!

## Ohio Dairy Health and Management Certificate Program

Module 5 – Leadership and Personal Effectiveness  
May 28-29, 2015  
Hilton Garden Inn, Columbus, Ohio

## Organic Livestock and Poultry Health Series

Pain Management on Organic Dairy Farms  
May 5, 2015 (1-2 p.m.)  
CSI for Dairy: Assessing the Risk of Uterine Disease  
June 1, 2015 (12-1 p.m.)  
Nutrition and Mammary Health  
June 3, 2015 (12-1 p.m.)  
On-Farm Dairy Herd Health Workshop  
June 29, 2015 (10 a.m. – 3 p.m.)  
Maria Stein, Ohio

## Poultry Health Management Schools

Animal Disease Diagnostic Laboratory, Reynoldsburg, Ohio  
Turkey & Broiler Health Management School  
May 4-5, 2015  
Layer Health Management School  
May 6-7, 2015

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*Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension and Gist Chair in Extension Education and Leadership.*



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