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This Issue

“Peer Review” System

Session

Party Audits

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News

“Peer Review” System for Food Animal Protocols and Practices

The survey link for feedback regarding the need for a “Peer Review” system for protocols is still active. If you have not responded, please do so. We greatly appreciate your input and thoughts. Details on the “Peer Review” System are available in the previous issue of the *Ohio Veterinary Newsletter*.

https://osu.az1.qualtrics.com/SE/?SID=SV_7TWHnWOQeQtZqO9

Q&A Session

QUESTION: "I have gotten a letter from my co-op/processor telling me that I need to be enrolled in the National Dairy Farm (FARM) program. How do I become enrolled in the program, and what should I do ahead of time to prepare for an evaluator coming onto my farm?"

ANSWER: Today's consumers are very concerned about how their food was produced and how livestock were treated. In addition to simply knowing where their food comes from. This has led to the development of third party auditing and certification programs. These programs provide independent assessments regarding animal welfare, food safety, employee training/environment, adherence to standards, etc. Many processors or retailers are demanding that farms are certified. This provides consumers some assurance that their food was raised responsibly. The National FARM program is one example of a third party program that is administered by the National Milk Producers Federation in partnership with Dairy Management Inc. There are some other similar programs administered directly by processors and/or retailers designed for the same purpose. It is important to note that retailers may also require their own audits, regardless of participation in any other audit/certification program. Here is some specific information for the National FARM program which was requested by your specific co-op/processor:

To be enrolled in the FARM program (<http://www.nationaldairyfarm.com/>), an evaluator will visit your herd every three months for a short interview and animal observations. Ask them if they have an evaluator that you can use for the assessment, as you should now have someone on staff that has been trained as an evaluator. You can also reach out to the Ohio Dairy Producers Association (<http://www.odpa.org/>) or Dr. Katy Proudfoot, OSU Extension Specialist (proudfoot.18@osu.edu) to help find an evaluator.

There are a few key things that you can do to prepare for the FARM assessment, including:

1. *Develop and show evidence of a veterinarian-client-patient relationship (VCPR).*

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FARM requires evidence of a VCPR. The easiest way to show evidence is to have your veterinarian sign a form assuring that they provide veterinary care to your herd. An example form developed by the OVMA Drug Use Task Force is available at: <https://vet.osu.edu/extension/general-food-fiber-animal-resources>

2. *Update your protocols with the help of your veterinarian, and write them all down.*

Evaluators will ask to see your protocols because in their short visit they will not be able to see everything that you have. Now is a good time to work with your veterinarian to update and get your protocols written down. Although written protocols are not always followed, making them more accessible to employees by creating a handbook (in English or Spanish), or visual posters hanging in obvious locations such as the milking parlor or office can also help.

3. *Start developing a culture of good stockmanship, including a zero-tolerance policy for animal abuse.*

FARM requires evidence that new employees are trained in good stockmanship, and that you have strict, written policy against animal abuse. Getting all employees to sign a form assuring that they will not abuse cattle, and report when they see abuse is a good start (example: http://www.nationaldairyfarm.com/sites/default/files/Dairy%20Cattle%20Care%20Ethics%20Agreement_Separate.pdf)

OSU Veterinary Extension offers personnel training and certification programs for both Spanish- and English-speaking workers. In addition, there are stockmanship training programs available online.

4. *Stop tail docking today.*

Due to the abundance of research showing that tail-docking is not beneficial to cows, this practice is no longer allowable by FARM or any other animal welfare assessment. If tail docking is still a practice on your herd, now is the time to replace it with an alternative practice, such as switch trimming.

Research

Floren, H. K., Sischo, W. M., Crudo, C., & Moore, D. A. (2016). **Technical note: Use of a digital and optical Brix refractometer to estimate total solids in milk replacer solutions for calves.** *Journal of Dairy Science*. Advanced online publication. doi: 10.3168/jds.2015-10834

BACKGROUND: Creating protocols for milk replacer feeding is challenging because formulations have changed significantly over the years and much of the research conducted is no longer relevant. Management decisions may still be based on obsolete findings. Anecdotally, some farms have been using a Brix refractometer to measure total solids in milk replacer mixes, although no evidence has been found to support that it estimates total solids the same as with milk.

PURPOSE: The objectives were to establish relationships between Brix refractometer readings, osmolality, and total milk replacers to help dairies quantitatively measure consistency in mixing and feeding milk replacer.

RESULTS: Readings from both digital and optical Brix refractometers were compared with total solids. The 2 types of refractometers' readings correlated well with one another. The digital and optical Brix readings were highly correlated with total solids percentage. A value of 1.08 to 1.47 would need to be added to the Brix reading to estimate the total solids in milk replacer mixes with the optical and digital refractometers, respectively. Osmolality was correlated with total solids percentage of the mixes, but the relationship was different depending on the type of milk replacer.

CONCLUSIONS: The authors concluded that the Brix refractometer can be beneficial in estimating total solids concentration in milk replacer mixes to help monitor milk replacer feeding consistency. If using the digital refractometer to estimate total solids percentage, a value of 1.5 would be added to the Brix reading (a Brix reading of 12 indicates a total solids of 13.5%); using the optical refractometer, a value of 1.1 would be added to the Brix reading (a Brix reading of 12 indicates total solids of about 13.1%).

[ACCESS THE ARTICLE...](#)

Mayo, L. M., Moore, S. G., Pooch, S. E., Silvia, W. J., & Lucy, M. C. (2016). **Technical note: Validation of a chemical pregnancy test in dairy cows that uses whole blood, shortened incubation time, and visual readout.** *Journal of Dairy Science*. Advanced online publication. doi: 10.3168/jds.2016-1111

BACKGROUND: Traditional methods of pregnancy diagnosis such as ultrasonography or manual palpation are typically performed 32 or more days after artificial insemination (AI). Earlier tests are based on pregnancy-associated glycoprotein (PAG) levels in milk.

(PAG) in the circulation that are detected as early as 25 days after AI, but this requires specialized equipment and significant wait times.

PURPOSE: The objective was to validate a chemical pregnancy test that confers the advantages of using whole blood incubation times, and visual readout.

RESULTS: When optical density (measured with a microtiter plate reader; plasma, milk, and rapid visual tests) was used, the percentage of pregnant cows classified correctly (sensitivity) for the plasma, milk, and rapid visual tests were $97 \pm 1\%$, $98 \pm 1\%$, and $95 \pm 1\%$ (\pm SE), respectively. The sensitivity of the rapid visual test when assessed visually was $98 \pm 1\%$. The specificity (proportion of nonpregnant cows classified correctly) for the plasma, milk, and rapid visual was $94 \pm 2\%$, $94 \pm 2\%$, and $92 \pm 2\%$ when an OD was used. When read visually, the specificity of the rapid visual test was lesser ($85 \pm 3\%$) because some cows with faint visual signals yielded false positive diagnosis.

CONCLUSIONS: The authors concluded that a rapid visual test had equal sensitivity and accuracy to existing PAG tests. The slightly lower specificity reinforces the need for a second pregnancy diagnosis (either chemical test or alternative method) during the period of embryonic loss has subsided. The sensitivity and negative predictive value of the visual test was almost equal and not different from other tests. This indicates that very few truly pregnant cows are misdiagnosed as not pregnant when a rapid visual test is used.

[ACCESS THE ARTICLE...](#)

Kaufman, E. I., LeBlanc, S. J., McBride, B. W., Duffield, T. F., & DeVries, T. J. (2016). **Short communication: Association of lying behavior and subclinical ketosis in transition dairy cows.** *Journal of Dairy Science*. Advanced online publication. doi: 10.3168/jds.2016-11185

BACKGROUND: Despite the availability of on-farm tests for detection of subclinical ketosis, it is still challenging for dairy producers to identify subclinical ketosis at an early stage. Evidence is growing that measurements of activity and feed intake behavior may be used to preemptively identify cows at risk for subclinical illness.

PURPOSE: The objective was to characterize changes in lying behaviors across the transition period and determine if lying time, frequency of lying bouts, and lying bout duration may be associated with subclinical ketosis.

RESULTS: Multiparous cows had a greater lying time, fewer lying bouts, and longer lying bout durations compared with primiparous cows during the transition period. Primiparous cows showed no difference in lying time or frequency or duration of lying bouts between health statuses; however, multiparous cows with subclinical ketosis and no other health problems during transition and cows with subclinical ketosis and 1 or more other health problems were found to lie down longer than multiparous healthy cows during the postcalving period. Further, increased odds of subclinical ketosis occurring with a postpartum health issue was associated with longer lying time during the week after calving.

CONCLUSIONS: The authors concluded that these results suggest that monitoring lying behavior across the transition period may not be useful for the early identification of subclinical ketosis, but may contribute to the identification of multiparous cows that have subclinical ketosis in combination with another health issue.

[ACCESS THE ARTICLE...](#)

Lippolis, K. D., Cooke, R. F., Schubach, K. M., Brandão, da Silva, L. G. T., Marques, R. S., & Bohrer, W. (2016). **Altering the time of vaccination against respiratory pathogens to enhance antibody response and performance of feeder cattle.** *Journal of Animal Science*. Advanced online publication. doi: 10.2527/kas/2016-0673

BACKGROUND: It is common for preconditioned calves to receive vaccination against bovine respiratory disease (BRD) pathogens at weaning and booster 30 days later at feedlot entry. Weaning and feedlot entry are two of the most stressful situations encountered by feeder cattle, and vaccine efficacy can be reduced if administered to highly stressed animals. Therefore, altering the time of vaccination against BRD has been investigated to enhance health and performance of feeder cattle.

PURPOSE: To compare the effects of anticipating, delaying, or vaccinating against BRD at the time of weaning and feedlot entry on growth, dry matter intake, and plasma antibody parameters of feeder cattle.

RESULTS: Collectively, the EARLY treatment resulted in increased plasma concentrations of antibodies against *Mannheimia haemolytica* (MH) and bovine viral diarrhoea virus (BVDV) at feedlot entry, and increased average daily gain during feedlot receiving compared with CON and DELAYED treatments. Moreover, treatment effects on plasma BVDV and MH antibodies were not significant.

feedlot entry should not be associated with increased antibody response in EARLY calves, but with greater interval between vaccinations and feedlot entry.

CONCLUSIONS: The authors concluded that anticipating vaccination and booster against BRD pathogens to provide doses prior to feedlot entry appears to be a valid strategy to enhance cattle health and performance during feedlot reception. Further research is warranted to validate these outcomes in high-stress feedlot receiving scenarios where morbidity and mortality are traditionally greater as observed herein, including evaluation of antibodies against other BRD pathogens and performance until slaughter.

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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 8 – Organic Animal Health Workshop

- Aug 25-26, 2016
- Hilton Garden Inn; Columbus, Ohio

Spots are always available for specific module plan.

Poultry Medicine Workshops

Practitioners will develop knowledge & skills to receive poultry clients

- Oct 4, 2016; Cleveland, Ohio
- Oct 5, 2016; Columbus, Ohio
- Oct 6, 2016; Cincinnati, Ohio

Details and registration information will be forthcoming...

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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Roger Rennekamp, Ph.D., Director, Ohio State University Extension.

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