DAIRY VETERINARY NEWSLETTER

July 2025

USU Dairy Extension Conference August 19, 2025

This conference will have information for all members of the dairy industry, including for dairy/food animal veterinarians. We hope to see you at this event. It will also introduce several speakers that are new in their positions at Utah State University including some new in the Extension system. They all have some new information to share with us on pertinent topics. **There is no charge to attend, including for the lunch**. The Utah Division of Professional Licensing and UVMA will award **3 CE credits to veterinarians** as well.

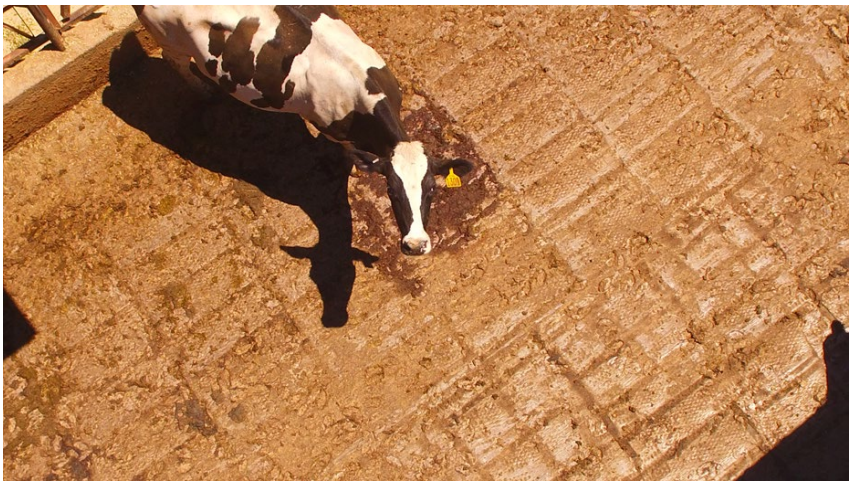
Location: **Cache Co. Events Center, Cache Co. Fairgrounds, 490 S 500 W, Logan, UT 84321**

Schedule and Agenda:

9:00 - 9:30 am: Welcome/Registration

9:30 - 10:15: Drone Use on Dairy Farms - Justin Clawson, USU Extension, Cache Co.

Small Unmanned Aircraft Systems (sUAS), also known as drones, are being implemented in multiple areas of agriculture. The implementation of drones can save time and make many tasks easier. This presentation will discuss real time information that can be collected and used on a dairy farm with the use of a thermal camera drone. The information will range from crop to livestock inspections, the use of spray drones on crops, and the licensing required for the use of these drones on the dairy farm.

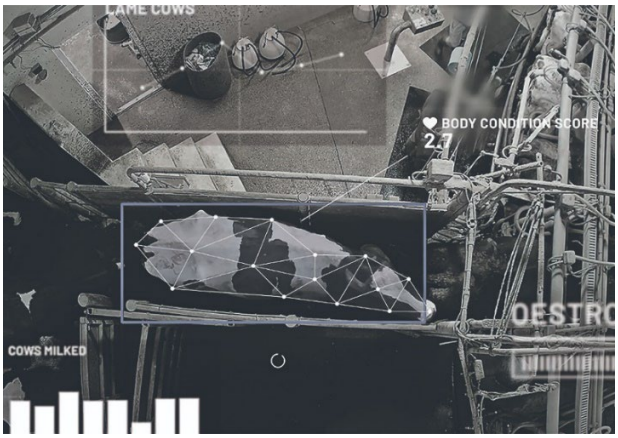


Drone camera zooming in on an individual cow. D. Wilson

10:15 - 11:00: Effectiveness and Producers' Perceptions of Camera-based Technology Detecting Hoof Lesions in Dairy Cows Compared to Foot Trim Findings - Drew Swartz, Dairy Extension, USU

Lameness, primarily caused by hoof lesions, poses major challenges to the dairy industry as it contributes to poor animal welfare, economic losses, and increased greenhouse gas emissions. Traditional lameness detection methods are labor-intensive and often inconsistent, prompting the need for alternative solutions that are accurate, low-effort, and practical for on-farm use. This presentation focuses on the evaluation of an autonomous camera technology (AUTO; CattleEye Ltd., Belfast, UK) which provides body condition and locomotion scores. Drawing from both published and ongoing research, we will review the system's performance in locomotion and body condition scoring, as well as its potential to classify cows with hoof lesions. In addition, we will explore findings from producer-based surveys that provide insight into dairy stakeholders' perceptions of lameness detection technologies and lameness management strategies. Building on this, we investigate the effectiveness of proposed threshold-based metrics from recent literature and introduce our own machine learning models developed using AUTO data and informed by producer feedback. These models aim to generate hoof trimming lists that are relevant and applicable to farm needs. Attendees of this presentation will learn about AUTO camera technology, current uses and limitations on dairy farms for detection of dairy cattle disease.

Practical application: There is a clear need for and interest in automated early detection of hoof lesions in dairy cattle.



"Electronic eye keeps watch for lame cattle." Cattle Eye, The Western Producer

11:00 - 11:15: Break

11:15 - 12:00: Dairy HPAI/H5N1: Exploring How the Virus Moves and Where it Was Found on Dairies in 4 States - Chloe Stenkamp - Strahm, Extension Veterinarian, USU

To better understand avian influenza virus H5N1/HPAI transmission in dairy cattle, we performed three field-based studies on dairy operations in California (CA), Colorado (CO), Michigan (MI) and Ohio (OH). The first early detection study enrolled several herds in CA prior to H5N1 infection, to detect virus in bulk tank (BT) and pen-level milk samples before and during farm outbreak periods. To assess what dairy locations harbored virus during a farm outbreak, a second environmental study collected a battery of environment and air samples on affected operations in all four states, and characterized them for the presence of H5N1. The third longitudinal study enrolled cattle either clinically or non-clinically affected by H5N1 on operations in CO, CA and OH. To determine which cattle excretions harbored virus, blood, urine, milk and nasal swab samples were collected from these cattle weekly or biweekly over the course of 10 weeks, and evaluated for the presence of H5N1.

Results from the early detection study showed H5N1 present in CA farm BTs about a week before clinical signs were seen in cattle on each operation. Pen-level milk samples showed viral presence in all lactating pens on

each farm within one week of clinical signs. On some farms, pen-level detections were made when the herd BT had become test-negative, and some herds had prolonged BT detections. Environmental sampling done on dairy operations in CA, CO, MI and OH showed no H5N1 detections in samples taken from housing areas, feeders, waterers, and other equipment and office surfaces, with few exceptions. H5N1 was detected from milking equipment, parlor surface, and wastewater samples, with the highest viral load seen on milking equipment and parlor surfaces. When two specific sampling devices were used, aerosol samples had H5N1 detection. Longitudinal sampling of individual cows in CA, CO and OH showed viral RNA detected in clinical and non-clinical cow excretions. These detections were intermittent in nasal swabs, urine, and blood, with more consistent detections in milk. The pattern of detection over time in individual cows was highly variable across farms, and by excretion and clinical delineation.

Taken together, H5N1 detections in BT, pen-level milk, samples from farm environments and clinical and non-clinical lactating cow excretions suggest that intra-herd transmission of the virus likely occurs via multiple routes.

Blood collection for HPAI/H5N1 testing. Euronews.com

12:00 - 1:00: Lunch generously provided by IFA

1:00 - 1:45: Toward Greater Efficiency: Nutrition Research for Dairy Cows at USU - Katie Kennedy, Dairy Nutrition, USU

Join us for a presentation exploring how lactation stage affects feed intake and diet formulation, with a focus on supporting cow health and performance through targeted nutrition. We'll discuss the Hepatic Oxidation Theory (HOT), a framework proposed by Dr. Michael Allen (Michigan State University), and its practical application in fresh cow feeding strategies. The session will also highlight current and future research at Utah State University aimed at advancing science-based approaches to improve efficiency, metabolism, and productivity across all stages of lactation. Whether you're a producer, nutritionist, member of the allied dairy industry or a veterinarian, this talk will offer research-backed insights to support better decision-making on the farm.

Bunker silo. SERC

5600 Old Main Hill
Logan UT 84322-5600

1:45 - 2:30: Making Puzzle Pieces Fit: How Forage Choices Affect Other Feed Inputs - Jamie Allen, Livestock Nutritionist, IFA

Sourcing forages to feed your dairy can often be an easy decision. However, the forage that is sourced, along with other factors - storage environment, equipment limitations, certification requirements, etc. - directly impacts a nutrition consultant's ability to formulate a complementary concentrate and an overall TMR recipe. When evaluating a nutrition program at a dairy, a consultant will often assess both the physical nature and the nutrient profile of the available forages before developing a new or modifying an existing feeding program. These assessments and the reasons behind them are discussed in this presentation.

Once again, we hope to see you on August 19, 2025 for this interesting conference. Please encourage your producer clients and dairy industry partners to come as well.

Please let us know your comments and suggestions for future topics. I can be reached at (435) 760-3731 (Cell), or David.Wilson@usu.edu.

David Wilson, DVM, Dairy Extension Veterinarian