UF IFAS
UNIVERSITY of FLORIDA
Department of Animal Sciences

Dairy Update

Quarterly Newsletter **Fall 2025**

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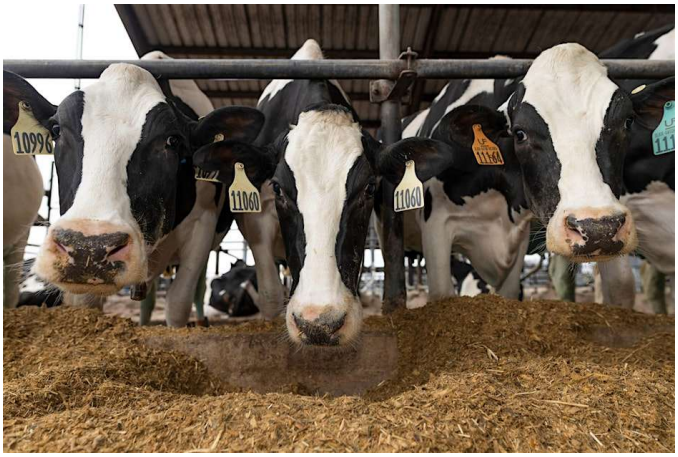
Dairy Extension Agenda

- 59th Annual Florida Dairy Conference Road Show 2025. Locations: Okeechobee (FL) on Wednesday November 12 and Tifton (GA) on Thursday November 13. 11:30am – 4:00pm. https://animal.ifas.ufl.edu/dairy/conferences--meetings/florida-dairy-production-conference/
- Family Day at the Dairy Farm, the open house of the UF\IFAS Dairy Unit for the public. Saturday March 7, 2026. 9am to 2 pm.

Agenda 59th Dairy Production Conference ROAD SHOW

The 59th Florida Dairy Production Conference has changed its format to a Road Show. This year, the aim of the conference is to get closer to producers. The program will be offered at 2 locations:

- Wednesday November 12: UF/IFAS Okeechobee County Cooperative Extension Service, 458 U.S. 98, Okeechobee, FL
- Thursday November 13: UGA Tifton Campus Conference Center, 458 U.S. 98, Tifton, GA



Event program at both locations:
11:30 AM - Registration
11:45 AM - Introduction
12:00 PM - Lunch
12:30 PM - Dr. Mike Hutjens - *Unlocking the secrets of optimal dairy production: A 7-pound milestone*
1:20 PM - Dr. Sha Tao - *Management during the transition from late lactation to the early dry period*
2:10 PM - Dr. Izabella Toledo - *Commercial application of "smart" technologies to reduce water usage when cooling dairy cows*
3:00 PM - Dr. José Santos - *Effects of a Maternal Bovine Appeasing Substance on Health and Production Performance in Dairy Cows*
4:00 PM - Adjourn

Registration: General admission is $8 per person to cover lunch. Pre-register through these links: Okeechobee, Tifton or visit https://animal.ifas.ufl.edu/dairy/conferences--meetings/florida-dairy-production-conference/
For more information, contact Izabella Toledo (352) 294-6987, izatol@ufl.edu

UF Co-Developed *Fresh Cow Index* Launched

Albert De Vries

A new metric to evaluate fresh cow performance was recently launched by Dairy Records Management Systems (DRMS) as part of their HerdHQ decision platform for dairy herd management support.

The Fresh Cow Index (FCI) is a cow- and herd metric that measures the level of success of the transition program by comparing the cow's actual first test-day milk with what is expected of her based on her history. More precisely, the FCI is the ratio of actual energy corrected first test-day milk yield (ECM) and predicted ECM, x 100. The FCI is calculated for first and older lactation cows between 5–40 days in milk. An FCI <<< 100 may indicate that the cow, or group of cows, had a poor transition into lactation.

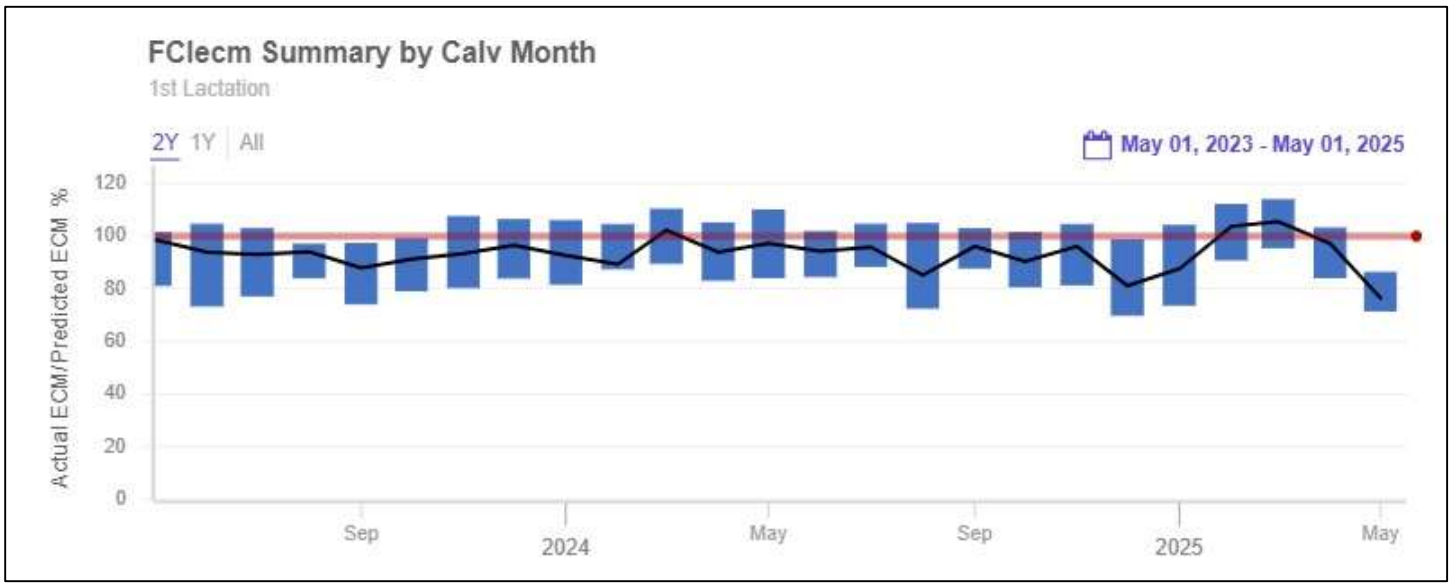
Key in the FCI calculation is the prediction of first test-day ECM yield, to which the actual ECM yield is compared. That predicted first test-day ECM yield depends on the cow's genetic merit and her production history.

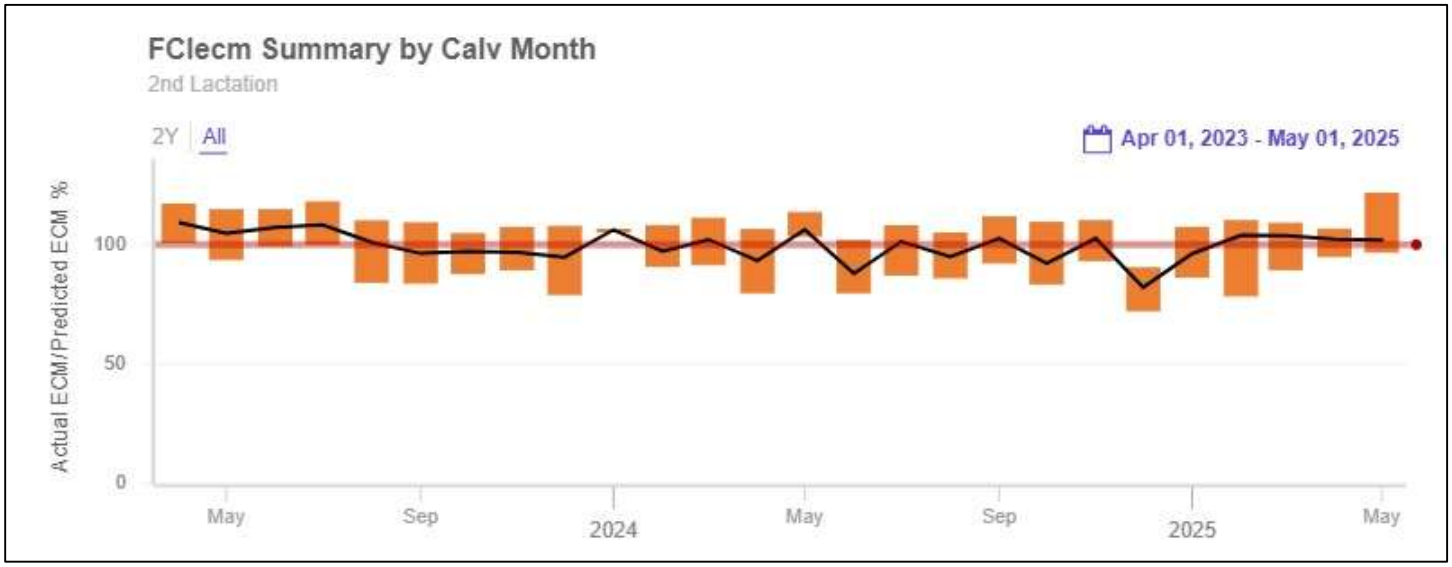
The formulas to predict the first test-day ECM were developed at UF by Anna Hanson and Albert De Vries, based on data of millions of records provided by DRMS.

First lactation cows have no prior lactation data and therefore have their own equation. The equation for first lactation cows includes variables related to year, calving age, genetic traits, dam performance, season, region, milking frequency, breed, abortion, calving ease, gestation length, and DIM at first testday. The equation for older cows also includes variables related to previous parity dry period length, milk yield, and days open.

Data presented at the American Dairy Science Association meetings this summer showed some of the predictive power of the FCI. Data from 409,384 first and 1,252,150 older lactation cows were grouped by 10 FCI increments, from FCI < 70 to FCI ≥ 130. Removal rates for first lactation cows decreased from 26.7% for cows with FCI < 70% to 23.2% for cows with FCI ≥ 130, while peak milk yield increased from 69 lbs to 94 lbs. Similarly, 305-day ECM increased from 20,454 to 27,045 lbs for FCI < 70 to FCI ≥ 130. For older cows, removal rates decreased from 37.7% to 33.1%, peak milk yield increased from 91 lbs to 130 lbs and 305-day ECM increased from 23,311 lbs to 31,962 lbs, respectively. Across lactations, cows with FCI < 100 were less likely to start a subsequent lactation. Cows with FCI < 80 were predominantly removed for production reasons and cows with FCI > 80, if removed, were increasingly removed for reproduction reasons.

For more information about the Fresh Cow Index, and how to use it on your dairy farm, visit https://www.drms.org/FCI-Management , contact DRMS at (919) 661-3100 or drms@ncsu.edu. Or contact Albert De Vries, devries@ufl.edu





Monthly Fresh Cow Index for energy corrected milk (FClecm) distributions for an example farm.

AVAILABLE: On-farm Milking Parlor Evaluation and Training to Improve Labor Efficiency on Conventional Dairy Farms in the Southeast

Carlos Nino De Guzman, Izabella Toledo, Albert De Vries

The Southeast Dairy Producers Check-Off Program recently funded our project to **offer state-of-the-art, noncommercial, on-farm milking parlor evaluations** and follow up with **customized recommendations and trainings**. This project is an extension of similar evaluations currently being conducted on organic dairy farms throughout the US.

Our Milking Parlor Evaluation:

Regular milking parlor evaluations are essential for ensuring high milk quality and enhancing milking parlor labor efficiency. These key points will be translated into a positive economic impact for milking operations.

Timing of the milking parlor evaluations (days, shifts, times) will be coordinated with interested dairy producers. During our visits, various activities are conducted to evaluate milking and parlor efficiency. We will ensure that minimal to no perturbation occurs to the milkers, allowing us to capture accurate data and information needed to prepare a meaningful report. We will use VaDia devices to measure the vacuum levels in the milking system and assess the performance of the pulsators.

Our complete evaluation of the milking system will include:

- Milking time test: We will retrieve information related to machine-on times, overmilking, and minimum, average, and maximum claw vacuum. This test is performed during the milking of at least one milking group. Vacuum devices are attached to the milking unit, allowing the milker to conduct their activities normally without altering their behavior.
- Vacuum fluctuation–restrictions in the milk pipe path: Using the claw vacuum information, we can determine if there are restrictions in the milk pipe path that directly influence the adequate claw vacuum level to perform the proper massage during milking.
- Overall vacuum stability: Determine if the system's vacuum can maintain stability during the entire milking process.
- Bimodality and overmilking: determine the proportion of bimodal milkings and the duration of overmilking, which are important risk factors for both long-term and short-term teat changes and extended milking times.
- Pulsator test: Each pulsator will be evaluated to determine that the pulsation phases' duration is optimal. All pulsators will be assessed to determine whether the phase duration variation among pulsators is adequate. This activity takes approximately 45 minutes (depending on the parlor size) and is usually performed at the end of milking, before washing.

Additionally, we will use scoring sheets and visual examinations to evaluate short-term and long-term teat end changes, cleanliness of the teat end before unit attachment, proper use of pre- and post-dip, and appropriate milking routine practices.

- Milking routine timing: Using a stopwatch, the milking routine will be timed to calculate important metrics related to good milking routine practices, such as preparation lag time, pre-dip contact time, machine-on time, and time to post-dip application.
- Teat end cleanliness: Cleanliness of the teat end will be assessed to determine how clean the teats are before the unit attachment.
- Short-term and long-term teat changes: Changes in firmness, color, swelling of the teat ends, and hyperkeratosis incidence will be evaluated.

Milking System Records Analyses:

We offer record analysis and interpretation of milking records as found in DairyComp and PCDART.

Our Milking Procedures Training:

Following the parlor evaluation and discussion about opportunities to establish improvements in milking consistency and efficiency, a milking procedure training will be offered. The training will be tailored to optimize milking procedures for each specific dairy operation, in cooperation with the farm owner. This may include showing milkers in the milking parlor how well-timed milking improves milking speed.

The training will be offered in-person on the farm, with the option to be recorded, allowing it to be further utilized by the dairy operation to train new employees. Training is available in English, Portuguese, and Spanish.

To evaluate the efficiency and outcomes of each training, we will follow up with an additional parlor evaluation session to document changes and improvements in parlor efficiency, if so desired.

Both the parlor evaluations and milking procedures trainings are offered to each dairy operation every 4 months (3x/year), or less if so desired.

Dairy producers located in the Southeast that are interested in a free parlor evaluation and/or customized trainings should **reach out to**:
Carlos Nino De Guzman, ninodeguz.carlos@ufl.edu
Izabella Toledo, izatol@ufl.edu, Albert De Vries, devries@ufl.edu or call (352) 392-1981.

Southeast Dairy Producers
Check-Off Program

Parlor Evaluation Success Story

Carlos Nino de Guzman

As part of a multi-state USDA Organic Research and Extension Initiative grant, Carlos Nino de Guzman, a PhD student in the Animal Sciences department working with Dr. Albert De Vries, is conducting visits to organic dairy farms across the US to identify risk factors associated with mastitis incidence and milk quality. These visits are conducted by teams of experienced people. During these farm visits, a full milking parlor evaluation is performed. This includes a pulsator, claw vacuum, and milking time tests using VaDia vacuum diagnostics devices Also, scoring forms are used to characterize teat end cleanliness, teat end damage, pre- and post-dipping usage, unit alignment, and udder cleanliness. After the visits, an evaluation report is prepared and discussed with the dairy producer. Carlos gives an account of one of his parlor evaluations:

"During my visits to organic dairy farms, I had the opportunity to conduct parlor evaluations and a survey focused on collecting information related to mastitis, a persistent challenge in organic dairy operations. One of the producers received monthly milking system reports from a private consultant who performed similar parlor evaluations. Even though they had the good habit of performing these evaluations once a month, the reports were often packed with tables and numbers that were difficult for the producer to make sense of. Although the data was very valuable, the lack of clear explanations kept the producer from translating recommendations into actual improvements on the farm.

After completing my own analysis and comparing the results, I took extra care to walk the dairy producer through the process step by step and ensured that I explained the results very clearly. I explained how the data connected to specific milking practices, somatic cell counts, and

overall udder health, which helped the producer see the bigger picture. This sparked a detailed discussion about how small changes in routine or milking system settings could yield measurable benefits. The producer appreciated being able to ask questions and gain practical understanding, rather than just having information handed to them.

One meaningful aspect of this visit was helping the producer communicate more effectively with his milkers, who mainly spoke Spanish. I collaborated with the team to explain the milking routine in Spanish, emphasizing both the practical steps and the reasoning behind each part of the process. We worked together to ensure that everyone understood not only what to do, but also why it mattered for animal health, milk quality, and milking efficiency. The milkers responded positively and began implementing the recommended practices with more confidence.

What I have found, and emphasized during these visits, is that some producers often do not pay much attention to the milking system itself. Pulsators and vacuum are often overlooked, yet they play a crucial role in mastitis control and ensuring the quality of the milk. By reviewing these technical aspects alongside compliance with milking routines, I was able to highlight how small changes to equipment maintenance or settings can lead to significant improvements in herd health and milk production. This attention to the "behind-the-scenes" machinery not only helps prevent mastitis but also supports the overall efficiency of the farm."

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