UF IFAS UNIVERSITY of FLORIDA
Department of Animal Sciences

Dairy Update

Quarterly Newsletter **Spring 2025**

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23rd Annual National Dairy Challenge Contest held in Florida

The 2025 National Dairy Challenge Contest and Academy was in Gainesville, FL, on April 6-8, 2025. The three-day event included immersive, hands-on learning experiences for 241 dairy-focused college students from across the US and Canada. Students representing 35 colleges and universities participated in this unique event, which combines real-world farm evaluation with networking and professional development.

Dairy Challenge is an educational program that brings together students, industry professionals, and academia to enhance dairy production skills. It is designed to help students bridge the gap between classroom learning and practical application in the dairy industry. “Contest” students compete as representatives of their universities. “Academy” students work together in aggregate teams to learn the basics of dairy farm evaluation.

The 23rd annual National Dairy Challenge attracted 241 dairy-focused college students to Gainesville.

The event began on Sunday, April 6, when students received herd data from their assigned farms. Contest and Academy participants then worked in teams to analyze the information, preparing for their on-site farm visits the following day.

On Monday, April 7, 114 Academy students visited either the Alliance Branford Dairy or the University of Florida Dairy Unit. Accompanied by industry mentors, students evaluated areas of the dairy farm such as calf care, parlor management, feed systems, and transition cow protocols. In the afternoon, students had the opportunity to interview the dairy producers to gain a deeper understanding of on-farm goals and management practices. Using this insight, students then developed presentations and proposed strategies for improvement.

The 127 contest participants visited either Southern Cross Dairy or North Florida Dairies. In just two hours, teams conducted a comprehensive on-farm analysis, followed by a Q&A session with the farm owners and advisors. Teams then prepared detailed recommendations in key areas

such as nutrition, reproduction, milking procedures, animal health, cow comfort, and labor and financial management.

57 Academy students evaluated the UF Dairy Unit.

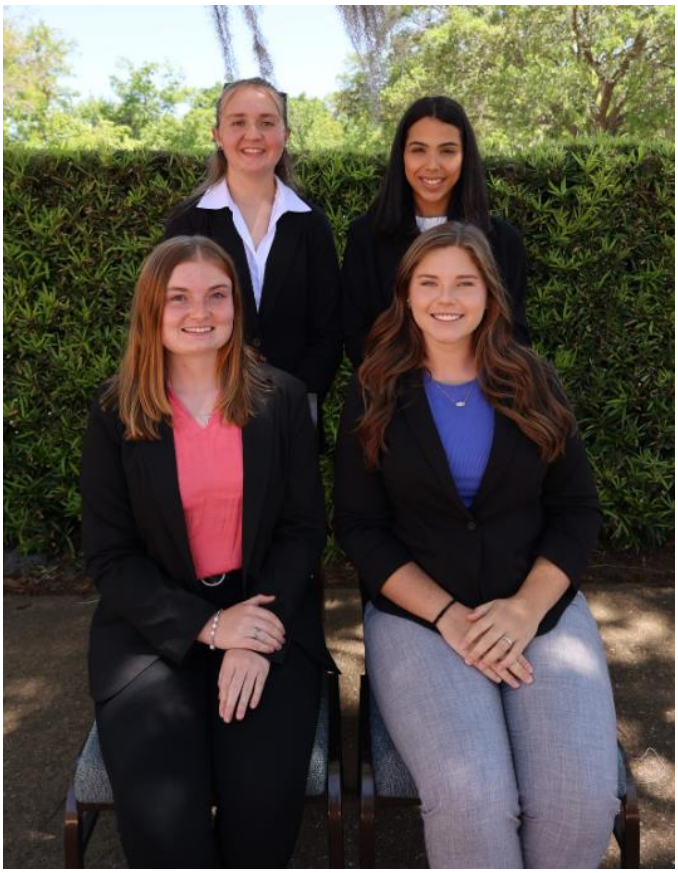
On Tuesday, panels of judges of dairy professionals evaluated each team's presentation, which highlighted the strengths and areas of improvement for their respective farms. Each panel of five judges included dairy producers, veterinarians, finance specialists and seasoned agribusiness personnel. Awards were presented to top-performing teams based on the quality of their analyses and practical recommendations.

Additionally, students visited the Career and Innovation Fair and attended top-level corporate technology seminars from Dairy Challenge sponsors.

The event concluded at the annual banquet with the presentation of student awards, marking the end of the successful 2025 National Dairy Challenge Contest and Academy.

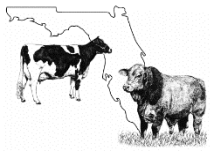
The UF Dairy Challenge Team, consisting of Animal Sciences students Angelina Fernandez, Jenna Larson, Rebecca Lyons, and Abigail Michnowicz, placed 3rd out of 8 competing contest teams. The team evaluated Southern Cross Dairy.

This article was adapted from the text of the 2025 National Dairy Challenge press release. Contact: Molly Kelley, Executive Director, mollyk@dairychallenge.org, or Albert De Vries, devries@ufl.edu. The Dairy Challenge website is https://www.dairychallenge.org



The 2025 UF Dairy Challenge Contest team. From left to right, top to bottom: Abigail Michnowicz, Angelina Fernandez, Rebecca Lyons, and Jenna Larson. Coach was Albert De Vries. The team placed 3rd out of 8 competing teams.

Proceedings of the 2025 Florida Ruminant Nutrition Symposium Online



The 36th Annual Florida Ruminant Nutrition Symposium was held in Gainesville on February 24-26, 2025. Over 300 people attended the symposium. The proceedings are now available at https://animal.ifas.ufl.edu/dairy/conferences--meetings/florida-ruminant-nutrition-symposium/ Contact Dr. Jose Santos, Event Coordinator, at jepsantos@ufl.edu

Proceedings of the 2024 Florida Dairy Production Conference Online

The 58th Annual Florida Dairy Production Conference was held in Gainesville on Wednesday October 23rd, 2024. The proceedings are available at https://animal.ifas.ufl.edu/dairy/conferences--meetings/florida-dairy-production-conference/ Contact Dr. Izabella Toledo, Event Coordinator, at izatol@ufl.edu

Slick Holstein Bulls for Sale

Pete Hansen

The University of Florida periodically raises Holstein bulls that have the slick gene that increases resistance to heat stress. These bulls could be used for AI or as natural service sires. The most recent such bull, Cool Brad-S-ET, was born October 13, 2024. He has a genomic PTA Net Merit of $616 and his PTA Milk is +661 pounds (April 2025 evaluation). This bull is for sale. If you have an interest in slick Holstein bulls, please contact Pete Hansen at pjhansen@ufl.edu

GATOR SLICK COOL BRAD-SE-T is for sale.

Should We Use the Old Semen in the Tank?

Albert De Vries

The new sire evaluations have come out and a number of new bulls have very good evaluations. But there is some old semen left in the tank. So should we use up the old semen in the tank first? Or should we throw out the old semen and replace it with new semen? Economically, it depends. The semen in the tank is paid for, so "free" to use. New semen costs money. However, if the new semen is of enough higher genetic merit, the resulting calf may be of a genetic value that warrants buying and using new semen instead of using the old semen.

There is a break-even gain in PTA where the value of the increase in genetic merit of the calf is equal to the price of new semen. If the increase in the value of the genetic merit is greater than this break-even price, the better decision is to not use the old semen but buy and use new semen instead. Let's do some math to illustrate and quantify this.

The semen in the tank has a PTA of a lifetime economic index that is $800. This index can be Lifetime Net Merit, but also another index. We'll assume that the economic index is a good measure of lifetime expected profitability. Assume further that it takes 3 inseminations to get a dairy calf on the ground and that we use sexed semen. There is a 90% chance of a female calf and 85% of the female calves become cows. Between the time of an insemination and the average time the genetics from a successful insemination is expressed is assumed to be 4.5 years. This includes time between the purchase of the semen and the successful insemination, the gestation length, time to raise a heifer, and the average time the cow expresses her genetic merit. This difference in time between the purchase and use of the semen, and the expression of the genetic merit of the cow should be discounted. Using a 5% interest rate, this means that $1 spent on semen is worth only $0.803 in 4.5 years in the future when this genetic merit is expressed. Now $800 x 90% x 85% x 0.803

= $491 which is the net present value of the PTA of the semen (compared to semen with a PTA of $0). Further, $491/$800 = 0.61 which means that $1 greater PTA of semen is worth $0.61 at the time the semen is purchased and used (I am assuming that the value of a bull calf that may result from an insemination does not depend on the genetic merit of the semen).

The $800 PTA semen is already paid for, so free to use. But there is an opportunity cost of not using semen with a higher PTA to make the pregnancy. How much higher would the PTA have to be in order to buy and use new semen instead?

If the semen price is $25 per unit and it takes 3 inseminations to get a calf on the ground, then the total semen cost per calf is $75. Because $1 greater PTA is worth $0.61, the PTA of the semen would need to be at least $75/$0.61 = $122 higher than the old semen in the tank. For the example above, that means that if the PTA of the new semen is greater than $800 + $122 = $922 it is economically a good idea to buy and use the new semen for $25 per unit and not use the old semen.

The necessary gain of $122 in PTA of the new semen does not depend on the PTA of the old semen. So we can generalize these results for sexed semen as shown in table 1. The $122 is in the middle of table 1. We see that the necessary gain in the PTA of the new semen is lower with cheaper semen and the fewer inseminations it takes to get a calf on the ground (better conception rates).

Table 1. Increase in PTA of a lifetime economic index necessary to warrant buying new sexed dairy semen versus using up the old sexed semen.

#inseminations per pregnancy	semen price (90% females) $ 5	$ 15	$ 25	$ 35	$ 45
1.5	$ 12	$ 37	$ 61	$ 85	$ 110
2	$ 16	$ 49	$ 82	$ 114	$ 147
2.5	$ 20	$ 61	$ 102	$ 142	$ 183
3	$ 24	$ 73	$ 122	$ 171	$ 220
3.5	$ 29	$ 86	$ 143	$ 200	$ 257
4	$ 33	$ 98	$ 163	$ 228	$ 293

Table 2. Increase in PTA of a lifetime economic index necessary to warrant buying new conventional dairy semen versus using up the old conventional semen.

#inseminations per pregnancy	semen price (50% females) $ 5	$ 15	$ 25	$ 35	$ 45
1.5	$ 22	$ 66	$ 110	$ 154	$ 198
2	$ 29	$ 88	$ 147	$ 205	$ 264
2.5	$ 37	$ 110	$ 183	$ 257	$ 330
3	$ 44	$ 132	$ 220	$ 308	$ 396
3.5	$ 51	$ 154	$ 257	$ 359	$ 462
4	$ 59	$ 176	$ 293	$ 410	$ 527

Table 2 is the result of the same math, except that the probability the insemination results in a female calf is now only 50% because we are using conventional dairy semen. Again, I assume that the value of the bull calves out of this semen does not depend on the PTA. With conventional semen, the increase necessary in the PTA of the new semen is greater than with sexed semen. If we had used conventional semen in the example above (3 inseminations, $25 per unit), the new semen needs to be at least $220 higher in PTA to warrant not using the old semen in the tank. Again, cheaper semen and fewer inseminations per pregnancy need smaller increases in the PTA of the semen to make it worthwhile to not use the old semen in the tank.

These analyses show that buying new semen instead of using up the old semen may be the smart decision for your farm. More information: Albert De Vries, devries@ufl.edu. This article was first published in the Winter 2020 issue of Dairy Update. A few minor edits were made for this issue.

Dairy Extension Agenda

- Save the date: 59th Florida Dairy Production 4onference, Thursday, October 23, 2025. https://animal.ifas.ufl.edu/dairy/conferences--meetings/florida-dairy-production-conference/

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The opinions expressed in this newsletter are those of the authors and do not necessarily reflect the view of the University of Florida.
Past issues are posted on the UF/IFAS Animal Sciences Dairy Extension website at https://animal.ifas.ufl.edu/dairy/. This issue was published on **April 24, 2025**