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Report of the 57th Annual Florida Dairy Production Conference

Izabella Toledo

The 57th Annual Florida Dairy Production Conference was held at the Straughn Extension Professional Development Center in Gainesville on Thursday, November 2nd, 2023.

The conference brought together dairy industry leaders to present and discuss a variety of current relevant topics to an audience of about 100 participants, which included dairy producers, faculty, students, and dairy industry partners.

Dr. Dale Woerner, Professor from Texas Tech University, started the day off with a presentation titled “Beef on Dairy: A new look on beef”. Dr. Woerner’s presentation focused on carcass characteristics and quality, as well as a comparison between the performance of conventional beef cattle, crossbred beef and dairy cattle, and Holstein cattle. The presentation generated a lot of great discussion among participants and gave a better understanding of carcass quality and performance when breeding dairy cows with beef semen.

Next on the agenda was Dr. Sha Tao, from the University of Georgia. Dr. Tao emphasized how heat stress impacts dairy cows throughout the lactation cycle and the importance of having cooling systems that are effective and efficient during all the phases of lactation to optimize the performance of dairy cows.



The afternoon started off with a talk from Dr. Robert Hagevoort, from New Mexico State University, who spoke about employee training and development. Dr.

Hagevoort’s presentation touched on many points regarding the importance of understanding dairy employees’ backgrounds, personalities, cultural differences and needs. Dr. Hagevoort spoke about improving training strategies and effectiveness to optimize labor performance, introduce labor specialization, and improve human to human interactions at dairy operations. His presentation generated substantial discussion among participants and opened new possibilities to develop effective techniques for employee training at dairy operations.

Dr. Klibs Galvão from the University of Florida Department of Large Animal Clinical Sciences spoke about the economics of uterine diseases. Dr. Galvão showed data on metritis and endometritis prevalence and treatment costs of uterine diseases for dairy operations. In addition to the costs, he emphasized the importance of antibiotic resistance and welfare when making uterine diseases treatment decisions.

After the afternoon break, the conference concluded with three speakers from the University of Florida, who showed data on projects funded by the Southeast Dairy Producer's Check Off Program. Dr. Diwakar Vyas talked about the potential use of nitrogen efficiency as a performance indicator for dairy farms. Dr. Geoffrey Dahl presented data on the use of "smart soakers" to reduce water usage to cool dairy cows. Lastly, Dr. Jose Dubeux from the Agronomy Department emphasized the environmental importance of measuring soil organic carbon stocks in Florida dairies. All three presentations generated important discussion among participants and brought up potential ideas for further expansion of the topics presented. The presentations were followed by a reception.



Dr. Dale Woerner speaking about "Beef on Dairy: A new look on beef"

Throughout the day, participants had the opportunity to interact and network with dairy producers, faculty, students, and dairy industry representatives. The organizers thank all the speakers and sponsors. Silver sponsors: Florida Dairy Farmers (Avery LeFils), RD Life Sciences (Kevin Hayes). Bronze sponsors: Zoetis (Jorge Fullada), Diamond V (John Gilliland), Swanee Valley Feeds and Alliance Dairies (Will Lloyd).

Proceedings of the conference are available at <https://animal.ifas.ufl.edu/media/animalifasufledu/dairy-website/Proceedings.pdf>

For more information, contact Izabella Toledo at izatol@ufl.edu

Save The Date

58th Annual Florida Dairy Production Conference



**FLORIDA
DAIRY PRODUCTION
CONFERENCE**

Wednesday, October 23rd, 2024

Straughn Professional Development Center
2142 Shealy Drive, Gainesville, FL 32611

"Keep Or Beef" Software Licensed to Dairy Records Management Systems

Albert De Vries

Dairy management is often about making decisions that make the most economic sense. Cow replacement and insemination decisions are no exception. The decision when to cull a cow is typically based on a physical evaluation of the cow, for example is she lame, and an estimate of her future performance and profitability. We take her records into consideration because they may help predict her future performance. We also consider prices and the availability of replacement animals. Many factors play a role.

What we are really trying to do is to compare the estimated cash flow of the decisions to keep her at least a little longer vs. the estimated cash flow that follows from the decision to sell her and replace her with a calving heifer. Essentially, we are trying to maximize profitability per unit of time for the slot that the cow now occupies. She competes

every day with that heifer that should take her place if replacement increases the profitability for that slot per unit of time. We will assume here that the calving heifer is the alternative, but some farms would replace cows with other purchased cows. The replacement principle remains the same.

To make the most profitable decision, we need the net present value of the cash flow that follows from keeping the cow until her optimal time of replacement and from the heifers that replace her sometime in the future, vs. the net present value of the cash flow that follows from replacing the cow now with a heifer, and from the heifers that replace the first heifer sometime in the future. These cash flow predictions do not stop with the current cow until she is replaced but need to include the cash flow of replacement heifers into the future. Calculations show that these cash flow projections should be at least 5 years.

Making accurate cash flow projections is not easy and requires more complex math best done by a computer. There is scientific literature going back more than 60 years on how best to do this for dairy cattle replacement decisions.

In addition to the algorithm doing the math, it is obviously very important what future performance of the cow is expected. Important factors are her lactation number and days in milk, milk yield and milk components, reproduction status and fertility, the type of semen she is pregnant from or what we plan to use in the future, disease history and outlook, genetic merit, environmental conditions such as heat stress, and prices such as for milk, feed, cull cows, heifers, inseminations etc. The list goes on and on. This is an active dairy research area where researchers try to associate past and current performance, such as what happens during heifer raising, with future performance when the animal has become a cow. Obviously, there is often a lot of uncertainty about predicting future performance, for example because we do not know how much a cow will produce in the next few months, but that is ok. The calculations are based on probabilities.

The difference between the net present values of keeping the cow for now, and replacing the cow now, will be called the keep value here. It is an amount in dollars that shows the value of keeping the cow compared to replacing her now. The greater her keep value today, the more important it is to keep the cow now. If the keep value is greater than \$0, the best decision is to keep the cow. For example, if the keep value is \$600, then the decision to replace the cow now with a calving heifer is expected to be loss of \$600 compared to keeping her. The cow is more valuable to keep than another cow with a keep value of only \$50. If we replaced this other cow now, the expected loss is only \$50. These keep values are opportunity costs; it is money not made when the wrong decision is made.

If the keep value is negative, that means that the best decision is to replace the cow now with a calving heifer. For example, if the keep value is -\$30, the best decision is to replace the cow now. Keeping her is expected to result in a \$30 loss.

How negative the keep value can be is a matter of assumptions. If cows are evaluated for replacement weekly and culled weekly, then the keep value cannot be very negative because it represents the opportunity cost of keeping the cow only one week too long. It is assumed that she will be replaced next week. This happens because the keep value algorithm makes optimal decisions not only for today but in the future as well. A very large negative value can only exist if the cow should be replaced now but instead is kept and she is going to be kept for a long time while we are not willing to replace her.

Keep values should be recalculated when new information becomes available, such as after test day, or perhaps weekly or daily when updates on milk production and reproductive status become available. Every day she is one day older so her keep value will change a little anyway. Insemination and pregnancy confirmation typically increase her keep value.

The figure shows keep values for the cows at the cows at the UF Dairy Unit on 12/15/2023. These cows have not yet been managed based on keep values but application is underway.

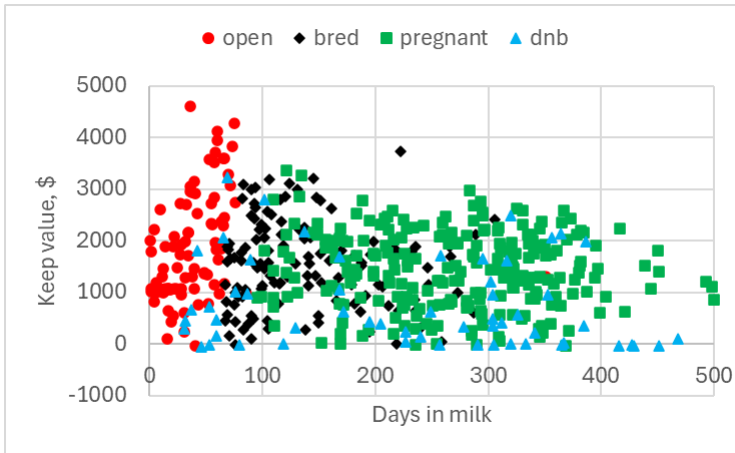


Figure. Keep values calculated for the cows at the UF Dairy Unit on 12/15/2023.

The keep value concept, based on cash flow predictions, is very solid and can be applied to many other cow level decisions. Think about the cash flow differences between sexed and beef semen, or between insemination and delay of insemination, do-not-breed vs continue inseminating, dry off or keep milking, targeted reproductive management treatment, or disease treatment decisions. There is a lot of opportunity and some of these applications have been developed.

Keep values software was developed by the author and supported by funding from the Southeast Dairy Producer’s Check Off Program and Food and Agriculture Cyberinformatics and Tools grant no. 2019-67021-28823 from USDA-NIFA.

The software was recently licensed to Dairy Records Management Systems (DRMS), in Raleigh, NC. DRMS branded their implementation of the software as KeepOrBeef and it is part of their new suite of dairy decision apps. I-29 Moo University recorded a webinar on 10/31/2023 which featured

“KeepOrBeef”, see

<https://www.youtube.com/watch?v=NlkGWALiyU4>

For more information on KeepOrBeef, contact DRMS, <https://www.drms.org/Support/Contact-Us>, or Dr. Robert Fourdraine, rhfourdr@ncsu.edu.

More information on keep values and future development, contact Albert De Vries, devries@ufl.edu



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<https://animal.ifas.ufl.edu/dairy/uf-dairyupdate-L/>



Saturday, February 10, 2024
9 AM to 2 PM

Join us for a fun-filled, educational experience!
See a working dairy farm. Learn where milk comes from.
Meet researchers who work to improve Florida dairy products.



Address and Directions:

**13515 Northwest County Road 237
Alachua, FL 32615**

Take US Hwy 441 to County Road 237 where you will see the “Hague” sign. Go north on 237 half a mile. Look for blue and white UF sign on right.

Guest Policies:

Please wear closed-toe shoes. All children must be accompanied by an adult. No pets please.



FREE ADMISSION

This event is weather-dependent. Check for updates the week prior to the event.

<https://tinyurl.com/FamilyDayattheDairyFarm>
<https://www.facebook.com/FamilyDayattheDairyFarm/>

Family Day at the Dairy Farm

<https://animal.ifas.ufl.edu/events/familydayatthedairyfarm>
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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 **December 22, 2023**