

# DAIRY PIPELINE

Volume 35, No. 4 May 2014

Department of Dairy Science  
Blacksburg, VA 24061  
540/231-6870 Fax: 540/231-5014  
www.vtdairy.dasc.vt.edu



## How GOOD IS THE REPRODUCTION IN YOUR HERD?

In March, a group of eight dairy farmers gathered at the Franklin Center in Rocky Mount to discuss the reproductive performance of some herds from Franklin County. The round table discussion group was initiated by Gonzalo Ferreira (Department of Dairy Science) and Cynthia Martel (Virginia Cooperative Extension). The meeting began with discussion of management issues typically observed in agriculture production. Some of the key points were:

► We all see and/or approach things differently. In the context of dairying, farmers might manage their farm in diverse manners. This can be valuable, as farmers might learn from the management practices of their peers. This concept was the essence of the discussion group:

**WE CAN ALL LEARN FROM DIVERSITY.**

► Many times we are so focused on our daily chores that we may not see the big picture with respect to our problems. Discussing dairy management among peer farmers would allow different perspectives. Having a broader vision of dairy management may help farmers make better decisions.

► Business will not improve by doing the same thing all over again. There is no change without action. If managers do not do anything to change (hopefully to improve) their businesses, then their businesses will not improve. The discussion group hopes to inspire farmers to encourage their peers to set new goals, but most importantly strives for a move to action in improving their businesses.

The meeting continued with a review of some reproductive performance concepts such as heat detection rate, conception rate and pregnancy rate; and how these indicators are related to calving interval (Figure 1). To the surprise of many, the bad news was that the average pregnancy rate of nine herds from Franklin County was as low as  $14.6 \pm 4.5\%$ . The good news was that there is a lot of room for improvement.

In addition to discussing actual results, the attendees weighed which areas they should focus their efforts for the short term. Some of the mentioned areas included: decreasing days to first service (3 cases), increasing heat detection rate (3 cases) and optimizing conception rate (2 cases).

In conclusion, there is much to improve in relation to reproductive performance in some areas of the state. Now, it is a matter of taking those necessary actions for improvement.

As for the discussion group, we will gather again on one of those farms with the best reproductive performance indicators. Without a doubt, we all have something to learn from these successful cases.

—Gonzalo Ferreira  
Extension Dairy Scientist,  
Management  
540-231-1965 | [gconf@vt.edu](mailto:gconf@vt.edu)

“There is no change without action.”



Calving Interval: 13.1 months

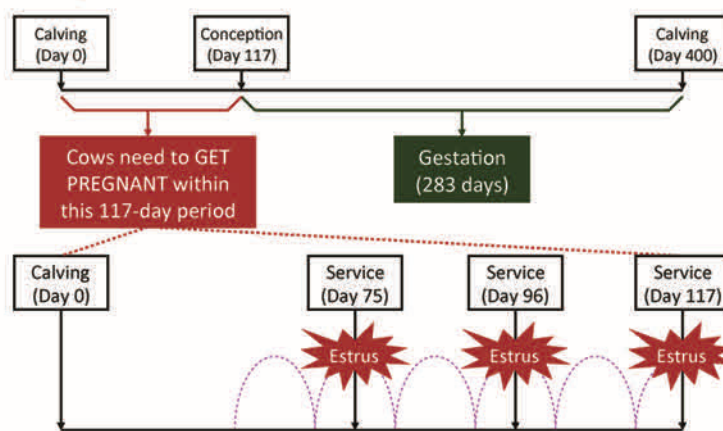


Figure 1.

## Upcoming Activities

See [VTDairy](#) for details.

### Monthly Round Table

Discussion Group: Franklin Co., contact [cmartel@vt.edu](mailto:cmartel@vt.edu)

### May 3, 2014

Virginia Tech Dairy Judging Workshop, Blacksburg, VA

### May 14-15, 2014

Leadership Facilitation Workshop, Harrisonburg, VA  
Contact [jdaubert@vt.edu](mailto:jdaubert@vt.edu)

### May 15, 2014

On-Farm Forage Management Meeting with Dr. Gonzaolo Ferreira, Amelia County - ([laurab08@vt.edu](mailto:laurab08@vt.edu) for more information)

### May 18

VCE Rockingham County open house, Rockingham County Fairgrounds

### May 19, 2014

[12<sup>th</sup> Annual Hokie Cow Classic](#)

### June 11, 2014

Dairy Day, Harrisonburg  
Turks Baseball Game

### July 30, 2014

VA Dairy Expo, Weyers Cave

### July 30, 2014

Showing and Fitting Workshop, Harrisonburg, VA

### August 1, 2014

VA Sale of Stars

### August 2, 2014

VA Summer Show

### September 22-24, 2014

[Southeast Quality Milk Initiative 2nd Annual Meeting](#)

*If you are a person with a disability and require any auxiliary aids, services or other accommodations for any Extension event, please discuss your accommodation needs with the Extension staff at your local Extension office at least 1 week prior to the event.*

## COOLING COWS: NOT JUST THE MILKING HERD

After a long, hard winter the warmer spring days are welcome for cold bones and forage crops. Yet, just ahead is that time of year most challenging for our cows. Summer!

It is important to understand that the maximum optimum temperature for cows as reported in the *Journal of Dairy Science* (Hahn, 1999) is roughly 59°F. This applies to both high producers and dry cows.

Above this point, minor productivity loss may occur, but intervention is not justified. Once environmental conditions reach a threshold of both heat and humidity which overwhelms the cow's ability to dissipate her internal heat production, intervention must occur. Of course, this critical point is reached sooner for high producers than for lower producers and dry cows. University of Arizona data suggests that this critical point is when the minimum daily Temperature Humidity Index (THI) exceeds 65. Traditionally, a daily THI threshold of 72 was used to initiate supplemental cooling in order to maintain cow productivity and well being. For information about how to offset heat stress in lactating cows, refer to the Dairy Pipeline article titled "[Five Simple Tips to Reduce the Negative Impacts of Hot Weather on Dairy Cattle.](#)" (July/August 2013).

“While most dairymen appreciate the negative effects of hot weather on lactating cows such as yield losses, difficulty getting cows bred, and increased mastitis, lactating cows are not the only ones affected on the dairy.”

While most dairymen appreciate the negative effects of hot weather on lactating cows such as yield losses, difficulty getting cows bred, and increased mastitis, lactating cows are not the only ones affected on the dairy. Dry cows, close-up heifers and calves are also affected.

Several research studies from University of Florida and Israel addressed the impact of heat stress during the dry and close-up period. Consistently, pre-partum cows and heifers receiving some form of supplemental cooling during times of heat stress:

- Gave birth to larger calves;
- Had higher IgG in colostrum;
- Produced more colostrum;
- Milked more in early lactation.

Calves from heat stressed cows were lighter and born earlier in gestation. A body weight difference was seen through weaning, but had been corrected by 7 months of age. Calves also had greater failure in passive transfer of immunity due to both reduced immunoglobulins (IgG and IgA) from the colostrum, and less absorption even when fed similar levels of immunoglobulins. Calves born during heat stress, particularly if dams are not cooled, may need more attention during the summer to keep them healthy and growing.

Finally, as herd genetics and management continue to push productivity higher, remember that all the extra metabolic heat will continue to challenge our current environmental modification strategies.

—Kevin Spurlin  
Extension Agent, Grayson County  
(276) 773-2491 | [spurlink@vt.edu](mailto:spurlink@vt.edu)

For more information on Dairy Extension or to learn about current programs, visit us at [VTDairy](#)—Home of the Dairy Extension Program at: [www.vtdairy.dasc.vt.edu](http://www.vtdairy.dasc.vt.edu).



R.E. James,  
Dairy Extension Coordinator &  
Extension Dairy Scientist,  
Dairy Nutrition