
DAIRY PIPELINE

Interested dairy farmers please respond. Several young people from the African nations of Cameroon and Rwanda are interested in coming to the United States to undertake practical training on US Dairy Farms. Under a special visa by the US State Department, these young people are allowed to learn on US dairy farms by doing, and working closely with dairy farmers to learn modern dairy farming techniques. The skills learnt, it is hoped will assist them in opening up their own small-scale dairy operations in their home countries when they return. These trainees have experience in dairy farm work, and all speak English. Special organizations such as the World Wide Farmers Exchange are designated by the US State Department to sponsor these trainees for their visas for up to 12 months. For more information on requirements and responsibilities of host farmers, please visit World Wide Farmers Exchange website at www.worldwidefarmers.org. Alternatively, you may contact Mr. Isaac Zama at (703) 425-1935 for more information on the applicants or me at the phone and e-mail address below about any needed contact information. This sounds like a great way to assist young people in developing their skills and fostering international development of dairy production in an area needing the high quality nutrition that dairy products provide.

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Summer "Heat Stress" and heat detection. Last summer I had a Master's student (Oscar Peralta) conduct his thesis research on a large commercial dairy located in North Carolina (~1,000 lactating cows) with the primary objective being to evaluate three systems for the detection of estrus. The normal herd personnel conducted visual observations for signs of estrus three times daily at 7:30 a.m., 1:30 p.m. and 11:00 p.m. (during the third milking). Two electronic systems were also used on 266 cows. Between 37 and 45 days in milk cows were fitted with a HeatWatch® (DDx Inc., Denver, CO) pressure sensor that detected mounting activity and an ALPRO® (DeLaval Inc. Kansas City, MO) activity

transponder that recorded cow movement. The percent possible heats was calculated similar to the method used by DHI to determine %heats observed (DRMS, Raleigh, NC) so that we could calculate the efficiency of detection for each system. The maximum daily temperature and humidity was used to calculate an index of cow comfort. The months of June, July, and August at this North Carolina dairy were all in the moderate heat stress range with an average maximum temperature for the three months of approximately 96 degrees with a relative humidity of 90%. In combination the three systems detected 72% of the possible heat periods; however, no single system detected greater than 50% of the possible periods of estrus. The conception rate for the 506 inseminations was 19.4% with the 75 cows detected both visually and by the HeatWatch® system having the highest conception rate of 29.3%. The 128 cows detected only in heat visually had the lowest conception rate of 8.6%. Parity influenced conception rates with 26.2% for first lactation, 18% for second and 12% for cows in their third or greater lactation. If the number of pregnant cows resulting from AI is the bottom line for evaluating the performance of the three heat detection systems, studied cows detected by the HeatWatch® system resulted in 11 more pregnancies with 39 fewer inseminations than visual detection. Visual detection resulted in 19 more pregnancies with 50 more inseminations when compared to the activity or pedometer system. The take home message should be that a combination of heat detection methods was superior to any single heat detection system.

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Forage quality is a challenge this spring. As I write this we are coming out of an extremely wet period setting records in many areas of the state for rainfall. The ability to harvest hay has been limited and what has been harvested has many times been rained on. Expect lower protein, higher fiber, and lower energy in what has been harvested. Delayed cutting will lead

to more mature grasses and legumes lower in protein and energy. Also rain can lead to deterioration of material that is in the field due to leaching and leaf loss. In some cases corn for silage will have delayed planting dates making an early frost in the fall a concern. It is possible to ensile forages that typically would have been dried for hay. This reduces the time in the field after cutting and reduces the exposure to rain. Material can be ensiled in a bag or pile on the ground if no silo is available. Material above 30% dry matter but less than 50% would ensile best. If less than 30% dry matter, leaching occurs with a loss of nutrients. Also if dry matter is outside the desired range the fermentation is usually not ideal and cow palatability can be a problem. What about barley or wheat for silage? Typically we harvest at soft dough, direct cut but it can be earlier or later. Earlier will be wetter and later may result in grain that is hard and not digestible but still some feed is better than nothing. Lodging is a significant problem this year but most fields can still be harvested. Ration adjustments will be needed with the feeds we are producing this spring. Check the forage for dry matter, protein, fiber, and energy. Good luck and let's hope we have a better balance of weather the remainder of this growing season.

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**** Upcoming Activities****

Dairy Conservation Field Day	July 22
<i>Cedar Springs Farm</i> , Madison Co.	
Farm and Family Showcase	Sept. 4-6
<i>Kentland Farm</i> , Virginia Tech	

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