

DAIRY PIPELINE

Closure of Forage Testing Lab. Effective July 1 the Virginia Tech Forage Testing Lab will discontinue accepting samples except from Extension Agents that use the lab for problem solving or educational programming. Private labs are available that can be used. Contact the Forage Testing Lab at (540) 231-6870 or me to get information about alternatives.

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It's summer time! Are your cows cool? We all know the effects of heat stress: reduced DMI, reduced milk production, decreased reproductive performance and the list goes on and on. How do you know your cows are heat stressed? Rectal temperatures will be above 102.5 degrees; respiratory rates increase to 80 breaths per minute (from 50 to 60) and the things that most people notice, milk production and DMI decreases at least 10%. Preparations for relieving summer heat stress should have been initiated in March, but there are many things that you can do now to help remedy the situation. Water is the number one limiting factor on dairies, so you need to provide plenty of fresh, cool water. Cows need 3 to 4 linear inches of space at the water trough to prevent boss cows from restricting access of other cows to the troughs. In the summer, water intake will increase from 30 gals/cow/day to 50-60 gals/cow/day. It should also be available to cows immediately after they exit the parlor. The process of milking causes cows to be thirsty and you need to take advantage of that to maximize water intake. One low cost way to increase the amount of water space on your farm is to install PVC pipe waterers along fence lines and lanes. To do this you will need a large diameter PVC pipe with the top third cut off along the horizontal access. Cap the ends, add a float, and you have a durable watering system that was easy and cheap to install. To make it easy to maintain, add a handle and attach the pipe in such a way that you can easily tilt it to dump the water and debris. One thing to be sure of is that you have a water line that is large enough to maintain at least 50% water volume during the highest time of water demand. Another area to consider when trying to

alleviate heat stress, do you clean your fans? Most people don't think of it, but dirt on fan guards can reduce airflow by as much as 40%. How about placement? Thirty-six inch fans need to be placed every 30 feet and 46 inch fans every 40 feet. By doing this, you eliminate dead space under the fan next in line. Fans should be placed at a 30-degree angle for optimum cow contact. A good way to check if your fans are working properly and placed correctly is to measure wind speed. If you are standing directly under a fan in a line of fans, wind speed at chest level should measure at least 5 mph. If that is not occurring you either need to clean your fans, check their placement or check the air flow rating (cubic feet per minute, the fan may not mechanically be able to move enough air to do what you need). When targeting areas for cow cooling, the holding area should be the first to be considered. Limit the amount of time spent in the holding pen, especially in the summer time, to about an hour to an hour and a half. In one group herds, try holding back half of the herd at the feed bunk or the freestalls where hopefully heat stress is less. Ideally, you should have fans or a sprinkler system in the holding area to help reduce heat stress. If you can't put a sprinkler system in the holding area, try adding a soaking station as the cows exit the parlor. To do this you need two showerheads aimed at a 45-degree angle opposite each other and something to turn the system on and off such as an electronic eye or wand system. This soaks the cows and allows for evaporative cooling. With the volatility of milk prices, we need to do everything possible to maintain production. These are just a few things that you can still do now to minimize your loss of milk production before the summer heat becomes worse.

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Tail painting an economical and effective heat detection system: A major factor limiting optimum reproductive performance on many farms today is the failure to detect estrus in a timely and accurate manner. Increases in herd size and milk yield have been implicated as contributors to the decreased reproductive

efficiency experienced today. For example, during the past ten years the average Virginia DHI dairy herd has experienced a 35% increase in milking cows and a 20% increase in milk yield per cow without the same increase in additional labor force. During this same time period the average calving interval has increased from 13 to 14.5 months. This decrease in reproductive efficiency conservatively cost \$12,000 per year per herd if one assumes a \$2 loss per each day open over 115 days and an average herd size of 135 cows. This is not even taking into consideration the additional losses of fewer replacements, increased labor, fewer cull cows, and increased drug and veterinary expenditures. Our research, with the electronic heat detection system HeatWatch, has reported that the “average” Holstein cow is mounted 7 times during the 7 hours of “standing” heat. During the summer months mounting activity decreases to 5 standing events and high producing cows express shorter and less intense standing activity than lower producers.

Why Tail Paint?

- Correct use of tail painting identifies almost 90% of cows in standing heat.
- Tail painting picks up cows which are only standing for a short time that would otherwise be missed.

How to Tail Paint

- Use commercially available specifically formulated products (house paint may not rub off correctly, water-based paints won't last). Contact your A.I. representative, all sell an acceptable product for tail painting.
- Apply paint to cover those points near the head of the tail which will be rubbed off by the brisket of the riding cow.
- A strip about 2 inches wide and 6 inches long painted along the ridge of the backbone immediately above the tail is recommended.
- Remove loose hair and dirt before applying tail paint. Do not apply paint too thickly.
- Check the paint strip at each milking or during lock-up if head locks are available. In 90% of cases, most of the paint will be rubbed off when a cow has been in standing heat. A further 5% of cows will lose some paint, and with the remaining 5% confusion can occur so experience in reading tail paint is needed for these cows. Paint is rarely removed by occasional mounting of cows not in standing heat.
- Cows detected on heat and then inseminated should not be repainted until the following

milking. Use a different color when re-painting inseminated cows. Unmated cows are then easier to identify.

- Tail paint should last four weeks unless the coat hair becomes loose with shedding. Touch ups with brush or aerosol tail paint are required if this happens.

When to use Tail Paint

- Three weeks before the voluntary waiting period (50 days in milk if start breeding at 70 days), tail paint can be used to identify non-cycling cows early.
- At the voluntary waiting period every cow in the breeding herd should be painted.
- May want to use one color for cows prior to voluntary waiting period, one color for cows after the voluntary waiting period and before first service, and one color for cows that have been inseminated.

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**** Upcoming Activities****

2004 Southeast Dairy Youth Retreat <i>Virginia Tech</i>	July 13-16
Grand Opening of the Virginia Tech Dairy Complex, <i>Virginia Tech</i>	July 16
2004 PDCA Dairy Days <i>Rockingham County Fairgrounds</i>	Aug. 5-7

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