

DAIRY PIPELINE

Volume 29, No. 7 September 2008

Department of Dairy Science

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WOULD YOU DRINK THE WATER?

During a time of high ration cost with little likelihood of relief, we begin to look for those practices to improve performance but not add to the expense of producing milk. One area frequently overlooked on dairies is availability and quality of water for the dairy herd.

Seventy to 97% of total water intake of dairy cattle comes from drinking water with the remainder arising from feed intake. There is a strong relationship between water intake and total ration dry matter intake. A good rule of thumb is that cows should consume 4 – 5 lb. of water (about three quarts) for each lb. of dry matter intake or about 3 lb. of water for each lb. of milk yield. Cows will consume the majority of their water immediately following milking. Common guidelines state that there should be enough trough space so that half of the cows have at least 2 ft. of space when exiting the parlor. Provide at least two water sources for each group cows and remember that cows should never have to walk more than 50 ft. to get a drink. Sources should be protected from sunlight as well. Shallow water receptacles (less than 12”) are desired because they prevent stagnant water and are easier to clean.

Assuming that water is available, what's the quality? The most common

water quality problem is with fecal and feed contamination. Water sources located adjacent to feed bunks or placed too low are commonly loaded with manure and spoiled feed. This water is frequently unpalatable and may contain high levels of undesirable bacteria. The quickest “fix” is to drain and clean waterers on a daily basis. This practice should be done daily or at least every other day on each water source for the lactating and dry cow herd. Most recently manufactured waters have large drain holes or may be dumped readily. In the case of concrete water tanks, consider drilling large drain holes near the bottom and devising stoppers which can be routinely removed with little effort. If this is not possible the tanks should be replaced. Finally water should meet similar standards as for human consumption. Test water to determine total dissolved solids (<500ppm), paying special attention to levels of sodium (<150 ppm), chloride (<250ppm), iron (.3 ppm) and manganese (.05ppm). Nitrate contamination is of particular concern as well and should be less than 20 ppm as nitrate – nitrogen.

Granted fine tuning the ration is important, but the first step to achieving improved performance should be directed towards better management of water intake for the dairy herd. Would you drink the water?

—Bob James,
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EVERY SECOND COUNTS

The little things we do during milking time have a profound effect on udder health and milk quality. It is important to remember that every quarter of every cow must be prepped for milking the same way by every milker at every milking.

Specifics of milking procedures may vary from farm to farm. For example, one farm may prep cows in sets of 4 cows, while the next farm preps in sets of 6. However, the basics of timing should ideally be the same or similar on every farm.

The first important time frame to remember relates to contact time of the teat dip being used as pre-dip. The contact time of teat dips applied before milking need to be on the teat skin for a minimum of 30 seconds to have adequate killing effect. During this time, the quarters can be stripped, but the dip needs to remain on the teat skin for the full 30 seconds prior to wiping. In addition to contact time, we must ensure that the “prep-lag-time” has an average length of 90 seconds from start of tactile stimulation.

Upcoming Activities

Sept 10 Commercial Dairy Heifer Show—Washington County—Contact Chase Scott for details at (276) 223-6040.

Oct 8-9 Mid-Atlantic Dairy Grazing Conference and Organic Field Day—agenda and printable brochure available at:

<http://www.wvu.edu/~agext/en/upevent.htm>

or contact Becky Casteel for more information at (304) 293-6131

Oct 28 Calf College—details to be announced

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.

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For more information on Dairy Extension or to learn about current programs, visit us at VT Dairy—Home of the Dairy Extension Program on the web at:
www.vtdairy.dasc.vt.edu

Bennet Cassell

Bennet G. Cassell
Dairy Extension Coordinator
& Extension Dairy Scientist,
Genetics & Management

Prep-Lag-Time by definition is the time from the start of either stripping, massaging or wiping the teats with a towel, whichever comes first, to unit attachment. On some farms this is stripping and others it is wiping, depending on the order of your preparation procedures. If we attach the units prior to the 60-second mark, we have not given adequate time for oxytocin to reach a useful concentration in the udder. On the flip side, we need to ensure units are attached within 90 seconds of stimulation to make maximum use of the letdown effect. I encourage you to take a stop-watch to the parlor, check your timing of milking procedures and make necessary adjustments to your routine until you are within these time frames.

One suggested protocol would include prepping cows in blocks of 4 or 5. Begin with the first cow by removing loose debris with a towel, then stripping each quarter and examine the milk for signs of mastitis. This would be repeated for the remaining cows in that block. Start back at the first

cow of the block (do not weave back through the cows in reverse order) and apply the pre-dip ensuring at least half of the teat is covered. Once the entire block has been pre-dipped, begin wiping the first cow of the block with a single-use towel. At this point, you should be able to also attach the unit before wiping the second cow of the block. However, check your timing and make sure a full 60 seconds have elapsed from the time that cow was stripped. If you are shy of the 60-second mark, continue wiping the remaining cows in the block and then return to attach the units, starting at the first cow.

Once you have a routine established, you will need to monitor the routine monthly to ensure the time frames are being met. Proper milking procedures will help to lower somatic cell count, increase pounds in the tank and decrease milk out time.

—Christina Petersson-Wolfe
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PLANNING FOR FALL COVER CROPS

In a few short weeks dairymen will be caught up in the fury of harvesting and storing this year's corn silage crop. The cover crop planting that will follow certainly deserves a little extra consideration this year. While it appears that feed prices may be easing somewhat this fall it is certain that profit margins continue to be tight with the higher costs of nearly all agricultural inputs. There are a number of cover crop strategies that may help your finances this fall.

DCR has several cover crop BMP's that are offered by your local SWCD. These practices are justified by the notion that winter cover crops scavenge unused nitrogen and prevent the runoff of unused nutrients and soil over winter. The SL-8B practice provides a cost share payment and VA Tax Credit in exchange for establishing a cover crop and maintaining cover until March 14th. As with any government program there more than a few stipulations including a planting date prior to October 25th, 2 bushel/acre planting rate and a prohibition on harvesting the crop. The cost share rate is \$20/acre with a \$15/acre early planting incentive and a \$5/acre approved rye culti-

var bonus payment for a maximum of \$40/acre.

For those farms that are not able to forego harvesting their small grain, the SL-8H practice offers a cost share payment of \$20/acre or VA Tax Credit in exchange for planting a rye cover prior to October 5th, leaving it in place until March 14th and is limited to 300 acres per applicant.

In light of higher nitrogen prices, dairymen may want to consider the WQ-4 Legume Cover Crop practice. Crimson clover used a winter cover crop has been shown to sequester as much as 100 lbs of N/acre while providing winter cover. The practice pays \$20/acre and a VA tax credit in exchange for planting prior to September 15th and leaving the crop residue to serve as mulch for the next crop.

To learn more about these cover crop programs contact your local Soil and Water Conservation District or visit DCR's Ag BMP Manual online at:
<http://192.206.31.46/agbman/toc.pdf>

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