

DAIRY PIPELINE

Department of Dairy Science

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MILK QUALITY IS NEVER AN ACCIDENT. . .

it takes careful planning and implementation. Low cell count herds have protocols and procedures that address dry cow management, cow handling, facilities, milking procedures and udder preparation. Although some of the particulars vary, the basics are the same. Having procedures in place that would result in milking clean, dry, well stimulated teats is a key. There is no magic bullet to accomplish this, but here are some suggestions.

1. Keep the cows' environment clean. Stall beds, bedded packs, loafing lots, pastures, and cow alleys must be managed to minimize the contamination of teats and udder floor.
2. Bring clean, calm cows into the parlor. Clean cows will have fewer bacteria on their teat ends to be removed during udder preparation. Calm cows achieve better primary oxytocin letdown and milk out quicker, more completely, with less liner slips.
3. Clip or singe udders on a regular basis.
4. Have consistent udder preparation protocols in place that include:
 - Applying an effective pre-dip
 - Allowing pre-dip to remain on the teats for 20-30 seconds
5. Maintain milking equipment properly. Pay close attention to the condition of inflations and rubber hoses and change at recommended intervals.
6. Provide fresh feed after milking to keep cows on their feet to allow post-dip to dry and teat ends to close.
7. Have a well communicated and thought-out “game plan” for problem cows and dry off and take extra precautions to insure that teats are cleaned thoroughly to avoid introducing bacteria into the udder when treating for mastitis or during dry cow treatment.

—Tina Horn

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THE VIRGINIA PHOSPHORUS (P) FEEDING INCENTIVE PROGRAM CONTINUES TO GROW

Monetary support of this project comes from USDA's Natural Resources Conservation Service and Virginia's Department of Conservation and Recreation in cooperation with Virginia Cooperative Extension and the Virginia Tech Department of Dairy Science.

Three groups of farms have started the program and are sending TMR and feed samples for testing on a bimonthly basis. This represents 146 herds or 19% of the Virginia Grade A herds to date. A fourth group is being signed up now for start in mid October.

A “P Report” is prepared by us that contains grams of P needed per cow and per herd and also the projected grams of P consumed. Dividing the P consumed by the P required we get

the supplied amount expressed as a % of the required.

We have observed individual farm P status from 90% to 200% of required. Between a quarter to one third of “P Reports” are 115% or less. This level of feeding qualifies for an incentive payment if it continues for a year.

What have we learned? First, it takes a lot of man and woman power to conduct a project of this nature. We have an excellent team of Extension agents and specialists, professors, a graduate student, field technicians, and technical assistants working on this project. As a result we are able to visit farms yearly, provide the “P Reports” from feed analyses, conduct nutritionist and producer meetings, publish a news-

Upcoming Activities

Producer Peer Group Meeting—October 11, 7:00 p.m. Rockingham County Extension Office

“What dairymen should know about Phosphorus Based Nutrient Management Plans, Precision Feeding and the Phosphorus Feeding Incentive Program”

10:00– 3:00

- **October 12** – Woodmen of the World, Dayton (north of Dayton on Rt. 42)
- **October 13** – Brandy Station Fire Hall, Brady Station (north of Culpeper on Rt. 29)
- **October 20** – Southern Piedmont Agricultural Research and Extension Center, Blackstone (east of Blackstone and south of Rt. 460)

In order to accommodate lunch please RSVP by contacting Sally Barnett at (540) 231-6792 or sabarnet@vt.edu with the your number attending and choice of location.

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.

letter twice a year, and summarize results to monitor who qualifies for payment.

Also, we've noticed that the level of P feeding seems to be less than was observed over five years ago when a survey revealed over-feeding of P in Virginia dairy herds. We think previous efforts along with the current project have created an awareness so steps are being taken to address overfeeding. As more herds

have phosphorus based nutrient management plans, we feel feed management is one option that needs to be considered to control nutrient output.

—Charlie Stallings

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HAVE WE CHANGED HEIFER GROWTH CURVES BY SELECTION FOR HIGHER PRODUCTION?

Dairy farmers have been selecting for higher production long enough that several “correlated responses” have appeared in dairy cows. For instance, experience (and data) have taught us that somatic cell scores go up and fertility rates go down if selection is only for higher milk yield for several generations.

The industry responded by developing genetic evaluations for somatic cell score and daughter pregnancy rate. Selection for lower cell scores and higher fertility, in conjunction with higher yields, is turning the tide of genetic change in a favorable direction for these two traits. Higher producing cows have increased appetites and tend to be more aggressive eaters. Does this characteristic affect their growth rates as heifers?

A long term study at the Scottish Agricultural College in Edinburgh, Scotland compared Holsteins selected for maximum production of fat

and protein to controls selected for average production. Complete details are in the Journal of Dairy Sci. 89:322-329.

Heifers in the maximum production line grew faster and were heavier at first calving than heifers in the control line. The size differences disappeared by the end of third lactation, however. So – there has been a correlated response to selection for higher yields, as growth rates and size at first calving have increased.

Most producers would consider these to be favorable responses. However, the changes call attention to the need for better heifer nutritional programs to meet growth requirements than were necessary a few generations ago.

The dairy cow of today is a highly specialized beast and requires increasingly specialized management systems to reach full genetic potential – even as a heifer!

—Bennet Cassell

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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

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