

Dairy Pipeline

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Department of Dairy Science

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Do you know the value of your homegrown forages?

Can you afford not to know? Knowing the value of your forages is important whether you are selling or feeding. Standard values are useful, but for those of you who pride yourself with your forage management... Don't you think your forages are a little better than average? Another point to consider is that different growing seasons produce different characteristics in our forages. How many years in the last five to ten have been normal or average? ***Knowing the values of your forages allows you to better market what is to be sold; more efficiently feed what is to be utilized on-farm, and helps you to decide which varieties or species to plant the next year.*** Regular forage testing allows you to formulate rations that are the most economical while also being nutritionally balanced.

Yield records are also a useful management tool. They can be used to determine if additional forages will be needed to get you through or if you have enough that you can sell or alter you plans for the remaining acreage. Yield records can also help you to fine tune your nutrient management plan to make better use of you inputs. Forage testing and yield records are useful tools and a combination of the two can greatly enhance your ability to manage your forage program and produce feeds that will allow you to better meet your goals no matter what they are.

--Tina Horn

Dairy Extension Agent

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Feeding the pre and post partum dairy cow

There seems to be some confusion over the best strategy for feeding the close up dry cows and after calving. It's been standard practice for some time for cows to consume a lower energy, higher fiber diet during the first half of the dry period followed by a ration with more energy (more grain) for at least two weeks pre partum. After calving some producers have continued to feed a lower energy, lower fat diet to enable the cow to "ease" into lactation. Others recommend immediately transitioning fresh cows to a high energy diet. In a study conducted in Wisconsin, dairy cows were fed either high

(.77 Mcal NE/lb.) or low (.71 Mcal NE/lb.) energy diets from 4 weeks pre partum until calving. After calving, half of each group was fed either a high or low energy diet. As expected the cows fed the high energy diet were in positive energy balance. However, there were no differences in blood concentrations of metabolites, insulin, or liver fat stores. Changes in liver stores of fat were more related to the change in diet after calving. There were significant interactions between the pre and post partum treatments indicating that delaying higher concentrate feeding until day 21 after calving could be offset by higher concentrate feeding pre partum.

Two significant findings have practical implications for feed management recommendations for this period of time. Cows fed low energy diets had a higher incidence of white line hemorrhage scores (sore feet) between calving and 10 weeks post partum than cows fed higher energy diets. Cows receiving the high energy diet in the dry period followed by the low energy diet post partum had the greatest increase in white line scores. The most favorable metabolic profile occurred when cows were fed the higher energy diets immediately after calving. It's also interesting to note that there was no difference in the incidence of udder edema between the different treatment regimes. What's it all mean? ***Consistency is important in any feeding management program. Dairy cattle respond best to consistent pre partum diets whether they are high or low energy.*** Negative effects of weather must be minimized by covering feed bunks and providing good cow comfort. Effective fiber must be present regardless of the energy level of the diet. ***The benefits of low energy post partum diets are minimal which means that diets immediately after calving should contain high levels of energy and feature forages of optimal palatability that encourage high intake post partum.***

--Robert E. James

Extension Dairy Scientist,

Dairy Nutrition

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Mycoplasma in calves

Before 2000 Mycoplasma was almost non-existent in Virginia. Since then the dairy and beef industries have seen a steady rise in illness associated with Mycoplasma. In dairy calves Mycoplasma causes pneumonia, head tilt, droopy ears, and swollen joints. Respiratory problems

with Mycoplasma can start showing up as early as 2 weeks of age. Unlike Pasturella that tends to causes severe toxemia and calves to look sick very quickly, Mycoplasma can be much more subtle and calves may go unnoticed until they have lost 50% or more of their lungs. These calves are called chronics in the beef industry and although they may live the odds of them becoming a milking dairy cow are slim. The earliest clinical sign of Mycoplasma is typically a single drooped ear when the calf is at rest.

Mycoplasma is very difficult to treat. Some commonly used antibiotics do not work for Mycoplasma. Penicillin, Polyflex®, Naxcel®, Excenel®, and Excede® all kill bacteria by destroying the cell wall. Mycoplasma does not have a normal cell wall so therefore they are ineffective in treating Mycoplasma. Micotil® shows little or no activity against Mycoplasma as well. Oxytetracycline has produced mixed results in treating Mycoplasma with some people reporting good results while others have seen poor responses. The drugs available to treat dairy calves that show the best results are Nuflor and Draxxin. ***Two important factors in the treatment of Mycoplasma are early recognition and prolonged treatment.*** Calves that are treated early in the course of the disease respond fairly well, but unless these calves are treated for longer than we typically treat other causes of pneumonia, 50-70% of the calves will relapse and get sick again. Every time the calf relapses it will have more lung damage and be harder to heal. Current recommendations are to provide continuous levels of antibiotics to these calves for 10-14 days. If you suspect problems with Mycoplasma work with your veterinarian to come up with a treatment protocol that will fit these guidelines. In older weaned calves chlortetracycline can be added to the feed as part the extended therapy protocol.

Baby calves are most likely exposed to Mycoplasma by drinking colostrum or waste milk from cows with Mycoplasma mastitis. However once Mycoplasma gets into a calf rearing facility it is very easily spread from calf to calf through the air. This sets up a never ending chain of infection as older calves infect the new calves moving into the facility. This route becomes more important the closer confined the calves are. On farms that are experiencing Mycoplasma problems most all calves will become infected with Mycoplasma. However, not all of these calves should get sick. ***If you are experiencing a high percentage of sick calves, you need to look at your calf rearing operation and see what aspects need improving. The list to look at***

includes colostrum management, feeding waste milk, ventilation, and overcrowding.

If you suspect Mycoplasma on your farm work with your veterinarian to find out and then set up protocols to not only treat the problems, but prevent it.

--John F. Currin

Extension Dairy Veterinarian

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Upcoming Activities

Rescheduled Dairy Conferences:

Brandy Station Fire Hall February 15
Registration Contact:

Carl Stafford (540) 757-3435 or ccstaffo@vt.edu

Ever's Restaurant February 16
Harrisonburg

Registration Contact:

Tina Horn (540) 245-5750 or tihorn@vt.edu

Virginia State Feed Association & Virginia Dairy Nutrition "Cow" College

"Partnering for the Future" February 22-24
Hotel Roanoke

For more info: <http://www.conted.vt.edu/vsfa/>

or contact Bob James (540) 231-4770; jamesre@vt.edu

Innovative Nutrient Solution Expo & State Dairy Conservation Field Day April 5

Cub Run Farm

Rockingham County

For more information, contact Charlie Stallings at

(540) 231-3066; cstallin@vt.edu

Little All-American Dairy Show April 8

Virginia Tech

For more information, contact Dave Winston at

(540) 231-5693; dwinston@vt.edu

Dairy Club Invitational Youth Dairy Judging Contest April 29

Virginia Tech

For more information, contact Dave Winston at

(540) 231-5693; dwinston@vt.edu

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.

Bennet Cassell

Bennet G. Cassell

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