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DAIRY PIPELINE

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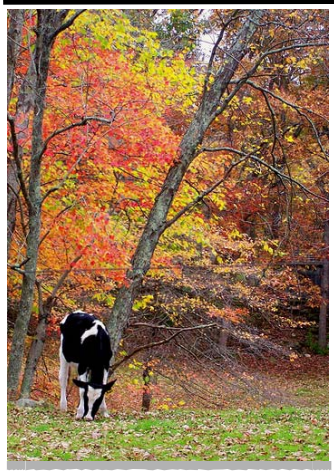

"What matters most is income remaining after feed costs are paid! "

"Recently, we have seen a trend of less bedding available and at a higher cost."

Photo courtesy of Flickr.com

What are Your Feed Management Plans This Year?

The dry 2007 growing season along with the impact of ethanol on corn markets has created some interesting challenges in feeding dairy cattle and heifers. Forage is in short supply. In many areas of the state, timely rains allowed the ears to set but stalks were short keeping dry matter yield per acre low. However, this means that although yields are low, energy content is high. In other cases rapid dry down resulted in drier corn silage at risk for mycotoxin contamination. Hay crops are in very short supply as the lack of rain during the summer eliminated or severely reduced yields on 2nd and subsequent cuttings. In addition, pasture forage is severely depleted. The short forage supply coupled with higher prices for corn and soybean meal begs the question: **What's a manager to do?**

It's important to approach these challenges early and methodically. Using the following steps early on will allow managers the flexibility to make wise and economical decisions.

1. *Thoroughly inventory all forages on hand.*
   a. Silage inventory can be estimated using the SILOCAP Excel spreadsheet at the VTDAIRY web site www.vtdairy.dasc.vt.edu. This will enable an estimation of quantity of silage available in upright or horizontal silos or in bags on a dry matter or as fed basis.
   b. Obtain analyses of all forages to determine quality.
2. *Allocate forages where they will do the most good.* Highest quality forages go to early lactation, high producing cows and young heifer calves. These animals require more nutrient density in their diets to achieve high milk production, good health and good growth. Consider grouping milking cows so that forage utilization can be more effectively managed.
3. *Project needs based upon proposed rations* by multiplying daily forages used/animal by animal numbers to determine how long the forage will last. Don't forget allowances for spoilage which can vary from lows of 5% to as much as 50% of round bales stored outside.

If a shortage of forage is evident, take action now to plan your strategies. Forage prices will only increase until the next harvest in spring.

►Seek locally produced forages or fiber sources first to reduce freight charges. However, in many cases, local forage supplies will be depleted or quality may not be adequate for early lactation, high producing cows. Consider purchase of higher quality western alfalfa hay for these animals.

►Be innovative in securing fiber sources for later lactation cows, dry cows and bred heifers. Corn stover, cotton gin trash, and poorer quality hay can be effectively used in rations for animals with lower nutrient needs.

►Consider use of byproducts of the food industry to supplement needed nutrients at low cost. When evaluating byproducts, seek assurances that they contain no harmful residues and determine how long they can be stored before quality deteriorates to unacceptable levels. A good example of an economical low cost ingredient might be Okara, a soy beverage residue produced in Mt. Crawford, VA.

►Reduce shrink. Train feeding personnel to load mix wagons without spilling excessive forage. Don't overload mix wagons. Fix or repair feed bunks to reduce losses on the feed bunk. Reducing shrink by 5% on 2,000 tons of corn silage equals 100 tons less corn silage to purchase.

►Cull marginal animals or sell surplus dairy heifers. Springing Holstein heifers are currently bringing over $2,000 each in most mid-Atlantic and southeastern states!

►Make plans for harvest of small grain silages such as rye for forage rather than spraying with herbicides.

Remember that milk prices are at record highs! Don't get too cheap with feeding programs for the high producing milk cows and young heifers. What matters most is income remaining after feed costs are paid! If you save $.40/cow in daily feed costs and production drops by more than two lb. of milk/cow, that's a net loss when milk prices exceed $20/cwt!

—Bob James
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Availability of Winter Bedding Material

A positive note to our dry weather is that dairymen have been able to use less bedding material this summer. The dry conditions that have persisted throughout the year and into this fall are nearly ideal in terms of managing the cow's environment. In particular, those dairymen with bedded pack barns have been seeing good pack conditions as they have dried down to the point of choking the tractor driver as they manage the pack daily. Perhaps it's just wishful thinking, but we are heading into the period of the year when we normally begin to see more regular moisture. And more moisture means more bedding. Recently, we have seen a trend of less bedding available and at a

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Upcoming Activities

Nov 15, 2007 Calf College - in Cooperation with Augusta Cooperative, Staunton. Contact Bob James for more information.

Transition Cow Colleges in cooperation with Southern States Cooperative, West Central Soya, Elanco & Pfizer

Dec 4 - Mt. Crawford, VA. - Mrs. Rowes Restaurant (contact Bob James for more information: 540 231-4770)
Dec 5 - Rocky Mount, VA. - Casie Center (contact Beverly Cox for more information 540 483-5161)
Dec 6 - Lexington, NC - (contact Bob James for more information: 540 231-4770)

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.

"...an awareness is being established about levels of phosphorus in rations and what feeds contribute to higher levels."

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
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higher cost. The bedding dilemma is a result of several factors. Lumber prices have followed the trend in the housing markets, with a peak around $450/Kbd ft in 2004. While the housing sector has slowed, interest in securing sources for lumber products has not. Consequently, dairymen are seeing their local sources for dry sawdust being diverted to a more lucrative market in the wood products industry.

Ultimately the role of any bedding is to provide a clean, comfortable place for cows to lay down. Sawdust was a good choice in that initially, it is dry and provides little nutrients, depriving mastitis causing bacteria of the media they need for growth. But with the addition of a little MUD (manure, urine and dirt), bacterial populations quickly soar in the absence of good bedding management, replacement or treatment. Furthermore, while sawdust has the ability to absorb 2 ½ times it's weight in moisture, it cannot do so without becoming a good media for bacterial growth.

In freestall operations, dairymen should consider the expense, stall retention, absorption and nutrient content of alternative bedding types. Common alternatives to dried sawdust would include peanut hulls, shavings, green sawdust, sand and mattresses. Shavings and hulls are similar to sawdust in that they are dry but tend to require more bedding as they are poorly retained in most free stalls due to their bulky nature. Green dust is typically more economical but has less capacity to absorb moisture and can come with a healthy bacterial load, particularly klebsiella. Frequent applications of lime to stalls bedded with green dust can potentially help mitigate some of the increased risk of high bedding cultures. Mattress installation is a more long term solution. Daily bedding costs will be lower, but not eliminated, and life of the mattress will ultimately play into the economic decision. Sand is a good, inorganic choice that supports little bacterial growth. Retention in stalls varies with stall design and it is well reported to be abrasive to equipment and hard to get out of manure pits.

In bedded pack operations, the options are shavings, peanut hulls, green dust, fodder, straw and potentially sand. If you overlook their cost, shavings and hulls work well in pack barns. Their absorption rates are lower than sawdust but their increased particle size tends to bulk up the pack, helping it aerate and compost better. Green dust will have even lower absorption rates and there is the added risk of much higher counts in bedding cultures. Again, lime applications might help mitigate the problem. Corn fodder and straw can be used in pack barns although they cease to be a composting unit at that time and with frequent applications they can provide a relatively clean bedding area. Sand is an option, although I have not been able to locate anyone that actually uses it in a pack barn. It is inorganic, could be tilled with the same equipment and it is considered excellent for cow comfort. On the down side—what to do with it once it reaches a saturation point of manure solids?

A survey of bedding suppliers in the Shenandoah Valley had trailer loads of shavings at $1700, peanut hulls at $1100, green dust at $630, and sand at $460. Corn fodder has been bringing $15 - $19 per large round bale while straw is currently bringing $26 - $32 in large squares.

Ultimately, bedding options come down to the economics, local availability and potential risk to udder health. For additional advice on the pros and cons of different bedding types and treatments please contact your local dairy extension agent.

--John Welsh, Extension Agent
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Updates on the Phosphorus Feeding Incentive Program and Feed Management Plan Development

The incentive feeding project was started in January 2006 and two hundred and fifteen Virginia dairy farms signed on to the program. At the end of the first year of feed testing a yearly summary is provided to qualifying farms and eligibility for payment is calculated. Three groups have completed the first year and over $30,000 of incentive payments have been—or are in the process of being—paid from funds provided by the Virginia Department of Conservation and Recreation and the Natural Resources Conservation Service (NRCS).

What are we seeing? First, an awareness is being established about levels of phosphorus in rations and what feeds contribute to higher levels. Second, we are seeing an overall reduction of phosphorus in rations of herds that stay on a regular feed testing program.

Feed Management, including but not limited to reduced phosphorus feeding, is an area of voluntary participation for a comprehensive Nutrient Management Plan. Maryland and Pennsylvania NRCS are currently working out the details of how they will handle payment for this process in their states. With certified nutritionists needed to develop feed management plans, a training/certification program has been scheduled in Pennsylvania for November 2007 and Virginia nutritionists are invited to participate. Virginia NRCS will likely follow what surrounding states adopt but at a later date.

Feed management is an area where significant reductions are possible in manure nutrient output and benefits can be obtained when developing nutrient management plans.

—Charlie Stallings
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