

DAIRY PIPELINE

**Relative Feed Value is an indicator of hay quality.** Relative feed value (RFV) is a term that has been used in the marketing of hays. It can be calculated for pure grass and legume or mixed hays. To calculate this value it is necessary to have a forage analysis for acid detergent fiber (ADF) and neutral detergent fiber (NDF). It does not consider protein but higher RFV values would usually be associated with higher protein. The ADF analysis is used to predict the digestible dry matter =  $(88.9 - (.779 * \% \text{ ADF}))$  and NDF predicts dry matter intake =  $(120/\% \text{ NDF})$ . RFV is calculated by multiplying digestible dry matter by dry matter intake and then dividing by 1.29. For an alfalfa hay containing 30% ADF and 40% NDF the  $\text{RFV} = (65.5 * 3)/1.29 = 152$ . Grasses typically have higher ADF and NDF concentrations and consequently have lower RFV. For instance a grass or mixed hay having 35% ADF and 50% NDF would have an  $\text{RFV} = (61.6 * 2.4)/1.29 = 115$ . What this calculation does not account for is ADF and NDF digestibility. Grasses typically have fiber digestibility's greater than legumes because legumes have more lignin associated with the fiber. Legumes make up for this by having more cell contents that are highly digestible thus elevating energy concentrations to higher levels than in grasses. When using RFV it is best to compare hays that are within a similar classification such as alfalfa, grass, or mixed. Commercial labs typically have the ability to provide RFV for hay crop forages. If you are interested, contact your local Extension Office for a list of commercial labs.

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**AI use varies greatly from herd to herd.** In some Virginia herds, the object of reproductive

management is simply to get the cow bred, and the service sire is just a delivery system. In other herds, the service sire is an investment in the future of the herd and a matter of great concern. Combinations of these two visions of "how to breed a herd" at work around the state. The table below shows the percentage of herds that choose to breed their cows by AI and natural service and some of the results of those decisions.

Comparison of AI practices in Virginia Holstein herds, September 2004.				
% of cows bred to non-AI bulls	% of herds in this category	Average NMS of lactating cows	Rolling herd average milk	% sire ID
None	26%	\$177	21,471	83%
1 – 9%	26%	\$158	20,767	84%
10– 24%	13%	\$140	19,839	77%
25– 74%	15%	\$107	18,502	59%
>74%	20%	\$72	17,978	43%

The table shows that 65% of Virginia Holstein herds (the first three categories) choose to use herd bulls for less than 25% of the services performed. These herds have higher production and consistently do a better job of sire ID. They usually have better records of the service sires that produced calves born than herds with more bull breeding. As one might expect, the average genetic merit of cows in those herds is higher than in the herds relying on bull breeding. This difference may be understated by the average NMS of cows in the herds, as genetic evaluations are not possible on cows that have no sire ID. We just don't know much about the genetic merit of those cows. I see the dairy business as increasingly competitive, a business where managers need to take advantage of every opportunity for greater profit. Use of genetically

superior bulls is one such opportunity. While many herds in Virginia utilize this best management practice fully, there is certainly plenty of opportunity for others to join in.

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**\*\* Upcoming Activities\*\***

Dairy Science Recruiting Day	Oct. 23
<i>Area Dairy Conferences</i>	
Rockingham Co.	Dec 14
Culpeper Co.	Dec 15
SW Virginia Tech	Dec 16
Franklin Co.	Dec 17
 Nutrition Cow College,	 Jan 11-13, 2005
<i>Virginia Tech</i>	
PCDART Workshops	March 8-9
<i>Virginia Tech, tentative</i>	

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