

Dairy Pipeline

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Don't forget to "water" your calves

Water is *the* most important nutrient; it makes up 70-75 percent of the weight of a calf. We are very careful not to limit water availability to lactating cows, dry cows and heifers, but pre-weaned calves seem to be often overlooked in respect to water requirements. One week after birth, calves should have access to free choice fresh water. In an effort to maximize growth and health prior to weaning, some producers invest in higher quality milk replacers and calf starters. Likewise feeding milk to calves is expensive even when milk prices are low. So why invest in milk, milk replacer and starter and then limit the single most important nutrient? Water!!

Complications from dehydration are a leading cause of calf mortality. Calves are susceptible to digestive upsets due to their immature immune and digestive systems. Providing fresh water to calves helps keep them hydrated, which in turn assists in treatment. Research has shown that calves with access to free choice water (in addition to milk replacer) consumed more starter grain and had a higher weaning weight than calves fed no additional water.

Calves need fresh water, not three-week-old swampy water and it shouldn't be contaminated with feed or manure. It is a good practice to dump water buckets daily, during feeding, and clean them if needed. Between feedings, some producers opt to offer water in the same buckets in which the milk is fed. While better than no water, this practice leads to dirty milk buckets with the potential to harbor bacteria since they are never allowed to dry.

How much milk or milk replacer do you feed each day? One gallon? How does that compare to the recommendations below? So when investing in calves don't forget water, it's not expensive but it is vital.

Holstein Calves	
Age	Gallons/day
1 month	1.3 – 2.0
2 months	1.5 – 2.4
3 months	2.1 – 2.8
4 months	3.0 – 3.5

--M. Chase Scott
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Genetic evaluations for stillbirths in August 2006 proofs

First-ever genetic evaluations for stillbirth percentages in Holsteins will be published this August. Stillbirth rates for Holsteins average between 7 and 8% across all parities, and are highest (over 10%) in first calf heifers. **Replacement heifers are an economic asset to dairy farms, so loss at birth of one of every twelve heifer calves is cash down the drain.** Most calves lost are born dead, but the genetic evaluations also include calves that die within 48 hours of birth. Heritabilities of stillbirths are low, 3% or less, but there are important bull to bull differences in stillbirth rates of progeny, especially for extreme bulls. The new genetic evaluations will allow producers to identify and discriminate against those "outliers". Genetic control of stillbirths is expressed through genes a sire passes to his calves as well as through the genes expressed when his daughters give birth. Service sire and maternal grandsire genetic evaluations will be published using the same procedures that are used for genetic evaluations for calving difficulty. USDA combines service sire and maternal grandsire evaluations for both stillbirths and calving difficulty into a composite called *Calving Ability*. This composite receives a negative weight (lower percentages are favorable for both calving ease and stillbirths) in Net Merit, and is as important in the index as udder composite. Producers do not need to practice additional selection against bulls with unfavorable calving ability composites if they use Net Merit for sire selection. If a well constructed index is not used for selection, be cautious not to place too much emphasis on stillbirths at the expense of other important traits. That said, genetic evaluations for stillbirths will help dairy breeders begin to eliminate unfavorable genes for this trait from the Holstein breed.

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Phosphorus content of feeds

The National Research Council's 2001 recommendations for phosphorus in rations in most Virginia herds would be .32 to .38% of the dry matter. **Since forages are typically lower in phosphorus than protein meals and certain by-product feeds (cottonseeds, wheat bran and midds, brewers grains, distillers grains) it is possible to sometimes reduce**

phosphorus by feeding more forage. For this to occur the forage must be of good to excellent quality. See the following table for P concentrations in forages from the 2001 NRC as well as Virginia summaries from Cumberland Valley Analytical Services (CVAS) for 2005.

	NRC P, %DM	CVAS P, %DM
Forages		
Alfalfa hay, immature	.31	.34
Alfalfa hay, mature	.28	
Grass hay, immature	.34	.27
Grass hay, mature	.26	
Barley silage	.30	.36
Corn silage	.26	.23
Rye silage	.42	.42
Pasture, intensively managed	.44	
Grains		
Barley	.39	
Corn	.30	.28
Protein meals		
Cottonseed meal	1.15	1.08
Peanut meal	.64	
Soybean meal	.70	.69
Fish meal	3.05	2.68
Whole seeds		
Cottonseeds	.60	.63
Soybeans	.60	.58
By-products		
Brewers grains, dry	.67	
Brewers grains, wet	.59	.61
Corn gluten feed	1.00	1.05
Distillers grains	.83	.74
Hominy	.65	.50
Wheat bran	1.18	
Wheat midds	1.02	1.08
Low P feeds		
Bread waste	.20	.25
Citrus pulp	.12	.12
Cottonseed hulls	.12	.14
Molasses, sugarcane	.10	
Soybean hulls	.17	.15
Sugar beet pulp	.09	

There are some slight differences but most values are similar. Phosphorus content of forages does vary with maturity. More mature legumes and grasses tend to have less phosphorus. Also, rye silage and intensively

managed pastures have higher P concentrations than corn or barley silages. However, overall, forages do have lower concentrations of phosphorus than many other feeds used in dairy rations. When we bring feeds into the ration to supply protein many times we also bring phosphorus. This is especially true for the protein meals, whole seeds, and by-product feeds; while grains such as barley and corn have less.

The question arises as to what can be done when the phosphorus content of the ration is excessive and no inorganic sources are included in the ration. I have identified some feeds that are low in phosphorus (.20% P or less). Some of these—such as citrus pulp, cottonseed hulls, and soybean hulls—are readily available. Others may have application under certain circumstances and limitations. In conclusion, to manage phosphorus content of rations it is necessary to analyze phosphorus levels and in some cases look for alternative feeds.

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Upcoming Activities

Dairy Quiz Bowl (State)

Tuesday, June 27 – Virginia Tech . Contact Dave Winston at (540) 231-5693; dwinston@vt.edu

Southeast Dairy Youth Retreat

North Carolina will be hosting the Southeast Dairy Youth Retreat this year July 10-14 in Jonesville. Check <http://www.dasc.vt.edu/youth/index.html> for additional details

State Holstein Field Day, July 20, Tait Family Farm, Weyers Cave, 10 a.m.

RORA Elevation Celebration Day, July 22, Loudoun Heritage Farm Museum, Sterling

Dairy Grazing Tours--July 27-28. Contact Tina Horn (540) 245-5750, Augusta, or John Welsh (540) 564-3080, Rockingham County Extension Offices for details

State Jersey Field Day, July 29 at Waverly Farm, Clearbrook, 10 a.m.

2006 Virginia PDCA Dairy Days August 2-5, Rockingham County Fairgrounds

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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