



# DAIRYINFO

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## Pre-Fresh Feeding Practices & Calf Birth weights? (I)

A comment heard on occasion from dairy producers is “I won’t feed a pre-fresh ration, [since] it causes my calves to be too big.” Is there any validity to this statement? Unfortunately, little published research has addressed this question in dairy cattle. Studies examining the factors affecting birth weight of beef calves are more numerous, and will serve as the basis of several conclusions discussed below. Producers must remember that other factors are likely to be contributing to, if not causing the problem of high birth weight calves. In situations where dystocia (calving difficulty) is truly occurring at unacceptably high rates, consider the following:

**Animal Effects?** Is the problem occurring primarily in first calf heifers? If so, take a serious look at heifer development as a source of the problem, rather than immediately placing the blame on big calves. Heifers should calve at 22-24 months of age, weighing 590-612 kg (immediately before calving), standing 132-137 cm tall at the hip, with a body condition score of 3.25 +/- 0.25 (1-5 scale). Heifers with smaller frame sizes and/or higher body condition scores experience a greater risk of dystocia, all other factors being equal. Does the problem have more of a genetic than a developmental basis? Are proven, calving ease sires being used, especially in heifers? Did a change in bull usage 9½ months earlier coincide with the onset of the problem? Also, don’t forget that the bull is only half of the calving- ease equation—the dam must be given some consideration as well. Review records to rule in or rule out these possibilities.

**Weather Effects?** Extended periods of excessively cold weather can increase calf birth weight. Nebraska research in beef cattle suggests that for every 1°F decrease in average winter temperature, spring-born calf birth weight increases by 1 pound. This occurs because peripheral blood flow (blood flow to the skin and extremities) is reduced in order to maintain a normal core body temperature more efficiently. With decreased blood flow to the periphery comes increased blood flow and nutrient delivery to the developing calf, resulting in increased calf birth weights. While research data does not exist to validate this occurrence in dairy cattle, anecdotal evidence and the physiological similarities between beef and dairy breeds strongly suggest that it can indeed happen in those situations where cows are subjected to extreme cold during late pregnancy.

**Nutritional Effects?** Data from Colorado indicates that altering the protein status of Holstein heifers during late pregnancy did not affect the birth weights of their calves. A New York study found no effect of increased dietary protein (from a highly rumen undegradable source) on birth weights of calves born to mature Holstein cows. Illinois research found no statistical differences in calf birth weight from cows consuming different levels of protein and energy during the dry period (see table).

## Measurements from cows consuming different dry period rations.

Parameter	Dry Period Ration		
	Control	High Grain	High Fat
NE-L intake (% 1989 NRC)	108	140	103
Crude protein intake (% 1989 NRC)	95	120	81
Change in BCS (units)	-0.4	-0.1	-0.6
Calf birth weight (kg)	44	42	42

*Adapted from Grum et al, 1996.*

Is there any evidence that nutritional management during pregnancy can influence calf birth weight? Robert Van Saun, DVM/PhD, (PSU), believes it can occur in heifers under the proper circumstances. Based on observations made in past research, he theorizes that heifers experiencing suboptimal nutrition during mid-pregnancy may undergo increased placental development in an attempt to maintain adequate nutrient provision to the developing fetus. If the heifer’s plane of nutrition is then raised substantially upon entering the dry or pre-fresh period, increased nutrient intake may combine with the existing, increased capacity to deliver nutrients to the late-term fetus, resulting in substantially increased birth weights.

*By Dr. R. Tom Bass, II, DVM, PhD - Renaissance Nutrition  
(To be continued in December edition.)*

## Quick thumb rules for fresh cows -

Here are a few “thumb rules” for managing fresh cows, so they perform to their genetic potential.

- Calve with a body condition score ideally between 3.25-3.5 (not too fat - not too thin!)
- Feed a balanced ration before and after calving
- Feed good quality forage to help stimulate appetite and increase dry matter intake
- Use research-proven products to strengthen the ration
- Review entire fresh cow management protocols and procedures, such as mastitis control and cow comfort... making changes that enhance performance, health, etc. It might include creating a separate fresh group.

I can help review your entire fresh cow program, working with you to maximize their productivity and profitability. This can impact your current (and future) bottom line.



*Interested in discussing topics in this newsletter, or want to do a better job feeding and managing your cows? Call us!  
Our goal is to help you. That’s the W-S Feed commitment!*

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**W-S FEED... THE TEAM FOR SUCCESS!**

### **Winter housing and calf care...**

Winter will soon be here with challenges of weather and time. This is a critical time for calves. When considering calf housing you need to think about the temperature, moisture and wind. Extreme cold requires dry straw bedding with a lot of depth. Additionally, if hutches are used, it is beneficial to insulate two or three sides, helping calves to conserve body heat. Be sure to keep hutches out of direct wind. Calves tolerate cold if they don't have to battle wind and the elements; have deep, dry bedding; and consume adequate amounts of a quality milk replacer and starter/grower. Newborn calves may need special arrangements on [very] cold nights, possibly a shed or under a roof with solid walls. You might even want to add heat, carefully observing safety measures when using supplemental heat. This can be a cause of many concerns! Calf comfort can make a difference in the growth/development of your future herd. Remember: tomorrow's herd starts today, with quality calf management and feeding!

### **MILKING PROCEDURES -**

How important are milking procedures? This is a process that happens every day on every dairy. However, it often happens without a great deal of consideration and establishing a set of procedures that can improve the productivity and profitability of your farm. It goes beyond merely ensuring that teat skin and ends are thoroughly cleaned. Recommended procedures include dipping, stripping and checking... but what about stripping each teat several times or making sure the milk appears normal? When good milking procedures are carried out consistently they can help to reduce the incidence and spread of mastitis. Carefully established procedures will result in more contented cows and easier work for milking personnel. Additionally, when a cow is properly prepped she should let down her milk sooner – reaching peak milk flow quicker, and finishing milking ahead of poorly prepped cows. Poor preparation can stress a cow, so she is less likely to let down her milk! This can usually result in longer milking times and the potential of teat end damage. Review your milking procedures and protocols, and make changes that can improve this experience for your entire herd. They'd thank you for it – if they could!



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***Milking Procedures -***

***Winter Housing and Calf Care...***

***NOVEMBER 2016***

***CHECK IT OUT!***