

HEREFORD INFLUENCE

Got Milk?

Fact Sheet #2006-01

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By now, most of you have heard me harp about the milk factor in beef cows once or twice. It's another one of those pet peeves that I can't help taking a shot at. In fact every time I read the different breeder magazines it makes me think that these associations have a Freudian penis envy of the dairy industry. Everyone is pushing milk and I guess it fits in line with the beef industries infatuation of ever increased production from our beef herd. If you really want to breed some milk into your cows, then just use a Holstein or Jersey and I'll guarantee you, in one turn you will have achieved that goal. But no one would do that, would they? After all, we all know that Holstein crosses are tough keeping cows. Well guess what?... Little by little, many of our beef breeds are headed in that direction. The fact of the matter is there are no free rides and the more milk genetics you add to your cow herd the rougher and not tougher doing they will be.

Milk EPDs are not an actual measurement of milk and they are not calculated by someone standing beside the cow with a milking machine. Milk EPDs are a predicted measurement of genetic merit for increased weaning weight due to the maternal ability of the cow to produce more milk. In a nutshell by using a bull with high milk you will be able to create daughters that will milk heavier and consequently wean a heavier calf. However, if all your calves from that bull are destined for slaughter then don't even pay attention to the milk EPD.

To illustrate this point I'll draw upon results from a study at Oklahoma State University in which researchers wanted to determine the effectiveness of the Milk EPD in predicting calf weaning weight

differences. They also studied the effects of milk on other cow and calf variables like conception rates and body condition. Cows were sired by combinations of high or low Milk EPD Angus and Hereford bulls. Birth weights, 205-d weights, final cow weights, final cow condition scores, and monthly 24-h milk yields were recorded. What they found was that calf birth weights were similar across breeds and milk levels. Cows from high Milk EPD bulls produced more milk at all stages of lactation than cows from low Milk EPD bulls. Weaning weights were 42 lbs heavier for calves out of high milk Angus cows than for calves out of low milk Angus cows. In the Herefords there was an 18 lb difference. On the flip side cows sired by high Milk EPD bulls had lower body condition scores than low milk EPD cows at weaning. In a nutshell cows from high Milk EPD bulls produced more milk and weaned heavier calves, but did so at the expense of body condition. By selecting for a higher Milk EPD, you will increase weaning weights, but you'll do so at the expense of body condition.

Remember I said that there are no free rides... Well in another study researchers looked at the biological efficiency from weaning to slaughter of crossbred beef cattle with different genetic potential for milk. They found there was a 15-20% greater dry matter intake and energy requirement for high milk EPD cows compared with low milk EPD cows of the same breed.

The thing I found most interesting about the first study was that the Angus breeders are winning the battle in terms of turning their cows into milk machines. Hereford breeders, you have some catching up to do!

Now I know Herefords have been beat up a lot in recent years. However, I think the breed and Hereford cross cows could add a lot into making Western Canada's beef herd thriftier. I may sound like a quack but the very factor of reduced milk and their easy fleshing ability are two major reasons why many commercial cattlemen may need to rethink this breed.

The other interesting thing about milk is that most of us have absolutely no idea how much milk beef cows produce, what its quality is and its swings in production. The greatest knowledge most cattlemen have about milk may be the colostrum they give to a weak calf, or the stuff in the 4 liter jug that's in the fridge.

I consider myself lucky; I grew up on a dairy and even though I hated milking cows I learned a lot from all the hours spent with "dad's girls". In the dairy industry right from day one cows are fed for maximum Dry Matter Intake. Basically it's about maximum milk production and minimizing body condition loss immediately post partum. In fact many times the feeds dairy cows consume are insufficient in meeting their energy requirements and so they will burn up body condition to make up for the difference. Provided the cows have enough body condition at calving and they don't burn off too much fat it's a pretty efficient system. However that's usually not the case and getting milk cows to rebreed is a major issue for that industry. By the way cows can convert fat to milk synthesis at about 82% efficiency.

Most beef producers do not feed their cow for maximum milk production at calving. In fact peak lactation in most beef cows occurs 6-8 weeks postpartum. It makes sense, since most newborns would have a tough time slugging back 10 liters of milk. However, as you select for more milk you will also select for more production at the beginning of lactation and unless you have a calf that can handle it you will have another management issue. This is especially the case with producers who have changed their calving season from winter to late spring calving. Those cows now have all the groceries perfectly lined for production like a Holstein. Its no wonder there are issues of poor bags and calves unable to properly nurse or that have milk scours. Again, don't always blame the cow! You were the one that got carried away at the bull sale and lost all sense of judgment!

That said on the flip side, just like the sex drive of middle aged adults there is a steady decline in milk production after its peak! There have been very few studies that have looked at energy expenditure and milk quality changes in beef cattle. In fact most of the equations in the computer ration balancing programs come from the dairy industry. A couple of years back a couple of USDA researchers released the results of what occurs in the lactation of Angus x Hereford cross 1st calf heifers. It not only looked at production but also looked at the change in the composition of the actual milk solids. In this study they found that peak milk production was 5-6 weeks after calving and after that there was a steady decline in production so that by week 35 it was only 25% of its peak.

I always find it interesting hearing the comments of how important milk is in terms of pulling of high calf weaning weights. Sure it's a factor, however let's assume milk production to be 50% of peak at 5 months into lactation and let's say its 4 liters/day. The part that everyone forgets is that calf is now at least 5 times heavier than it was at birth...so really milk makes up a smaller and smaller proportion of the calves total intake. In fact, peak milk production in the cow coincides with the exact same time of when the calf becomes a functioning ruminant. So really as each day passes the calf becomes less and less dependent upon its dam for nourishment.

But that's not the end of the story. One thing that does change over the course of lactation is milk quality. From the point of birth through lactation the concentration of lactose in the milk decreases, whereas the concentration of milk fat stays stable and protein levels increase. So perhaps in the later stages of lactation it's not really the quantity of milk that effects calf gain but rather the quality of the milk solids. Again sort of like sex for middle aged adults, quality over quantity.

As proven by this article there is a lot more to milk than most people think. The fact is as milk goes up so too do the groceries needed to sustain it and cattle should be balanced in trait selection like milk. Otherwise the better question asked instead of, "Got Milk?"... is... "Got Good Feed?"

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