Happy Fall!

After several months of anticipation, the “Cost of Raising Dairy Heifers” report is now complete (and off my desk)! Some highlights are included in this month’s newsletter. A big thank you to Fond du Lac County dairy producers and heifer growers who participated in the field survey for this report!

The report only quantifies what you and I already know...raising heifers costs more than purchasing heifers. The 2013 field survey indicates heifer raising costs from birth to freshening have increased nearly $580 since 2007 to $2,227 per heifer. Current market price to purchase a springer ranges from $1,300 to $1,600 per heifer.

Raising heifers is the second largest expenditure in the production of milk. With it costing more to raise heifers, take in consideration ways to increase profitability in the heifer herd...early culling, genomic testing, tightening of the freshening age, reduce feed costs, etc. Ever little penny helps in reducing the cost and increasing your bottom line.

For more details and the full report on the cost of raising dairy replacement, visit http://www.uwex.edu/ces/heifermgmt/. And while you are there...don’t forget to check out other resources which can help you fine-tine your dairy replacement program.

Grow Wisconsin Dairy Grant now available

The Grow WI Dairy Producer Grant, as part of the Grow WI Dairy 30x20 Initiative, strives to improve the long-term viability of WI’s dairy industry through services to achieve annual milk production of 30 billion pounds by the year 2020 to meet the demand of the market place.

Grant recipients will be awarded up to $5,000 to hire consultants with the expertise to address specific business needs. Cost share payments by the farmer are required at 20% of the total grant amount. The grants are grouped into two categories: Planning & Preparation and Dairy Profit Teams.

The application is available online at http://datcp.wi.gov/Farms/Dairy_Farming/Grow_Wisconsin_Dairy_Grant/index.aspx. For more information, please call toll-free 855.WI.DAIRY (855.943.2479) or email GrowWisconsinDairy@wi.gov.
What is the Cost of Reproduction?

There are many ways to measure the cost of reproduction—from both positive and negative performance perspectives.

For instance, the dollar value of a pregnancy is generally considered to assess a reproductive program’s financial success. The exact figure varies from farm-to-farm and study-to-study—the 2009 University of Missouri Dairy Cattle Reproduction Manual estimates a pregnancy to be worth $200 to $550— but that variation does not detract from this measure’s importance to a dairy’s bottom line since pregnant cows are worth more than open cows.

Also, on the plus side, each percentage point increase in pregnancy rate is valued at about $35 per cow.

Meanwhile, an increase in days open (a negative performance indicator) can be valued between $0.50 and $4.50 per day, which significantly impacts dairy producers’ financial productivity.

A third, more encompassing consideration that should also be investigated has emerged: the impact of reproductive performance on milk production.

**WHOLE LACTATION PERSPECTIVE:** Few would argue with the point that reproduction impacts milk production, but the two disciplines are not always considered in tandem, particularly when discussing the cost of reproductive performance. Still, one of the major factors in determining dairy herd efficiency is the amount of milk sold per cow per day of life.

Age at first calving and the percentage of time a cow spends in peak lactation, or the early part of her lactation curve, are two of the biggest influences on milk production.

Peak production occurs five to 10 weeks after calving and a high level of production is maintained for several months, as outlined in Figure 1.

Generally, speaking, about half a cow’s lactation production takes place during the first 120 days in milk—this is when she generates the most profit. During the next stage of her lactation, the cost of milk production is about equal to milk revenue, with revenues and cost becoming inverted at the end of a cow’s lactation.

**BETTER REPRO, MORE MILK, MORE $:** Given this trend, it’s easy to see that if a cow has more peak milk periods, the more profitable she, and your dairy, will be. And the amount of peak milk periods is determined by reproductive success. Conversely, poor reproductive performance costs her peak milk periods, which negatively impacts overall farm financial success.

Poor reproduction also tends to mean longer calving intervals, another reproductive cost not always considered. That’s because a cow that’s slow to breed back—whether due to health or management reasons—spends more time in the break even or financial loss phases of her lactation, rather than returning to peak milk in a timely fashion. An emphasis on reducing calving intervals gets greater as cows get older.

For every cow there is an optimum time for pregnancy which is mostly influenced by level of production, persistence of lactation and parity. In general, as production decreases, lactation number increases and persistence of lactation decreases, cows should be bred sooner postpartum and pregnancy obtained earlier in lactation.

**SET IMPROVEMENT GOALS:** To help keep your herd’s reproductive performance on the right financial track, use the following goals as a starting point. For the most part, attention to detail—not necessarily a huge capital investment—contributes to reproductive success and the ensuing financial gains.  
*Source: Dairy Cattle Reproduction Council e-newsletter, August 2013*
Calf and Heifer Raising Costs—A Wisconsin Survey

The cost of raising dairy replacements represents 20 to 25 percent of the total costs of milk production. It is a major component in making a dairy operation profitable, yet sometimes is neglected as a profit center for the farm since no direct income is generated by the replacement herd. In 1998, UW-Extension Dairy Team surveyed Wisconsin operations to determine the costs associated with raising calves and heifers, and to benchmark labor efficiencies. Due to inflation and the changing economic dynamics in the dairy industry, county-based extension educators conducted a similar field survey in 2007 and again in 2013.

Thirty four herds were surveyed for the 2013 report representing the broad scope of Wisconsin’s calf and dairy industry.

Thirty of the 34 operations surveyed had a calf enterprise, raising calves from birth until time moved to group housing: 12 tie-stall, 13 parlor and five custom calf grower operations. The survey indicated the cost to raise a calf from birth to the time she moved to group housing (average 68.6 days) was $376 or $5.34 per day. When comparing calf raising costs by operation type, it was found custom calf growers could raise a calf for an average of $3.81 per day as compared to $5.48 and $5.59 per day for tie-stall and parlor operators, respectively.

Feed cost for calves accounted for nearly 45% of the total cost to raise a calf ($165 or $2.37 per day) with labor and management (paid and unpaid) accounting for over one-third of the cost at $134 per calf or $1.99 per day. Fixed costs accounted for 6.5% of the total cost with the remaining 12% attributed to other variable costs.

Thirty-two of the 34 operations participating in the field survey managed heifers from the time they moved to group housing to freshening or, in the case of the custom heifer grower, returned to the producer. Twelve tie-stall, 13 parlor and seven custom heifer grower operations represented the operations in the study. Based on the survey the average cost to raise a heifer from time moved to group housing to freshening (or returned to producer) was determined to be approximately $1,863 or $3.04 per day. When comparing heifer raising costs by operation type, it was found custom calf growers could raise a heifer for an average of $2.57 per day as compared to $3.20 and $3.15 per day for tie-stall and parlor operators, respectively.

Over half (57%) of the cost to raise a heifer was due to feed cost. Feed cost averaged $1,046 per heifer. On a per day basis, this translated to an average feed cost of $1.71.

With regards to the heifer enterprise, the other three management areas contributed nearly equally to the remaining total cost to raise a heifer. Labor and management (paid and unpaid) contributed over 16% of the total costs to raise a heifer, costing $331 per heifer or $0.54 per day. Other variable costs: which included bedding, veterinary, breeding, and electrical and fuel, interest, and death loss, equaled approximately 15% of the total heifer cost. This averaged $274 per heifer or $0.44 per day. Fixed cost was 11% of the total heifer cost averaging $210 per heifer or $0.34 per day.

Many farms can benefit by reducing some cost components in their replacement program without reduction in heifer quality. Some areas to consider are:

- Feed a lower cost source of liquid feed to young calves
- Feed high quality and palatable concentrates to younger calves
- Analyze forages and run ration formulations
- Monitor size and age/weight variation
- Use proven feed additive to improve growth and efficiencies
- Keep weight gains steady

Feed cost is the most prevalent area where costs can be refined. Understanding nutritional requirements and how to adjust to changing environments without over conditioning is important. Changes can make a difference saving up to 10% or more through better forages, nutrition, labor efficiency or other management areas.
Fixing the 2013 Soil Damage

Years like 2012 and 2013 bring with them immediate problems, but also lingering effects. One that fits into the latter category for this year is damage to the soil. When wheel traffic and tillage occur under wet soil conditions, the odds of causing significant soil compaction go up significantly. Soil tilth and quality also suffer.

Soil compaction can be divided into two types: surface and subsoil. We experience the effects of surface compaction nearly every year. It’s caused by ground contact pressure from the tire or track. We see evidence of this by reduced crop growth in the wheel tracks. Surface compaction is highly detrimental to crop yields, but also relatively short-lived.

Subsoil compaction is essentially permanent, but yield reductions are less dramatic. It’s caused by heavy axle loads on wet soils. How heavy is heavy? Research suggests that anything above 10 tons per axle is asking for problems, especially on wet soils. Unfortunately there’s a lot of equipment that exceeds this weight limit.

Once subsoil compaction occurs, there’s little chance for remediation. Freeze-thaw cycles are of little value below 20 inches. Deep tillage or subsoiling may help temporarily, but also sets soils up for a higher likelihood of being re-compacted.

In matters of compaction, the bitter truth is that there are really no good answers other than to limit the damage. We know that controlled traffic patterns are ideal, but often not practical. Proper tire inflation makes a huge difference, and is every bit as good as tracks. Over-inflated tires are the worst when it comes to causing compaction. Deep-rooted cover crops and legumes like alfalfa are also an option for alleviating surface and upper subsoil compaction. Finally, limit traffic on wet soils with heavy equipment to every extent that is practical. Again, there is no good fix for subsoil compaction.

SNAP+ Software Training Program

Developing a nutrient management plan (NMP) that is both economically and environmentally sound has been made easier with computer software. The long awaited SNAP+ ver2 is now ready for the 2014 planning season. In order to meet the growing interest in development and implementation of the NMP, training sessions for SNAP + ver2 will be offered on December 17th and 20th from 10 a.m. to 3 p.m. Each date will offer the same training. SNAP+ ver2 is a FREE Microsoft Windows based Nutrient Management Planning software program designed to develop and guide implementation of the NMP using Wisconsin’s Nutrient Management Standard Code 590. In the meantime, if you want to learn more about SNAP+ ver2 and download it now, refer to the following web site: [http://snapplus.wisc.edu/](http://snapplus.wisc.edu/)

If you have questions, please call: Becky Wagner, Fond du Lac County Land & Water Conservation Dept., (920) 923-3033 x 120.

Goodbye Cartel, Hello Lower Potash Prices

In case you haven’t noticed, potash prices have recently come down significantly. A major Russian producer of potash jumped the cartel ship making it much more difficult to control prices by limiting production. How long this will last remains to be seen, but this is at least good short-term (or more) news for farmers. Potassium deficiency in crops has become more common in recent years and statewide soil test averages are heading downward.

What factors influence corn test weight?

Many factors influence the measured test weight (TW) of corn. The physical characteristics of the kernel certainly come into play. These include such things as size, density, shape, and "slickness" of the outer kernel layer. Hybrid differences exist for TW, but a high-yielding hybrid may not necessarily be a high TW hybrid, and vice-versa.

Today, corn is sold by weight and often in 56-pound “blocks” that for some reason we still call a bushel. In reality our modern day bushel has been transformed from a defined volume to a defined weight. This is the root of much confusion as measured TW is still based on a volume bushel.

Sometimes a high TW is associated with high grain yield and low test weight is associated with low grain yield. In fact, there is a poor relationship between TW and yield. The same TW can exist across a wide range of yield environments. That said, high TW corn can result in a grower being paid for more “bushels.” For example, there are more bushels (those 56 lb. blocks) of 57 lb. TW corn in a level full truck than the same truck filled with 53 lb. TW corn. In actuality, the truck holds the same number of volume bushels regardless of the TW.

Perhaps the most important relationship to understand is between grain moisture and TW. As kernel moisture decreases, grain TW increases. Why? As grain dries it also shrinks allowing for more kernels to “pack” into a volume bushel. Additionally, dry corn is naturally more slippery, or slick, which tends to allow for better packing.

Exactly how much TW increases after it has dried is somewhat variable. Factors such as hybrid, mechanical condition of the grain, and drying temperature come into play. Grain with a high percentage of damaged kernels will increase less than high quality grain. Grain dried at temperatures in excess of 180 degrees will also have less of an increase.

Other major factors influencing final TW are plant stresses caused by diseases, insects, soil fertility and/or environmental conditions (e.g. drought, hail, and premature frost). In other words, anything that impacts the movement of nutrients to the kernel during grain fill or degrades the integrity of the kernel (e.g. ear rots and molds) once it is filled will lower grain TW’s.
Fond du Lac County Holstein Association

Scholarship & Herd Builder Applications

A $500 scholarship will be awarded to a Fond du Lac County Holstein member pursuing a degree in an agriculture-related field. The application is available at http://fyi.uwex.edu/fdlldairyyouth/. Applications are due November 1st. For more information, please contact Joseta Halbur at josetahalbur@hotmail.com.

Fond du Lac County Holstein Association is offering a $1,000 interest-free loan to any Fond du Lac County 4-H, FFA or Jr. Holstein member to purchase a registered Holstein calf. When the calf is 24 months old, or has calved, the $1,000 loan is to be paid back to the Holstein Association.

Applications are available at UW-Extension or online at http://fyi.uwex.edu/fdlldairyyouth/ and are due December 31st. For more information, please contact a Fond du Lac County Holstein Association Board Member.

Successful Milking Routine Video Resources

Now Available Online

Looking for educational resources for your milkers? UW-Milk Quality now has a video series focusing on how to effectively milk cows to produce high quality milk. Within the video series, UW-Extension Milk Quality Specialist Pam Ruegg discusses the science behind effective milking routine in seven practical habits.

Videos are available online at http://milkquality.wisc.edu. Also check out all the other resources to help make milk quality an achievable goal on your farm!
Calendar of Events

**NOVEMBER**
1. Fond du Lac County Holstein Association Scholarships due to UW-Extension
14. Fond du Lac Area AgriBusiness Council Annual Meeting, Holiday Inn, Fond du Lac 7 p.m.
12. “Reproducing Profitability” Repro Money Road Show, Millhome Supper Club, Kiel, 10 a.m. – 3 p.m.
18. Pest Management Update Meeting, UW-Fond du Lac, Rm. 113-114 University Center, 10 a.m. – 3 p.m.

**DECEMBER**
6. UW-Extension & LTC Progressive Operators Seminar Series-“Would You Work for You?”, Lakeshore Technical College, Cleveland, 10 am -3 pm
11. Area Soil, Water, and Nutrient Management Mtg., Millhome Supper Club, Kiel 10 a.m. – 3 p.m.
13. Dairy Forage Day, UW-Fond du Lac, Rm. 114 University Center, 12 – 3 p.m. (tentative)
17. SNAP+(V2) Software Nutrient Management Plan Training, UW-Fond du Lac, Rm. A/E 205/206 10 a.m. – 3 p.m.
20. SNAP+(V2) Software Nutrient Management Plan Training, UW-Fond du Lac, Rm. A/E 205/206 10 a.m. – 3 p.m.
28. Market Livestock Initial Beef Weigh-in, Fond du Lac County Fairgrounds, 10 am - 1 pm.
31. Fond du Lac County Holstein Association’s “Herd Builder” Applications due to UW-Extension

*UW-Extension provides equal opportunities in employment & programming, including Title IX requirements.*