



Green County beef newsletter

Shortening the Calving Season: A Success Story

Most producers will agree that having a short breeding and calving season has advantages. Research has shown that controlled calving improves weaning weight, reproductive rate, cow performance, production efficiency, and profitability. Even though most producers would like to have a short, controlled calving season, most find it difficult to accomplish.

Last year, the University of Kentucky conducted a demonstration in cooperation with Mr. Wendall Gabbard in Jackson County. Our goal was to shorten the calving season of Mr. Gabbard's cowherd from 10 months to two, 60 day calving-seasons; one in the spring and one in the fall. Cows in this herd calved from February until November. We decided to establish a group of cows that would calve in March and April and a group of cows that would calve in September and October.

We began this demonstration in the Fall of 2006. Cows that calved from February 1st to May 1st were selected for the spring herd (20 cows). The remaining cows were selected for the fall calving herd (24 cows). Most of the cows selected for the fall calving herd calved in October and November. Estrus was synchronized in this herd by inserting a CIDR[®] (Phizer, Inc.) device into the cows for 7 days immediately preceding the bull turnout. The day after the CIDR devices were removed, the bull was turned out with the cows. The bull used was a mature bull and had passed a breeding soundness examination.

The results of this trial were very interesting. Pregnancy rate was fantastic as 23 of the 24 cows conceived. Unfortunately, two of the cows were observed aborting before calving. All 21 of the cows calved from September 11th to November 11th. Eighteen of the cows calved in the first 40 days. Certainly, Mr. Gabbard was pleased with the reproductive performance of his cowherd and remarked that this was the heaviest set of calves he has ever had.

The following breeding season, Mr. Gabbard simply turned a bull out with his cows. Of the 21 cows in the fall calving herd, 18 conceived within the first 30 days of the breeding season, two conceived the next cycle and only one cow was open. Obviously, once this cowherd was "straightened out", cow reproductive performance remained high.

Inserting a CIDR device for 7 days prior to bull turnout can help shorten the breeding and calving season. The cost of the CIDR devices is usually about \$10 per cow. However, based upon the breeding performance and weaning weight achieved in Mr. Gabbard's cowherd, we estimated that using the CIDR devices returned approximately \$110 per cow.

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Spring-Calving Cow Herd

*Schedule spring or "turn-out" working in late April or early May - at the end of calving season and before the start of breeding season. Consult with your veterinarian about vaccines and health products for your herd. "Turn-out" working for the cow herd *may* include:

- Prebreeding vaccinations
- Deworming
- Replacing lost identification tags
- Sort cows into breeding groups, if using more than one bull
- Insecticide eartags (best to wait until fly population builds up)
- Turn-out working of calves may include:
 - Vaccinate IBR-PI₃, Clostridial diseases and Pinkeye
 - Dehorn, if needed (can be done with electric dehorner and fly repellent during fly season)
 - Castrate and implant male feeder calves (if not done at birth)
 - Deworm
 - Insecticide eartags

*Bulls should have a breeding soundness evaluation (BSE) well before the breeding season. They should also receive their annual booster vaccinations and be dewormed.

*Choose the best pastures for grazing during the breeding season. Select those with the best stand of clover and the lowest level of the fescue endophyte, if known. Keep these pastures vegetative by grazing or clipping. *High quality pastures are important for a successful breeding season.*

*Start breeding yearling replacement heifers one heat cycle (about 21 days) earlier than cows for "Head-start" calving.

*Mate to known calving-ease bulls.

*Begin breeding cows no later than mid-May, especially if they are on high endophyte fescue. Cows should be in good condition so that conception occurs prior to periods of extreme heat.

*If using **artificial insemination**:

- Check the herd at least twice daily (early morning and late evening) to observe cows in heat (Confining cows to a limited grazing area will ease this chore).
- Use an experienced inseminator.
- Make positive identification of cows and semen used. This will permit accurate records on date bred, return to heat, calving date and sire.
- Good handling facilities and gentle working of the cows are essential.

*Record identification of all cows and bulls in each breeding group.

*Observe breeding pastures often to see if bulls are working. Record cows' heat dates and then check 18-21 days later, for return to heat.

*Continue supplying a high magnesium mineral until daytime temperatures are consistently above 60 degrees F.

Fall-Calving Herd

*Pregnancy check the cow herd. Remove open cows at weaning time.

*Let fall calves remain with cows during the spring "flush" of pasture for heavier weaning weights.

*Plan marketing program for calves. Consider various options, such as maintaining ownership and backgrounding in a grazing program.

*Weaned calves can be conditioned by feeding a complete dry ration for a short period of time after vaccinating, deworming and implanting.

*Initiate fly control for the cows when fly population builds up.

Stockers

*Keep calves on good pasture and rotate pastures rapidly during periods of lush growth. Manage to keep pastures vegetative for best performance.

*Control internal and external parasites.

*Provide mineral mix with an ionophore.

*Implant as needed.

General

*Harvest excess pasture as hay. *Work around the weather and cut early before plants become too mature. Harvesting forage early is the key to nutritional quality.* Replenish your hay supply!

*Clip pastures to prevent seedhead formation on fescue and to control weeds.

*Rotate pastures as needed to keep them vegetative.

*Seed warm season grasses this month.

Back to the Basics?

Most of us tend to make situations more complicated than they really are. It is my opinion that we could solve most of our problems if we just got back to basics. The solution might not be easy, but it could be simple.

Let's look at the national news for a moment. The talk about the presidential election and the "possibility" of a recession keeps the airwaves busy. The events surrounding the presidential election make my head spin. We've got primaries, caucuses, proportional wins, winner-take-all and super delegates. I have a radical thought. What about one person – one vote? Just add 'em up! This reminds me of the old saying that "a giraffe is just a horse put together by a committee".

Now, what about the economy. The big debate concerns the technical definition of a recession. I'm not an expert there either but I'd bet most cattle producers would say that the purchasing power of their dollar has receded. Is it a recession? Who cares what they call it? We just say "things are tough" and keep going.

Here's the problem. Corn is over six dollars a bushel, gasoline and diesel are getting higher every day (oil is over \$100 a barrel) and nitrogen fertilizer is off the chart. All of this follows a year of drought and feed shortage. We find ourselves vulnerable to another disaster. The most basic question is "how do we survive"?

In the short term, we must make sure that another drought doesn't put us out of business. We have "zeroed-out" all of our feed reserves and our hay supply. We have to restock. Simply put ... "let's make hay while the sun shines". Take every window of opportunity that you get. Also, consider some warm-season hay crops so that we aren't totally dependent upon making hay in the spring-time.

Ever since we started using big round bales of hay, some have flirted with disaster by storing all of their hay outside and not being able to carry any over. We should have the goal, and the ability, to keep an extra one-third of our annual hay needs stored inside for emergency feeding. Consider an old barn or a new structure for hay storage.

We also need to manage our pastures to take advantage of legumes and minimize our use of nitrogen fertilizers. Clovers will also improve the nutritional quality of pastures and hay.

Our long-term adjustments are just as basic. We need to match cattle genetics to our farm's available forage resources. We continue to select cattle for "more frame-more milk" with little concern for the nutritional cost or, more importantly, the effect on reproduction. If you really want bigger calves, use a moderate-sized, efficient cow and a terminal cross sire. Rediscover crossbreeding.

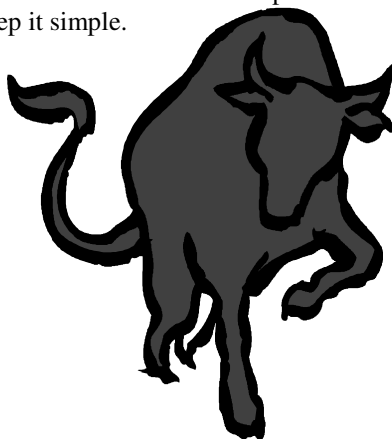
We have the genetic information to help make breeding decisions but we abuse their intended use. EPD's are tools which allow you to make a more informed decision. They are not an end in themselves. Why do we always think that a large number must be better?

Take cow size and milk production, for example. What happens if we keep using bulls with bigger numbers for yearling weight and milk EPD's? These two things have a dramatic effect on nutritional needs of their off-spring. If you don't meet the cow's nutritional needs, they don't rebreed. It's that simple.

Does cow efficiency really matter? Let's consider two different cows in the first 60 days of lactation. First, a 1100 lb cow with a body condition score (BCS) of 5 and producing 15 lb of milk daily could have her nutritional needs met with 24 lb of average hay and 3 lb of corn. The second, a 1400 lb cow with a BCS of 4 (needs to gain around 80 lb before breeding) and producing 30 lb of milk daily would need about 18 lb hay, 12 lb corn and 1.3 lb of soybean meal, for example. So you say the second cow will wean a bigger calf. Maybe, but she won't wean anything if she doesn't get pregnant.

It is time to select bulls and order semen for spring breeding. The trend, as I see it, is that most of us will select Angus bulls for example, with yearling weight EPD of greater than 100 and milk EPD of well over 30. Where does that put us in terms of reproductive efficiency? Do we really think that we'll see cheap corn anytime soon?

Let's just get back to the basics and stay focused on functional cattle which produce efficiently under our management and our environmental conditions with a minimum of extra attention. Keep it simple.



Improving Cowherd Reproduction via Genetics

Let's begin with some thoughts on Direct Selection and its impact on herd reproduction: A well-entrenched view of both commercial and seedstock producers is that the "cows left standing" after culling on the components of reproduction (e.g., pregnancy status and calf loss) are genetically superior. By extension, it is presumed that a great deal of progress in reproduction is made through rigorous culling and the retention of heifers out of dams making it to advanced ages. Though this may seem like a reasonable deduction, it is generally not the case.

Unfortunately, little genetic headway is made by simply culling cows that do not achieve reproductive thresholds. This may seem counterintuitive. Why wouldn't getting rid of the offenders improve your genetics for reproduction? The main reason lies in the fact that measures of reproduction tend to be lowly heritable (estimates typically run between 5-20%). And, with lowly heritable traits, an animal's own performance is not a good indicator of its genetic level for the trait. Therefore, many open culls may be genetically above average or even superior for reproduction. By the same token, several cows kept because they are bred will be genetically inferior for it - certainly not an outcome that will yield much improvement.

So, how do we directly select for reproduction? Because a cow's reproductive performance is expressed later in life, and even then it only provides a very cloudy picture of her genetic merit, are we relegated to making little to no selection progress for reproduction? Heck no! We can clear the clouds with reproductive EPDs.

Though EPDs always provide the best estimate of an animal's genetic merit, they are especially valuable when applied to low-heritability traits. This is because, when an animal's own record is a poor indicator of its genetic makeup, gathering information on its relatives is the only means we currently have of getting a clear picture of the animal.

You may ask yourself, "If an animal's own performance does not tell us much, what can be gained by records on its relatives?" It is not that a single relative record brings much to the mix (obviously it adds even less than the animal's own record); it is that there is strength in numbers - an animal can have many relatives with records, but only one record on itself. Through the use of EPDs we utilize information on all of an animal's relatives and, in doing so, chip away at the cloud with each record that flows in.

With a low-heritability trait expressed later in life like reproductive function, the cloud clears slowly - but it will clear. In fact, if an animal has enough progeny records, we can see its genetic merit for reproduction as clear as a bell.

Fortunately the seedstock industry now has EPDs that are, for the most part, direct measures of reproductive function: stayability (STAY) and heifer pregnancy (HP). Researchers at CSU (Snelling et al., 1995) developed the prototype for STAY, which was unveiled to the industry by the RAAA a few years later. The US breeds currently calculating STAY: Gelbvieh, Limousin, Red Angus, Salers and Simmental. Colorado State University later developed HP based on work by Doyle et al. (2000) and implemented it for the RAAA National Cattle Evaluation in 2001. While the Angus Association of America has released a trial version, the RAAA is the only breed to publish an official HP at this point. Unfortunately, neither STAY nor HP is currently calculated on non purebred seedstock, though there are plans to do so in the future.

Though STAY and HP have potential shortcomings (e.g., seedstock breeders' culling practices are probably not in lock step with the commercial industry and breed association culling records tend to be sketchy), in my opinion they are the most effective selection tools available for improving reproductive function. What's more, based on computer simulation efforts by USDA researcher M. D. MacNeil, the economic impact of stayability when selecting a sire to keep replacement females is nearly twice that of the next closest trait, while the relative importance of heifer pregnancy is on par with the most important carcass or growth traits (personal communication) - so these reproductive EPDs certainly warrant a great deal of attention in the selection process.

Obviously, if you are a commercial producer you do not have the luxury of using STAY or HP to select replacement females; however, if you select sires with superior EPDs in these areas the reproductive function of your cowherd is likely to improve over time. Given their relationship to stayability, you may also gain some reproductive ground by selecting sires with lower milk, smaller mature size and better maternal calving ease EPDs. (In the future, these relationships will be accounted for in the computation of reproductive EPDs in the manner birth weight is incorporated in the prediction of calving ease - eliminating the benefit in considering them separately; however, they are not currently factored into the calculation of STAY or HP.)

In closing, I must reiterate that crossbreeding needs to be at the center of any effort to improve the reproductive function of your cowherd. The dramatic impact of heterosis on reproductive performance is crystal clear - no herd should be without it! Though reproductive improvement through selection is possible, it is generally limited to utilizing reproductive EPDs when selecting your herd sires. By combining crossbreeding with the selection of superior sires you will position your enterprise to excel in the most vital area of beef cattle production - cowherd reproduction.

Article courtesy of the Ohio Beef Cattle Newsletter



May Market Update

New month, same old story. Feeder cattle markets remain very volatile as they watch the developing feedstuff situation. The March crop planting intentions report showed a larger than expected shift to soybeans this year. New crop prices for corn and beans really favor corn right now, but wet weather is preventing corn planting and driving prices upward. The April 28th crop progress report showed only 10% of the corn in the US planted compared to 20% in 2007 and over 30% historically.

Although feeder cattle prices have remained volatile, they aren't that far from where they were two months ago. This is especially true for heavier feeder cattle as can be seen in the chart below. Feeder cattle prices are being supported by strong fundamentals outside of the grain market. Feeder cattle supplies remain low this spring and live cattle futures for the fourth quarter remain well above \$1 per lb. Markets will stay volatile though the spring and summer as we monitor planting progress and the development of the corn crop. As always, Memorial Day will be a crucial holiday as it is often seen as a good measure of beef demand strength. Producers should look for opportunities on these price run-ups to price or protect a portion of cattle backgrounded over the summer.

KY Feeder Steer Prices: Medium and Large Frame #1's

| | Week of Feb 28 th | Week of April 24 th |
|----------------|------------------------------|--------------------------------|
| 400 to 500 lbs | \$119.47 | \$112.58 |
| 500 to 600 lbs | \$111.88 | \$108.48 |
| 600 to 700 lbs | \$103.52 | \$100.30 |
| 700 to 800 lbs | \$96.29 | \$95.25 |
| 800 to 900 lbs | \$91.09 | \$91.92 |

Kentucky Livestock and Grain Report (2-28-08 and 4-24-08)

Roberts Agricultural Commodity Market Report

LIVE CATTLE futures on the Chicago Mercantile Exchange (CME) were gainers on Monday with the exception of the August '08 contract. The APR'08LC contract closed at \$92.400/cwt, up \$0.125/cwt and \$2.375/cwt higher than a week ago. JUNE'08LC futures were up \$0.375/cwt from Friday's close at \$93.750/cwt and \$1.800/cwt higher than last week at this time. Profit taking weighed on prices while spreading in June/August and August/October were noted. The herd has been trimmed and demand is strengthening. Packer margins remained profitable at an estimated positive \$61.90/head vs. a positive \$78.25/head last Monday, according to HedgersEdge.com. Packers were reported buying for \$90.99/cwt vs. an estimated breakeven buy at \$96.00/cwt. Cash cattle were steady to higher trading at \$92/cwt, up \$2/cwt. USDA put the 5-area price at \$92.11/cwt. Cattle in the U.S. Plains were up as much as \$3-\$4/cwt. Export was looking up. In export news, South Korea is ready to start taking more bone-in beef from animals under 30 months of age. USDA put Friday's choice beef at \$154.87/cwt, down \$0.40/cwt. This market looks like it may have bottomed out. Cash sellers should consider holding cattle to the end of the week. Corn inputs should be not be priced yet.

FEEDER CATTLE at the CME closed down amid increasing corn prices and technical selling on Monday. The May'08FC contract finished at \$106.725/cwt, off \$1.025/cwt. AUG'08FC futures were off \$1.475/cwt at \$109.175/cwt. Spiking corn futures to record highs hurt feeders on Monday. Increasing corn prices will hurt most when the grass is scarce later on in the colder months. August took the most pressure because May cattle can still find grass. Demand remains good for heavier feeders. The Oklahoma City auction shows cash feeders up \$1-\$3/cwt on top of gains last week to \$4/cwt. The CME Feeder Cattle Index for April 24 was placed at \$101.87/cwt, up \$0.18/cwt. August feeders may rally later depending upon pasture conditions. Hopefully nearby corn inputs were priced on earlier profit taking days ago.

CORN on the Chicago Board of Trade (CBOT) closed up on Monday amid more wet weather reports that may hamper corn seedings. The July'08 contract set a record corn price of \$6.51/bu. The MAY'08 contract finished at \$6.00/bu, up 22.6¢/bu and 19.8¢/bu higher a week ago. The DEC'08 contract set a fresh high closing up 23.4¢/bu at \$6.302/bu and 25.2¢/bu higher than last Monday. Wet weather, record crude prices, and heavy volume were supportive. Funds bought over 10,000 contracts on Monday. Most funds are long in the market with over 80% of their high-risk portfolios in energy and about 11%-12% in commodities such as corn, soybeans, or wheat. These funds have to balance the books at the end of month. That means when money comes in from energy (crude) they need to invest it in the same ratio in grain and livestock commodities. Crude went up ... so the funds went on a buying spree. Many folks in the Mid-Atlantic States say they are just about to give up on planting corn. They are hoping they can find soybean seed. USDA placed the U.S. corn crop at 10% planted vs. a five-year average of 35% by this time of year. The market was working on estimates of between 15%-19% planted. U.S. corn-inspected-for-export was placed at 34,939 mi bu vs. estimates for between 35-40 mi bu. As the livestock sector struggles with high feed costs, cash corn in the U.S. Midwest was steady to firm. Cash corn in the U.S. Mid-Atlantic States was \$5.55/bu-\$6.05/bu for old crop and \$5.95/bu-\$6.15/bu for new crop. Even though Monday was a high-volume day, the supplement to the CFTC Commitment of Traders report had funds cutting bullish positions in CBOT corn by 11,000 contracts from 185,851 lots. It is a good idea to price up to 60% of the '08 crop this week. Market volatility is offering a good opportunity to price more corn. Corn futures are overpriced at this time so profit taking can be expected most likely by mid-to-late in the week. However, there is fundamental support for U.S. corn so upside potential remains a very good possibility.