

A new tool for selecting commercial beef heifers: genomics

Spring is quickly approaching. That means warmer weather and green grass are on the way. For the cow/calf producers, it means that calving is in full swing (or about over for some) and the breeding season is just around the corner.

Decisions are being made that will impact the cattle operation for several years, such as the next herd bull to purchase or the sires to breed cows and heifers through artificial insemination. Some producers spend many hours in selecting the right bull for their operation, looking over pedigrees, EPDs, performance data, etc. There is a tremendous amount of data available on purebred cattle, but limited genetic data on commercial cattle.

In the past, selection for our commercial replacements has been on individual performance, structural soundness, body phenotype and possibly genetic information about sire(s) and/or dam. There has been little to no measure of genetic potential of commercial replacement heifers. However, that is rapidly changing with the use of genomic testing.

Genomic predictions are being developed and available for commercial cattle producers to utilize in their operation. Commercial cattle often do not have EPDs, which provide a predictive measure of the animal's genetic potential like purebred cattle. These genetic predictions can be used to select replacement heifers, market feeder calves, and/or make mating decisions.

Through genomic testing, producers are able to make more informed decision that could impact their operation for many years. Depending on the test utilized for genomic testing, producers can gain valuable information on maternal traits, performance traits and carcass traits. Some of the genomic tests are breed specific, such as Angus (>75%) or Gelbvieh; whereas others are non-breed specific.

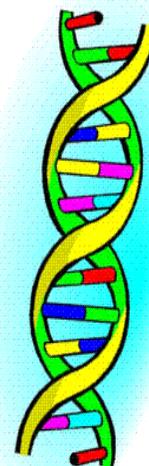
Selection decisions can be made by retaining the higher ranking animals that meet your production goals and culling the animals that are below average. In addition, genetic predictions can be utilized in making mating decisions. If you have low scoring heifers for carcass traits, you could mate your heifers to higher carcass value bulls and increase performance.

Majority of the tests cost between \$20-50 per head, depending on the number of traits being evaluated. The greater the number of traits being measured, the higher the price tag for the test.

In addition, the genomic tests offer sire parentage testing. Think of the opportunity to measure performance differences of multi-sired groups of heifers. One could gain tremendous information on their herd bulls and make decisions accordingly to your specific goals of your operation.

With the genetic information on commercial cattle, producers can make management and marketing decisions that could potentially be very powerful. I would not recommend making selection or management decisions solely on the results of genomic testing. Genomic testing is another tool in the tool box. Will it be utilized by every producer? No, but those that choose to take advantage of this new technology could increase their rate of progress in their herd dramatically.

Source: David Hoffman, Livestock Specialist



Maximizing Soybean Yield

Various sources are predicting that 2016 will see an increase in soybean acreage. So, here are some tips on how to produce higher soybean yields.

1. **Variety selection**- According to some sources, if you are planting a variety that is two years old or older, you may be giving up as much as \$13 or more per acre. Check independent yield trials such as University trials that are local or that are similar to your growing conditions, local side by side trials, and field days that feature variety comparisons to get as much information possible about varieties that fit your growing conditions.



2. **Soil pH** - pH is critical. Soybeans have a taproot which releases hydrogen into the soil. This creates a zone of concentrated acidity around the root. Optimal soil pH range is between 6.3 and 6.5 as this range maximizes nutrient availability and biological nitrogen fixation while minimizing soybean cyst nematode (SCN) population growth.

3. **Balance fertility** - Higher yields demand close attention to soil fertility status to avoid a lack of proper nutrient supply to plants. Soybean is a huge user of potassium. Potassium is involved in water management and disease prevention.

4. **Quality of root zone** - This will improve water-holding capacity of the soil and plant resiliency. This includes managing soybean cyst nematode populations, using fungicide and insecticide seed treatments, soil drainage, managing compaction and fertility. Improving any or all of these conditions will produce healthier roots which will allow the plant to take full advantage of its yield potential.

5. **Rotation** - Rotation almost always increases yield. This appears to be true for all soil types. Yield increases of 5, 7 and 10-15 bushels per acre have been reported after 2, 3, and 4 years of corn respectively.

6. **Inoculate seed** - If soybeans haven't been grown in a field for a few years, inoculant is needed. In some years as much as a 2 bushel yield increase has been reported where inoculant was used on a regular basis. If in doubt, inoculant is cheap insurance with today's soybean prices.

7. **Plant early** - Plant as early as conditions allow to take advantage of as much of the growing season as possible.

8. **Spacing and population** - The greatest yield advantage is from 15- and 10-inch row spacing. Data from several Midwest Universities indicate that a final stand of 100,000 to 125,000 plants per acre will provide the best return on investment.

9. **Manage weeds early** - This reduces stress on the soybean and competition for nutrients, water and sunlight.

10. **Hope the weather cooperates.**

Submitted: *Joni Harper, Agronomy Specialist*

Transferring the Family Farm or Business (and Other Near-Death Events)

There is a lot of pressure these days to learn all we can about the best way to pass a parent's assets on to the next generation. This may be more important to families with a long family history of farming with children that will not likely stay on the farm. Retirement, transferring a family business across generations, and estate planning are things that get put off because we don't like to think about getting old and dying. Farmers tend to plan for retirement when knees and other body parts start wearing out. Successful navigation of our senior and end-of-life events, begins decades before.

MU Extension has a curriculum development project on retirement, succession planning, and estate planning. They are offering these classes now. While you wait to attend these classes, here are some ideas to get your thinking started.

Start Planning Early. Planning doesn't just happen, it takes some initiative. Begin by taking an inventory of what one has, deciding what to do with it in the future, and then communicate it with all the people who need to know about it: family (parents and children), legal professionals, and financial planners. The sooner retirement saving begins the easier it is to be secure later in life. Succession Planning, or the transfer of the farm or family business from one generation to the next, can begin early when the children are young adults. Estate Planning should be done early and can always be modified later. We expect our parents to always be there, but the death of the first parent always comes too early. It is important to be ready for that event BEFORE it happens.

Communication is Critical. We all make plans as we work alone, drive, and attend meetings. But it isn't enough to just do the planning in our heads. It is important for husbands and wives to share their visions, and also for the kids to understand their parent's plans and explore what their own developing interests are. We all know of folks where the parent's planned for one scenario and the kids actually had no interest in what the parents had planned. It works better to talk about your plans.

Not Planning is a Choice. The State of Missouri will provide for the distribution of our assets for us even if we do not do any planning. The Probate process is carried out through Probate Court. Estate Planning provides additional control over one's property that Probate Court does not offer. Similar costs of choosing not to plan occur with succession planning or retirement. Planning allows control.

Time is Money. As an economist, this is more than just a cliché to me. Land prices keep going up. Even with the inflation and collapse of land prices in the 1980's land prices have been increasing at an average of 6 percent a year for decades. Regardless of that history, our land in southwest Missouri is a bargain.



Farmers in areas with much higher land values can sell that land and move to southwest Missouri and start again. If your son or daughter is buying into your operation, it can be more cost effective sooner than later. Saving for retirement also becomes more costly with fewer options the longer that process is postponed.

Our class in retirement, succession planning, and estate planning will be a great tool for Missouri residents to plan for retirement, transfer of their family-owned businesses, and distribute their assets to their heirs. Planning for these events can be complicated and intimidating, but it is easier the earlier it begins. Our new program will prepare participants, now, to begin work with their legal and planning professionals, provide confidence, and help them make the most out of their approaching near-death adventures. Watch for it coming to a county near you soon!

Source: *Mark Jenner, Ag Business Specialist*

Sales Closing Date Quickly Approaching for Noninsured Crop Disaster Assistance Program (NAP)

The Farm Service Agency encourages producers to examine available USDA crop risk protection options, including federal crop insurance and Noninsured Crop Disaster Assistance Program (NAP) coverage, before the applicable crop sales deadline. Crops not covered by traditional crop insurance may be eligible for NAP. The following sales closing dates apply to Missouri for 2016 NAP coverage:

- March 15, 2016 – Most spring-seeded crops; pecans, forage and pasture

The 2014 Farm Bill expanded NAP to include higher levels of protection. For all coverage levels, the NAP service fee is the lesser of \$250 per crop or \$750 per producer per administrative county, not to exceed a total of \$1,875 for a producer with farming interests in multiple counties. There is an additional premium for additional levels of coverage.

Beginning, underserved and limited resource farmers are now eligible for free catastrophic level coverage, as well as discounted premiums for additional levels of protection.

