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Integrating Information into Selection

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Integrating Information into Selection

Loren Berger

Introduction

Berger's Herdmasters is located on the southern edge of the Sandhills near North Platte, Nebraska and is home to our composite seedstock operation with a base of approximately 350 head. Our business is focused on the production of hybrid bulls consisting of Red Angus X Simmental and Angus X Simmental, plus we do have some high percentage Angus bulls (both Red and Black) that are designed to be used on heifers. Our operation conducts an annual bull sale on the second Saturday in February and continues to see expansion each year. This year's offering will consist of around 180 bulls sold at auction with an additional 30 head offered private treaty later in the spring. Approximately 95% of the offering is the result of AI and synchronization programs. With the continued success of our sale we rely on the help of several cooperator herds to supply a portion of the sale offering in addition to the bulls produced here at the ranch, These cooperator herds provide genetically similar cattle that compliment our operation very well and allow us to offer superior bulls, selecting the top end from over 1000 head. All bulls are performance tested, semen tested and ultra sounded here at the ranch. We winter the bulls free of charge until April when they are delivered to their new owners.

History

My background definitely influences the genetic traits I consider important and the tools I use to evaluate those traits. I grew up in northeast Kansas on a diversified livestock operation where we had a small herd of registered Herefords. In 1971 I AI'd some of those Herefords to Simmental bulls and those resulting F1 cows were some of the most productive cows that I had ever seen. That experience firmly etched in my mind the value of maternal heterosis and the importance of breed complementarity.

After college I worked for several seed stock operations looking for the opportunity to get financially involved in an operation. We eventually ended up working on a purebred Simmental operation in North Platte, Nebraska, where I ran some cows of my own as part of my salary. This arrangement continued for several years until the owner decided to retire and offered to let me assume the lease on the ranch and lease his cows. This was in 1993 and the market acceptability of traditionally colored Simmental cattle was rapidly declining. I was faced with the decision; what do I breed these red and white spotted Simmental cows to so they would produce bulls that the market would accept? Intellectually, I knew that the logical choice was Red Angus. I had been using some Red Angus on the virgin heifers for several years, and the results were encouraging. But, the question still remained: Could I sell

a significant number of Red Angus X Simmental bulls at a price that would keep me in business? I took the plunge and AI'd all of those purebred Red Simmental cows to Red Angus bulls. What I discovered was that the demand for these F1 hybrid bulls far exceeded my expectations. My customers liked the advantages of hybrid vigor plus the simplicity of management these crossbred bulls brought to their breeding programs.

Genetic Priorities

With that as background, I would like to discuss the factors that influence the traits that we emphasize. I am not suggesting that the traits we focus on should be the ones that other seed stock producers emphasize. The beef industry needs a wide variety of genetic packages to suit the needs of various operations and environments.

The number one factor affecting the traits that I emphasize are; THE GENETIC NEEDS OF MY CUSTOMER TO BE PROFITABLE!!! We try to talk with each of our customers several times each year. We value our customers input in setting the direction for genetic selection and have utilized a survey in addition to discussion in the past, asking questions that assess their current and future genetic needs. Their input is critical in our decision making.

The second thing we consider are the genetic strengths and weakness of our cow herd. We think of our cow herd as our, "factory." Into that factory we will put the most highly proven AI sires that we can buy. The out put from that factory are the genetic packages that we offer to our customers.

A third factor we consider is the direction we think the beef industry is going. For example, we feel that the increasing cost of inputs will require moderate sized, easy fleshing cows. So we put upper limits on mature size and milk production. The genetic decisions we make today will influence our cowherd and our customer's cowherd for the next ten years.

Based on these factors I like to divide the various traits I consider into four broad categories. By far the most important are those traits that we put under the "maternal" category.

Fertility: Breed as a yearling and then calve unassisted annually.

Longevity: Stays fertile and productive well past ten years of age.

Mothering ability: Takes care of her calf, but not over protective.

Trouble free: Teat and udders, feet & legs, pigmented eyes & udders, teeth, and disposition.

The next category in terms of importance are what we label " cost of production traits".

Frame size: A range from 5 to 6.5

Milk production: A moderate level, (Angus EPD's<25)

Growth Rate: Above average, avoid extreme growth.

Feed Efficiency: Above average.

The third area we are labeling " product traits".

Marbling: Above breed average.

Red meat yield: Above breed average.

Tenderness: Above breed average.

A specialty category is what we call the Ultra-calving ease category.

Calving Ease Direct: Top 10 % of breed.

Birth Weight: Top 10 % of the breed.

Selection Tools

The next step is to effectively utilize the genetic tools that are available to us to evaluate these traits. We rely heavily on EPD's to select for those traits where EPD's are available. However, in the area we deem the most important, the area we label "maternal traits" there are limited EPD's. We do consider the Stayability EPD in selecting our AI sires. But by far, the most valuable tool we can use to help our customers improve the maternal traits in their cowherd is to provide them a simple, easy way to maintain maternal heterosis. No other tool even comes close, in improving fertility, longevity and lifetime productivity. We believe the hybrid bull provides a convenient method to accomplish this. The rancher selects the breed combination that best fits his resources for his cowherd and then uses bulls that are the same genetic combination. The resulting calves are identical to their parents. This method has the advantage of maintaining some heterosis in the cowherd while being managed like a single breed.

Many of our customers like the combination of ¾ Angus ¼ Simmental. Once they get their cowherd to this genetic mix they stay there by using ¾ Angus ¼ Simmentals bulls. I believe

that "**keeping it simple"** is one of the most important benefits that we can give our customers.

Other "maternal" traits that we consider very important are teat & udder quality, disposition, and structural integrity, which are often rated by the semen companies. However, we frequently contact other breeders who have daughters in production by a bull we are considering and have found this to be a very reliable tool.

On frame size our goal is to be between 5 and 6.5 yearling frame score. We evaluate that using EPD's when available or from information put out by AI companies and people who have progeny from the bull.

Milk production is evaluated by EPD's. On an Angus basis we want to be under +25 on the top end and have used a few bulls below + 10 with good results.

Growth rate is evaluated using EPD's. Birth weight, we want to be well below breed average with weaning weight and yearling weight above breed average. Extreme growth is avoided because it seldom comes with excellent maternal traits.

Feed Efficiency is a trait we consider only after a bull has met our standards in other areas. We have used some AI sires in the past whose progeny had great feed efficiency, but their progeny had serious flaws in conformation and fertility. Certainly, there are cattle that are very feed efficient with desirable conformation and fertility and those genetics are the ones we will be using.

The product traits are important and we evaluate them using EPD's, but we consider them only after an individual has received a passing grade in the previous categories. Our customers consider Ribeye Area the most important of the product traits so we put more emphasis there, but we want all the product traits to be well above breed average.

There are a number indexes available. The only one we really consider is the All Purpose Index that the Simmental Assn. publishes. Since our bulls are used to produce replacement females the terminal indexes have little value.

We have used DNA testing on traits like hair color, but we have not used it in the selection process for other traits. Until now, we have felt that the amount of variation that was explained by the test, was too low to be an effective tool. We do expect to use this tool more in the future.

Most of the selection tools I have discussed thus far are used to select the AI sires. Our customers appreciate the predictability that comes with highly proven sires, so we seldom consider an AI bull unless he has a considerable number of daughters in production. We have learned some expensive lessons in the past when we used bulls that did not have daughters in production.

We select our replacement heifers with much the same priorities as selecting our AI sires. We do keep more heifers for breeding than we need to maintain our cow numbers. We feel that we can do a better job of selecting the heifers we want to put in our herd after they have had one or two calves. This certainly is not the most economical approach, but it allows us to keep the best cows in the herd and sell the others as bred cows or young pairs. We have always synchronized and AI'd our heifers, but the last two years we have AI'd for 30 days and have not used a clean up bull. This insures that all the bred heifers will calve early in the calving season and allows us to sell the opens in early August, which is usually a good market.

While the advancements in technology and science are all valuable and certainly have their place, there is one type of selection criteria that still remains important and that is visual appraisal. Structural integrity is essential for longevity and is best gauged by the eye. Additionally cattle that fit the "type" we are looking for is important. Moderate framed, deep bodied, forage efficient cattle with visual muscle are essential. Our bull customers come to the sale looking for deep-bodied cattle with base width and visual muscle. We must not loose sight of that.

Summary

The driving force for me as a seedstock producer, is to do everything that I can to help my customers be profitable. Maternal traits are the number one genetic influence on the profitability of a cowherd. Maternal heterosis will do more to improve fertility, longevity and overall productivity than any other tool available. I believe that the best thing I can do for my customers is to provide them with a simple, easy to manage method to sustain heterosis in the cowherd and take advantage of breed complementarity. The hybrid bull is the simple answer to this complex dilemma. By using the best genetic tools available I can select the most highly proven AI sires that will insure that the genetics going into my customer's herds are proven, predictable and profitable.

For more information you can visit our web site at:
www.Bergersherdmasters.com