

Identify herd goals.

Herd goals serve as the foundation for sire selection and provide guidance to traits with the most economic importance. Defining the production and marketing system, along with management strategies and environment, is the key factor that warrants consideration: Will the bull be used on

heifers, mature cows or both? Will replacement females be retained in the herd?

How will the calf crop be marketed (at weaning, backgrounded, retained ownership, sell females)?

What are the labor and management resources available?

What are the feed resources and environmental conditions of the operation?

How will this sire contribute to the overall breeding system plan?

Assess herd's strengths and weaknesses. Fundamental records are key to identifying strengths and weaknesses. Basic performance parameters such as calving percentage, weaning percentage, weaning weights, sale weights, carcass merit, feed usage and so forth are necessary to serve as the basis for assessing areas of strength and those needing attention.

and other factors.

Performance is a function of both genetics and environment/ management. Superior genetics can be negated by poor management, a problem that emphasizes the importance of separating the effect of management (nutrition, health program) from that of genetics when specific priorities for the herd are established. Considering both the genetic and management influences on various traits is important. Focus on the handful of priority traits rather than attempting to change many traits simultaneously. Establishing the few traits to focus on is the key factor.

Utilize selection tools. Once selection priorities have been established through close examination of herd goals and current status, a number of useful tools are at the disposal of beef producers to assist in making genetic improvement. Genetic differences across breeds have been well established, and utilization of different breeds in a complementary fashion through structured crossbreeding plans provides the opportunity for improvement in multiple traits.

Most importantly, heterosis attained through crossbreeding has been shown to have significantly favorable effects on traits such as reproductive efficiency and cow longevity, which are critical for herd

profitability. The limited ability to select for reproductive traits in the form of expected progeny differences (EPDs) further emphasizes the importance of capturing the value of heterosis.

EPDs are available for many traits of economic importance. The introduction of economic indexes that combine several related traits and their economic values into one EPD are available to assist with simultaneous improvement in multiple traits that affect areas such as carcass merit and post-weaning profit. Again, with the large number of EPD tools available, the critical step is to determine the EPDs that are most important and establish benchmarks relative to each.

Establish benchmarks. Several tools can be utilized to assist in the determination of EPD specifications. EPD values for current and past sires can be used as benchmarks. With these benchmarks, EPD specifications can be set to reflect the desired increase or moderation in performance for a particular trait. As an example, establishing a benchmark for milk EPD can be determined through the relationship between previous sires' genetics for milk and the performance of their daughters in the herd.

Find a source. With the above defined, you can now begin to look at individual bulls. There are many sources of bulls that warrant consideration — production sales, test stations and private-treaty sales. Of critical importance is that the bull be from a reputable source that will stand behind its product. It may be necessary to look at several sources in order to

Do your homework. The first step to doing so is to evaluate the sale book's performance pedigrees and data. By examination of each bull's performance record, determine which bulls meet the EPD and other specifications that have been established, and, likewise, eliminate those that do not meet the specifications.

find the correct bull.

Be prepared to make tradeoffs, as the perfect record may not be attainable. Do not be surprised or alarmed when the bulls you have highlighted appear scattered throughout the sale order. Remember to stick to the selection criteria and qualifications/specifications that have been established. All this can and should be accomplished prior to departing for any sale.

Have a look.

Scott Greiner, Virginia Tech Extension animal scientist

Bull

Once the list has been narrowed to only bulls that meet the criteria, these bulls can be further evaluated and selection refined. Having a list of suitable bulls prior to arrival at the auction or farm will not only save time but also assist in making sure the right bull for the situation is purchased.

Once potential candidates have been narrowed on paper, the bulls can be evaluated for suitability of phenotypic traits, and the potential candidate list can be shortened even further. Not all relevant traits have EPDs — examples include disposition, foot soundness, fleshing ability — and therefore must be evaluated visually.

Make a sound investment. For many cow-calf producers, purchasing a new bull is a relatively infrequent occurrence. This emphasizes the importance of selecting the right bull, particularly in singlesire herds. The value of the right bull cannot be underestimated. Investments in good genetics will pay dividends both short- and long-term through the influence the bull has on each calf crop as well as his daughters that are retained in the herd.

Manage the new bull properly. Of equal importance is the care and management of the newly acquired bull. Proper management and nutrition are essential for the bull to perform satisfactorily during the breeding season. With most new herd sires purchased as yearling bulls, management prior to, during, and after the first breeding season is particularly important. Plan ahead by acquiring a new yearling bull at least 60-90 days prior to the breeding season so that ample time is available for him to adjust to a new environment, commingle with other bulls and for you to get the bull in proper breeding body condition. HW

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