

Cattle Business in Mississippi – October 2004 **“Beef Production Strategies” article**

Genetic Planning – Developing a Blueprint for the Herd

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The dictionary defines “blueprint” as a detailed plan of action. Blueprints are not only useful in building houses and other structures; they are also valuable in building beef herds. The foundation of a beef herd is the genetic base used to build it. The best forages and feeds can be fed, and the best herd health program can be implemented; yet the herd can only perform up to its genetic potential. Establishing acceptable genetic potential in the herd and continuing to improve on that genetic potential necessitates creating and implementing a well-designed genetic blueprint.

Gather Details

Beef production involves lots of different plans, and all plans start with details. Developing a winter-feeding plan starts with evaluating forage quality and supply, feed options, and animal nutrient needs. Developing a marketing plan begins with researching marketing alternatives and specifications. The first order of business in developing any plan is to know where you are starting from and what you have to work with. This means gathering information. These details come in the form of herd records. Useful genetic records may include growth performance information, expected progeny differences (EPDs), pedigrees, and ultrasound scan information to name a few. Other details worth consideration include whether heifers will be raised or purchased, available forage and feed resources, and marketing alternatives to develop breeding objectives.

Take a close look at performance information and EPDs in sale catalogs before going to bull or replacement female sales. Decide what cattle will fit the breeding program based on this information, and then visually inspect those cattle for structural soundness, muscling, thriftiness, etc. Take time to visit with breeders to learn the herd health and nutritional backgrounds. Some breeders will offer a “genetic package” for sale rather than just an animal. This “genetic package” can include anything from breeding soundness guarantees to calf buy-back opportunities. Seedstock breeders have an incentive to offer a high level of customer service to commercial producers to build and maintain a solid customer base.

Prioritize and Plan

Genetic goals contribute to the ultimate goal of beef production profitability. Reproduction is priority number one in creating and maintaining a profitable cow-calf enterprise. In a cow-calf operation, decisions regarding herd genetics should focus on the following broad areas in order of priority: reproduction, production, and product. If a herd female does not enter the production cycle in a timely manner and produce a calf

every year, then she is not contributing her share to covering the expenses of the cow-calf operation. Benefiting from superior genetics still requires live calves as a starting point. In terms of genetic selection, reproduction is less heritable than production and product traits but has a high level of hybrid vigor (heterosis) and responds more to crossbreeding than production and product traits. It is therefore tougher to select individual animals for reproductive traits than for performance traits such as preweaning growth or product traits such as ribeye area, but a well-planned crossbreeding program can achieve a high level of reproductive hybrid vigor in the commercial herd.

Genetic improvement involves judicious individual animal selection and culling (seedstock and commercial herds) along with a well-planned crossbreeding program (commercial herds). Appropriate selection and culling criteria must be set and used. It is easy to say before palpation time that every non-pregnant cow will be removed from the breeding herd and marketed, but it is tougher to stick to that decision when a favorite cow comes up open. If profit is the objective, then it is important to treat these decisions as business decisions. Ask yourself, "Will this herd female contribute to herd profitability or will she be a drain on net returns?" Culling and replacement selection should be approached as an organized effort with profitability as the bottom line. Crossbreeding must be structured as well. Considerations for designing a crossbreeding program include the current breed composition of the herd, whether or not replacement heifers will be kept, market targets, environmental conditions, and forage and feed resources. Whether making decisions on individual animal selection or crossbreeding, strive to keep plans and goals realistic and yet challenging.

Take Action

Creating and implementing a well-designed genetic blueprint involves the following steps:

- 1) Evaluate the current herd for reproduction, production, and product
- 2) Assess resources such as feed and forage
- 3) Consider marketing alternatives
- 4) Design a crossbreeding program
- 5) Set and stick to culling and selection criteria
- 6) Monitor herd and individual animal performance and profitability
- 7) Continue to adapt breeding and selection programs to improve profitability

Going through the information gathering and planning motions of the first six steps is not enough. Implementing the last step is essential in moving the genetic blueprint forward and reaping its rewards. Plans are only valuable if they are put into action. A genetic blueprint that is well designed and utilized can help put and keep a beef operation in the black. When acting on the genetic plan, remember that genetic progress can take some time and patience. A case in point is the investment of both time and money in producing superior replacement heifers and getting them into production. The rewards of implementing and sticking to a disciplined genetic plan can be tremendous though.

Make the Best of the Situation

“Mistakes are a fact of life. It is the response to the error that counts.” --- Nikki Giovanni.

Sometimes despite the best plans, things do not turn out for the best or even as planned. There are many factors beyond our control in beef production including the weather and market conditions, and even good faith planning is not always foolproof. How you react to the outcome of the genetic plan is critical in avoiding mistakes in the future. For example, many participants in the Farm to Feedlot program identified herd sires that lagged well behind their expectations for calf feeding performance and profitability. Instead of continuing to use bulls that produced less than desirable calves, these realizations were used to make genetic improvements and led to profitable changes in many breeding programs. These producers identified a problem (poor calf feeding performance from particular sires), came up with a possible solution (change to herd sires with genetic potential within more appropriate specifications for the situation), and implemented that change in their operations (acquired and used better herd sires).

Opportunity Awaits

The upcoming Mississippi BCIA Fall Bull Sale is an excellent opportunity to advance your genetic plan by purchasing a bull backed with performance information. The sale is scheduled for 12:00 noon on Thursday, November 11 at the Hinds Community College Sales Facility in Raymond, MS. For more information on the BCIA Fall Bull Sale or beef cattle genetics, contact your local Extension office.