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A Genetic Management Plan For Your Commercial Beef Herd: Part 3

Over the past two months the topics of SELECTION and INBREEDING have been discussed in relation to the Genetic Management Plan for your individual commercial beef operation. As a commercial beef producer you will not use **Inbreeding** (although the Seedstock Producer from whom you buy your bulls will probably use that tool). And in reality, most of your **Selection** will be determined by selecting the right source for your herd bulls. It is essential that the place where you buy bulls has a genetic plan and that they select for the economically relevant traits you need to enhance profitability from your cow herd. Many will discuss buying bulls, but what you are really buying is a package of genetics which will be delivered to your cows by a bull. You must be certain that those genetics (the bulls you buy) enhance your profitability.

The only other genetic tools you have at your disposal are HETEROSIS and COMPLIMENTARITY. Beef Industry consultant Burke Teichert reminds us that deciding to use heterosis is a strategic decision and once that decision is made, how it is done is a tactical decision. “If you decide to go after heterosis, the breeding program must be defined: breeds? rotation? composites? seedstock supplier? and etc?” says Teichert. Implementing the tactical decision of how you establish optimums in your commercial cow herd is where you need an understanding of **Heterosis** and **Complimentarity**. *{Definitions for bolded terms have been previously defined in Parts 1 and 2, and were paraphrased from: Guidelines For Uniform Beef Improvement Programs, Beef Improvement Federation (BIF) which is available as a free download from www.beefimprovement.org.}***

Since **Complimentarity** is simply the combing of specific breeds chosen to have

characteristics (traits) that “compliment” each other, deciding which breeds to use is where complementarity comes into play. This is not meant to be a discussion of breeds, but an example might be to use a “growth breed” mated to a “maternal breed” to try to capture some of what each breed contributes. Sometimes you might mate two “maternal breeds” that have other traits that may complement each other, but rarely, if ever, would you mate two “growth breeds” for a commercial cow herd.

Using a well designed crossbreeding program to obtain **Heterosis** is undeniably the greatest tool available to the commercial beef industry, but it may be the least understood. Many would consider mating two different breeds is all that is involved (that would certainly yield heterosis), but it is much more complex. As you have already suspected, obtaining the benefits from heterosis implies that complementarity is an important consideration.

There are a variety of ways to capture heterosis with a planned crossbreeding system. The greatest benefits from heterosis will be from combining breeds that are the most genetically different. In general, we have three breed groups: British Breeds such as Angus, Hereford, Red Angus, Shorthorn and their cousins; Continental Breeds such as Charolais, Simmental, Gelbvieh and others originally derived from the European Continent (all British and Continental Breeds are *Bos Taurus*); and the *Bos Indicus* Breeds such as Brahman, Brangus, Beef Master and others (sometimes called American Breeds).

Much useful heterosis can be obtained by crossing the British Breeds and in fact most of what we originally learned about the benefits of heterosis were from crosses of Angus X Hereford X Shorthorn. However, heterosis will generally be greater when you cross British Breeds with Continental Breeds and heterosis will be even greater still if you cross any of the *Bos Taurus* Breeds with the *Bos Indicus* Breeds. Data from *Bos Indicus* X *Bos Taurus* crossbreeding studies originally began to accumulate in the 1950s and have been reinforced with

recent studies, most notable with large numbers at USDA - MARC, Clay Center, Nebraska. Their data would indicate that using a Bos Indicus Breed in the crossbreeding program will result in almost a doubling of the lifetime productivity compared to crossbreds of Bos Taurus X Bos Taurus Breeds, either British or Continental.

Simple genetic management plan for your commercial beef herd: 1. Decide to develop a commercial crossbred cow herd, obtaining maximum HETEROSIS by utilizing bulls from at least two divergent COMPLIMENTARY breeds preferably with one of those breeds being a Bos Indicus Breed. 2. Find a Seedstock Producer for each of those breeds that has a genetic SELECTION program for the traits you deem important for your purposes.

Please consider attending the SPITZER RANCH PROFESSIONAL CATTLEMEN'S BULL SALE set for **Saturday, February 28, 2015**. The Spitzers will publish both SUMMER 2014 and WINTER 2015 NEWSLETTERS. If you wish your name added to their mailing list for Newsletters and a Bull Sale Catalog call 864/972-9140, write SPITZER RANCH, 1511 HWY 59, Fair Play, SC, 29643 or send an email note to spitzeranch@mindspring.com. Be certain to visit their WEB SITE at www.srbulls.com where you can study their philosophy of serving the commercial cattle industry, view catalogs from previous years Bull Sales and inspect the data they provide for your genetic selection decisions. You might additionally enjoy joining almost 1200 followers of their QUOTE OF THE WEEK on Facebook.

****If you are unable to download the printed version of the BIF Manual, contact the Spitzers and they will see that you get one. Commercial Producer or Seedstock Producer and agree or disagree with this series of articles; the BIF Manual is well worth a read!**

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