

## Crossbreeding Provides Real Economic Opportunities

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Crossbreeding is not always a welcome term in the cattle business. The world and people change. Cattle also change--but not to the degree producers often think.

Every decade brings a trend, which by definition implies change or it would not be a trend. Whether the laws of supply and demand eventually tip the value scales, sheer biological principles change the population base or, as is usually the case, people simply change their desires, those changes are inevitable. When it comes to change, what is will not stay, and what was will come again.

The North Dakota State University Dickinson Research Extension Center had to make some cull decisions on the 2003 heifer crop this week. The challenge of maintaining a crossbred beef cow is no easy matter, so with the market regaining strength and demand, the Center moved to exchange heifers.

Maximum heterosis or hybrid vigor occurs when totally unrelated individuals are mated. That is often achieved in practice by selecting different breeds of cattle. If one always mates a good cow to an excellent bull that contains none of the breed makeup of the cow, the calf will always have maximum hybrid vigor.

At the Center, we use a sort-of cross breeding system. The perfect systems, usually defined in Extension bulletins or books, are correct but hard to implement in total.

All of the Center's mature cows are estrous synchronized and inseminated artificially to Black Angus sires, selected for growth and carcass merit. These are excellent bulls and are fully utilized. Essentially, the first cycle calves are Angus-sired, utilizing many top bulls in the industry. The calves perform exceptionally well.

Hereford bulls, selected with maximizing growth EPDs, are purchased as cleanup bulls. The second cycle calves are all Hereford-sired, capitalizing on both excellent selection for growth, as well as assuring a high level of heterosis in the later-born calves.

The system works well. Three prominent types of

calves are produced. The first cycle calves are a majority Angus, sired by AI Angus sires. The second cycle calves range from half Angus and half Hereford to varying degrees of Angus-Hereford cross.

In order to keep the system focused, we sell all the second-cycle heifers as excellent replacement heifers. The Center keeps the majority of the replacement heifers from the AI-sired calves or purchases Angus or half Angus/half Hereford heifers.

This year we kept 54 heifers weighing an average of 668 pounds and sold 74 exceptional replacement heifers. The sale heifers sold at 591 pounds shrunk weight for \$99.35 per hundred weight or \$587.23 per head. These heifers, in commercial production bred to unrelated breeds of bulls, will produce very acceptable calves for today's market.

The sale heifers were 77 pounds less than the replacements, but keep in mind, the sale calves were approximately 30 days younger (30 days of growth at 2.5 pounds a day would be 75 pounds). Under the system the Center uses to produce commercial cows, all the heifers perform similarly. The bottom line is to keep those heifers that are more likely to be bred to bulls of similar genetic makeup but have exceptional performance, and when mated with AI, conceive to an exceptional growth bull of a different breed to add heterosis.

Crossbreeding concepts work, regardless of breed. Choose your favorite breeds and plan a good system.

May you find all your ear tags.

Your comments are always welcome at [www.BeefTalk.com](http://www.BeefTalk.com). For more information, contact the North Dakota Beef Cattle Improvement Association, 1133 State Avenue, Dickinson, ND 58601 or go to [www.CHAPS2000.com](http://www.CHAPS2000.com) on the Internet. In correspondence about this column, refer to BT0180.

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## 2003 Replacement Quality Heifers

	54 heifers sold	74 heifers sold
Average Weight	668 pounds	591 pounds
Birth Cycle	First 21 days	Second and Third 21 days
Principle Sire Breed	AI Angus	Natural Service Hereford
Sale Value per head	\$ 688	\$ 587

From mature cows at the NDSU Dickinson Research Extension Center