GARDINER ANGUS RANCH

The GAR REPORT

October 2001 PROUD TO BE A FOUNDING MEMBER OF U.S. PREMIUM BEEF.

Editor's note:

This issue of the GAR Report will focus on Total Quality Management. Our colleague and friend, Don Meador, Dreamcatcher Genetics, San Marcos, TX, has contributed an article on TQM we think you will enjoy.

Mark Gardiner recently contributed articles published in BEEF Magazine discussing improving beef cattle genetics and production. The focus of each article is improving quality from calf to carcass.

We also would like to thank Dr. Bob Long for granting permission to reprint his recent article published in the September issue of the Angus Journal.

We appreciate the enthusiastic responses we continue to receive from our readership and encourage questions.

"Through U.S. Premium Beef in 1999 & 2000, GAR customers received $431,320 or $53.92 more per head over cash market for their cattle. For every 100 head of GAR influenced cattle selling through U.S. Premium Beef, our customers received an additional $5,392!"

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If you have industry related questions or specific issues that may be addressed in the GAR Report, please submit to:

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Information & Technology 101

Previously published in BEEF Magazine —Written by Mark Gardiner

The business of improving beef cattle genetics and production has never been easier. I enjoy reading about all of the new technologies that are available to us today. While it's possible that gene markers, gene splicing, cloning and the like will make things "better" in the future, it's my opinion that improving beef production today involves four very simple steps:

- **Read "The Book"**
  (Sire Summaries)
- **Get your cows bred**
  (Reproduction is still the #1 performance trait)
- **Give your cattle something to eat**
  (genetics are worthless if they are unable to express themselves)
- **Have a herd health program**
  (work with your veterinarian)

I realize that this is not earth-shattering information, but the reality of the business is that very few producers do all of these things. Let's revisit these items.

1) SIRE SUMMARIES

The genetic information (EPDs) that is available today in most breed association sire summaries is priceless. If you were producing pork or poultry you would not be able to access this information. Yet many beef producers fail to utilize this information, and when they ignore the data, they are throwing ***MONEY*** down the drain.

It is important to remember that there is no good or bad EPD. Each producer must figure out for themselves the EPDs that will fit in his production environment. The reality is that with each new sire summary we have better choices of sires. Today, I can select sires within the Angus breed that 10 years ago were deemed impossible to create, let alone identify. When a breed identifies these "Michael Jordans" within the population, then everyone can expand upon them. Hence, the producers who "read the book" have better tools to engineer genetic change than those who don't. ***Genetic Change*** is ***opportunity***. This opportunity can be turned into money if these genetics are incorporated into the herd and marketed.

2) REPRODUCTION

Reproduction has been the number one performance trait ever since man started raising beef cattle. If cattle do not reproduce, you have nothing to sell. I am often amazed at how many producers want to claim how "tough" their cattle are because they have to make it in the "real world". Sure, beef cattle must reproduce in many challenging environments. Why make it tougher?

The key to reproducing in adverse environments is to balance your forage system with the nutrient requirements of your cows by timing your calving and breeding seasons correctly. Each producer needs to determine the best time for his cows to calve by answering the following questions: When does my operation have the most abundant feed supply to breed back on ? What is my back-up system for the years when I am adversely affected by weather? If it has to be "tough" on my cows, can I make it occur after they are pregnant ?

The next question that comes to mind with reproduction is how can a producer use the sire summaries and implement technology to improve reproduction? I have a friend who likes to remind beef producers of the "forgotten technology." He sarcastically tells them, "here is a new technology for you boys, it is called ***Artificial Insemination."*** AI is one of the simplest, yet most underutilized technologies in the beef industry today. While this is not a "new" technology, it would certainly be a new management practice for most beef producers. Widespread use of AI could allow all beef cattle producers to use the very best "Michael Jordans" from any breed. In most cases, these AI bulls can be accessed at very reasonable prices. With today's estrus synchronization schemes there is really no reason that ***all*** pro-

ducers could not implement an AI program. We sell bulls for a living, so the best thing to follow an AI program with is using "sons of Michael Jordan" to breed your females.

Using the EPD information provided in sire summaries and employing the "forgotten technology" (directly or indirectly) will allow you to create the value-added cattle that work in today's grid-based market.

3) GIVE CATTLE SOMETHING TO EAT

In the cattle business the main focus has to be harvesting as many pounds of beef as possible, as efficiently as possible while enduring whatever environmental conditions are presented. I deal with many producers who face challenging environmental circumstances; yet they do a great job of providing forage for their cattle. I also encounter producers who try to "starve a profit" into their operation. I contend that at the same time they "starve" the genetic potential out of their cattle. Common sense tells you "genetics cannot be expressed without something to eat."

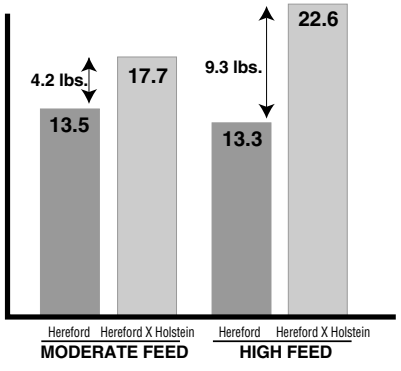

Figure 1. Comparison of Milk Production At Different Feed Levels

Dr. Robert Totusek and colleagues at Oklahoma State did one of the classic studies that shows how feeding can affect performance genetics They compared the milk production of 3-year-old Hereford, or Hereford x Holstein (crossbred) cows under two levels (Moderate or High) of feed during the winter. Every 4-H kid knows that the Holstein crosses should produce more milk than the straight Herefords and they did (Figure 1). When feed was scarce the Holstein crosses just barely beat the Herefords, however, when feed was plentiful the Holstein genetics for milk was expressed to the full extent.

This concept will hold true for growth genetics, carcass genetics, whatever genetics. The bottom line for any ranch will be to pick the "right genetics" for the feed resources in order to optimize performance, but more importantly to maximize the operation's net income from pounds harvested off of the ranch.

4) HAVE A HERD HEALTH PROGRAM (WORK WITH YOUR VET)

I like to give veterinarians a hard time because I am married to one, and my college roommate who does our herd health work is one. The reality of any operation that does not work with their local veterinarian is that they are not creating a value added product (i.e. healthy cattle). In fact, they are probably wasting money by not vaccinating for the correct diseases and/or with the correct vaccines.

I do not care what the vaccine rep has to sell me, (I always run them off). On the other hand, it is crucial that my vet knows what suits our operation best. I depend on Dr. Randall Spare of the Ashland Vet Clinic for recommendations that will maximize the genetic potential of animals in our herd. I hope you have a similar relationship with your veterinarian. Dr. Spare's recommendations always fit this general philosophy:

SOUND NUTRITION

This insures a high quality and quantity of colostrum is provided to newborn calves, Appropriate vaccination and biosecurity programs in the cowherd- to reduce the risk of disease outbreaks.

COMMON SENSE ANIMAL HUSBANDRY TO MINIMIZE STRESS

The benefit of weaning and preconditioning calves on the ranch is greater than the risks of weaning after shipping to a feedyard. Dr. Spare has observed that cattle that have been weaned and prevaccinated prior to relocation (feedyard, grass, or wheat pasture) of the cattle, encounter very few problems. These are the cattle whose genetic potential is fully maximized.

Providing an environment that is both healthy and allows for genetic expression is not only good management it is good business. Information and technology available today allows all producers a better chance at profitability than ever before. However, I still believe it's simple attention to genetics, reproduction, nutrition and herd health that makes an operation successful.

Plan now to join us Saturday, April 6, 2002, for the Gardiner Angus Ranch 23rd Annual Production Sale.

Total Quality Management: A Corporate Concept For The Beef Industry

— Don Meador, Dreamcatcher Genetics, San Marcos, TX

Editors Note: Don and Karen Meador own Dreamcatcher Ranch in San Marcos, Texas, where they have rapidly accumulated some of the best performance Angus genetics available. Don recently retired as a manager for the Procter and Gamble Company. Don's degrees are in Industrial Engineering and he has had considerable training and experience in Total Quality Management. Karen has her Ph.D. in Education and is an educational consultant in Gifted and Talented Education and has used Deming's principles in schools. They have collaborated before on a published article on the use Total Quality technique in education. W. Edwards Deming, mentioned in the article, is generally recognized as being responsible for the renaissance of quality control production philosophy, first in Japan and then in the United States. In addition to being friends, Don and Karen are Gardiner Angus customers.

We are sometimes asked how we can use the training and experience that we have gained from 30+ years in industry and education in the execution of our growing cattle operation. The truth is that the opportunities for reapplication of the things we have learned are enormous. These opportunities are most profound in the area of quality. We have found that the ideas of Dr. W. Edwards Deming have had considerable impact on both industry and education. Dr. Demings' premise is that all businesses that apply the principles of Total Quality in every aspect of their operation greatly enhance their capability to be successful. The basis for all the decisions we make in our cattle operation is the principle that we must drive toward quality at every opportunity.

To illustrate this premise, one need only to consider the principles of quality control in a manufacturing facility. A requirement for good control of quality is the identification of the traits of the product that are essential to meet the customers' needs. These are then translated to in-process measures that will accurately predict that these traits will be met. Identification of the in-process traits must then be followed by a system that (1) consistently and reliably measures these traits, and (2) reports them in sufficient time to make adjustments to the process thus gaining control of the output. Both of these elements have to be in place to produce consistently high quality output. These principles are elegant in their simplicity but often a lot harder to achieve than they first appear. If we fail to accurately measure our in-process traits then we will be making adjustments to the system that cause it to race out of control. Similarly if our feedback system is not timely, we can produce millions of dollars worth of product that does not meet our customers' expectations before corrections are made.

By now you are beginning to see the relevance of these principles to the production of

an "in-control" quality cattle operation. First we have to realize that our customers are those folks who consume our ultimate end product and that they expect quality that results in a satisfying eating experience every time. We then have to identify both those end product measures, such as end product EPD's like carcass merit, etc., that predict this satisfaction and to determine the in-process measures that allow us to efficiently achieve these output results. These measures include efficiency EPD's like growth, birth weight, etc.. Now we have to determine how to use these in our process by (1) accurately measuring these traits and (2) feeding these trait measurements back into our process through breeding decisions in time to bring our system into control.

It is the first requirement of accurate measurement of traits that brought us to conclude that Angus was the breed we would raise at Dreamcatcher Ranch. We have all heard about the value of the Angus data base. As researchers and statisticians, we have the utmost appreciation for the advantage it provides us and this explains our almost fanatical use of the database. It is that data that allows us to make informed decisions regarding achieving the desired end point results in carcass and to determine the process efficiency that we have to achieve.

Remember, however, that accurate measurements that are not timely enough to impact the output are of little value. It is this requirement that results in our excitement and interest in new techniques such as ultrasound that allow us to measure traits in time to adjust and impact our output results. As an example, recently, someone proudly told me that they did not identify donor cows until the animal had produced at least 10 natural calves that each indexed greater that 100 for growth, etc. This individual was "right on" in recognizing the need to identify and reproduce quality animals. But, his problem arises in "manufacturing" execution. First, using natural calf data allows for a sample size that almost never exceeds 10 and statisticians tell us that this is certainly much less desirable than bigger sample sizes, like the ones we get on proven bulls. More importantly, the timing of the feedback makes adjustments to improve the output impractical at best. I guess it is our advanced middle age that causes us to reject control systems that require decades to make change in our product. We simply don't have that much time left! This discussion explains why we have concentrated our operation to use all the technology we have today. Ultrasound and the use of embryo transfer allow us first to measure in-process quality that predicts customers' satisfying experiences and then allow us to reproduce and improve this quality as quickly and reliably as we know how today.

Just in case you are wondering by now who in the world we are, here is some key data. Don grew up in Acuff, Texas where the population is yet to be determined and Karen grew up in Medford, Oklahoma, population 1200. We have lived all over the United States, but have returned to our roots. We love ranch life and especially appreciate the opportunity to sit in the topless jeep with our cattle dog, Dixie Chick, and watch the sun set over our black cows. We are simple, life-long learners who enjoy working towards having the best cattle operation we possibly can. If you should travel down our way, why not stop for a little bed and breakfast at Dreamcatcher Ranch? The breakfast may not be too outstanding, but the bed will be comfortable.

Will Corporations Control The Cattle Business?

By R.A. "Bob" Long

(reprinted with permissions, Angus Journal, Sept., 2001)

Will corporations control the cattle business?

It has been said that nothing lasts except external change. So it is with the beef industry. The acceptance of performance selection, value-based marketing, vertical integration and up-to-date technology has resulted in the formation of large companies involved in both seedstock and commercial production. Typically, as these groups succeed and grow, they begin to dream of owning their own gene pool and holding it close as the only source of "superior" genetics.

Historically, both the swine and poultry industries have had such seedstock producers. Each has identified strains or lines superior in certain traits, which are then crossed; and the crosses are sold to commercial breeders.

It's been tried

For example, a swine breeder crosses two lines superior in maternal traits and sells the F_1 females to commercial producers to be used as brood sows. Concurrently, two lines superior in growth and carcass are crossed, and the F_1 males are sold to be used on those F_1 sows. That provides good performance and maximum heterosis to the commercial producer and allows the breeder to retain his private, purebred lines intact. It is a workable plan.

It has some major shortcomings, however. Foremost, even the largest companies cannot maintain sufficient numbers in the seedstock herd to permit a rate of improvement sufficient to keep up with a competitor selecting from an entire breed. Secondly, market specifications can change, and the smaller gene pool reduces flexibility. Finally, the inherent problems of size, human nature and bad luck can result in failure.

The poultry industry provides another example. In the 1960s, a large Georgia breeder (Vantress) furnished approximately 75% of the genetic material for the entire broiler industry. Now, 40 years later, that breeding program no longer has the monopoly on genetics, according to my sources at the University of Georgia. Dozens of large breeding programs have come and gone, and both the people and the genetics leading the industry are different.

My own example

A case in point is my personal experience. In the late 1960s, the original Ankony Angus Corp. was atop the Angus business in show winnings and sales. The astute owners realized their cattle were not as productive as they should be and became aware of the effect "new" performance selection programs would have on the beef seedstock industry.

Consequently, I became an employee of Ankony Angus to develop a complete performance- and progeny-testing program. The Ankony program required performance records on every animal in the herd for calving ease, birth weight, weaning weight and yearling weight and visual scores for trimness, muscling, frame size, structural soundness, breed character, and masculinity or femininity. Breeding values were computed for the same characteristics.

Major sires and prospective sires were progeny-tested for carcass characteristics-both quality and cutability. Unfortunately, the Angus Herd Improvement Records (AHIR) program was ignored, and it was decided to handle all the performance data in-house. I confess it was my recommendation. The goal was to acquire performance information on various strains and individuals not available to other breeders and thereby have a competitive advantage. The plan worked.

The story continues

At this same time, Ankony expanded in both herd size and land holdings. The operation involved deeded ranches in South Dakota, Iowa and Colorado, along with leased land in Texas, Montana and Idaho. Additional breeding stock were purchased until the registered Angus herd was approximately 5,000 head, with even greater numbers of exotics, other breeds and crosses. Included in these additions were the entire Murray Corbin Emulous herd, Canadian Colossal, and a select unit of Canadian sires and females, along with some blood from the Erdmann herd.

All these Angus were compared, including the original Ankony cattle. The Emulous cattle whipped them all. Therefore, only sires from

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GAR Contributes to R.A. Brown Ranch Elite Angus Female Offering, October 10-11

When long-time friends, the R.A. Brown family, began preparing for their Sale Of The Century, they recommended we, along with Don Meador, Dreamcatcher Genetics, and Ron Eaton, Eaton Ranch Co., sell a few females. We appreciate the opportunity and have committed genetics consistent with our breeding philosophy. We encourage you to find the sale catalog in the September issue of the Angus Journal and take a look at this impressive offering of elite Angus females.

Lot 503: GAR Precision 1709 is one of the most complete genetic packages available in the Angus business today. She ranks in the top 10% of all Angus non-parent females for YW, and ranks in the top 1% for %IMF, REA, and % Retail Product. 1709's dam, EXT 614, was the third high selling female at the 2000 GAR Sale selling for $37,000 to KMK Acres, TN, and later was the second high selling female at the 2001 KMK Dispersal. 614 is now a featured donor at Shady Brook Angus, TN, and Gallagher Angus Farm, NY. 614 is in the top 1% of all current Angus dams for YW, %IMF, REA, and % Retail Product. 1709 has full sisters as featured donors at Dreamcatcher Genetics, TX, and Eaglestone Farm, KY. 1709 sells bred 3/4/01 to GAR Traveler 4144, embryo sexed as a bull. 1709 may truly be one of the best ever genetic packages in the history of Gardiner Angus Ranch.

Lot 508: GAR Precision 2798 is a moderate framed Precision daughter out of the GAR donor cow EXT 704, who in turn, is out of the famous GAR donor Scotch Cap 309. 2798 ratioed 103 at birth and 113 at weaning with her first calf sired by New Design 036. 2798 ranks in the top 2% of all Angus dams for YW and in the top 1% of all dams for %IMF. 2798 sells open and ready to flush.

Lot 510: GARLD Precision 8229
Lot 527: GARLD Precision 8240
Lot 528: GARLD Precision 8213

Three Precision daughters out of a full sister to GAR Maximum Payload that combine a unique package of proven genetics. The combination this pedigree offers is the ultimate in marbling genetics, since both Precision and Payload are in the top 1% of all Angus sires for %IMF. 8229 sells open and ready to flush; 8240 and 8213 sell with early September calves by New Design 036.

Lot 524: GAR 6807 Traveler 653 is a "wide bodied" 6807 daughter that ranks in the top 10% of all Angus dams for low BW and high YW, while ranking in the bottom 10% of the breed for Yrlg. Hip Ht. She is also in the top 20% of all Angus dams for REA. She sells with a 2/28/01 New Design 036 heifer and rebred to Expectation, embryo sexed as a bull.

Lot 527: GARLD EXT 7780 is a full sister to R.A. Brown Ranch donor 721, Lot 521, the dam of ABS bull Load Up. She ranks in the top 5% of all Angus dams for YW and %IMF and in the top 25% for REA. She sells with an early Sept. calf by RITO 616.

Lot 542: GAR EXT 63

Lot 543: GAR EXT 68 are full sisters and EXT daughters whose dam was a full sister to Precision. 63 ranks in the top 15% for YW among all current dams in the Angus breed. Also, 63 ranks in the top 10% of Angus dams for %IMF and the top 25% for REA. She sells bred 5/12/01 to RITO 616, embryo sexed as a bull. 68 ranks in the top 10% for YW among all current dams in the Angus breed and in the top 20% for %IMF. She sells bred 5/11/01 to RITO 616, embryo sexed as a heifer.

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the Emulous line were used extensively in the breeding program, and bulls from the other lines were unloaded as soon as possible.

For example, Canadian Colossal was sold to Dave Canning, and shortly thereafter Dave called me and said, "We are starting the Canadian Colossal Cattle Co. here in Nebraska, and I want to buy Colossal's mother, his sister, his two top sons I saw in the show barn and every single yearling son you own-no exceptions." Wow! Since there were almost 300 Colossal sons around, it was a welcome call.

Tops among the young sires from the Emulous line was Ankonian Dynamo. He was out of Miss Emulous B by Emulous Pride 70 ("Big 70"). Dynamo was a great performer, a great show bull, a great sire and a profuse semen producer. He was used heavily in the Ankony breeding program, with no semen sales to other breeders. Literally hundreds of his daughters were retained in the herd.

The moral

Remember, none of this performance data became a part of the AHIR program. It is embarrassing to admit that this 10-year exercise was wrong. In retrospect, it was a disservice to the Angus breed and to Angus breeders.

It also was a disservice to Dynamo and his descendants as their current expected progeny differences (EPDs) would be entirely different had their records become a part of the Association database. Further, had we offered Dynamo semen for sale shortly after his showring appearance, thousands of additional progeny would have been added to the breed.

Now hear this, all you mushrooming cattle companies out to control the industry: You are not going to be good enough or big enough to get the job done. Historically, such organizations have failed. Either the plan was wrong, a key person died, resigned or was fired, or somebody stole the money. Don't go it alone; be a part of the industry.