



The GAR REPORT

Spring 2007

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

Editor's Note: This issue of The GAR Report features a detailed look at our 28th Annual Production Sale offering. The 2007 offering, as a group, ranks as the highest averaging cattle across the board of any ever offered at Gardiner Angus Ranch. For those who are loyal readers of this newsletter, the information 'About the Bull' and 'About the Females' may seem repetitive. However, the information does contain important data results and reconfirms our commitment to the total use of AI and embryo transfer. If you haven't received your catalog along with the March issue of the Angus Journal, you can visit www.gardinerangus.com and review.

U.S. Premium Beef has given permission to reprint Brian Bertelsen's crossbreeding article. Brian has done an excellent job of discussing the perceptions and mis-perceptions about heterosis.

Also, please note the attractive premiums being paid for age verified (AV) cattle sold through U.S. Premium Beef. All calves enrolled in GAR's G3 program should qualify for AV premiums if sold through USPB.

We hope to see you all March 31, at our 28th Annual Production Sale at the ranch.

**Since 1999, GAR customers using our USPB delivery rights have received over \$2,012,223 in premiums and dividends.
If you retain ownership, that's valuable marketing information!**

Since 1885



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

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28th Annual Sale offering posts best data ever recorded at GAR

March 31, 9 AM, At The Ranch Near Ashland, KS



Gardiner Angus Ranch is a 24/7 family ranching operation. This photo, taken in the summer of '06 by Bret Spader, *Kansas Stockman*, represents the next generation at GAR. Our handling is as disciplined as our breeding philosophy and results in quiet, easy to manage cattle.

ABOUT THE BULLS

The bulls that sell in our sale represent a total A.I. program with no clean-up bulls since 1964. We have only used progeny proven bulls at GAR in our sire selection since the very first sire summary was published in the fall of 1980. We use a great deal of discipline in our sire selection to produce bulls that provide GAR customers with the most predictable cattle possible. Using high accuracy bulls through A.I. is the only way to produce this type of bull. Using clean-up bulls or low accuracy A.I. sires only propagates genetics of unknown quantities. Premiums are paid now, more than ever before, for documented information! The best way for our customers to insure predictability is to use sons of progeny proven sires. We invite you to study the 475 bulls in this catalog. All are sons of the best bulls of the Angus breed.

Embryo Transfer is a technology that allows us to provide better genetics to our customers. Of the sale bulls, 349 head, or 73%, are the result of embryo transfer. ET allows us to breed the best bulls of the Angus breed to daughters of the best bulls of the Angus breed to create

very predictable cattle.

The fall born bulls were fed for 85 days at Beefland Feedyard, and Triangle H Feedyard, Garden City, Ks. Their start weight was 852 pounds and out weight was 1,290 pounds. Their ADG was 5.15 lbs/day with an average dry matter feed conversion of 4.74 lbs. of feed per lb. of gain. The group's cost of gain was \$43.82/cwt. Since October 10, all of these bulls have been running in section or larger pastures. The bulls were brought in January 30, to be semen tested and clipped for the sale. These bulls are hard and ready to go to work.

In 1995, Dad stated that we would have a pen of bulls achieve a conversion on a dry matter basis of a pound of gain from less than 4 pounds of feed. We are .85 away from our goal on an ADG basis, and .74 away from our goal on a dry matter basis. We will reach and surpass these goals in the near future, albeit our dry matter goal will/has been more difficult to achieve since we are dealing with heavier in weights on our bulls. Our confidence that we will reach these goals is due to the fact we have already done it on a pen

(Continued on page 2)



LOT 1 • GAR SELECTIVE

Ultrasound				\$Values			
BW +.2	WW +57	%IMF +.57	Fat +.014	SW +31.92	SG +25.83		
YW +114	Milk +27	RE +.58		SF +53.34	SB +59.50		

Selective compiles one of the best genetic predictions in our history. Top 1% Calving ease potential combined with top 1% YW with off the charts indexes end product merit. Calving ease sires have the greatest potential for semen sales due to the fact that the commercial industry inseminates more heifers than cows. Selective has the potential to address this market better than any sire in our history. **Selective is leased to Select Sires.** Selling half interest and no possession. The buyer will be our partner with Select Sires.



LOT 2 • GAR PERSPECTIVE

Ultrasound				\$Values			
BW +2.2	WW +54	%IMF +.59	Fat -.002	SW +26.68	SG +29.87		
YW +106	Milk +23	RE +.79		SF +45.85	SB +61.32		

Perspective has one of the highest \$Beef values in the history of GAR. In fact Perspective is the 7th ranked \$B non-parent bull of the entire breed. No surprise as he is a double bred Precision back to 2536 on his maternal side. His potential is very interesting.



LOT 3 • GAR OBJECTIVE 6805

Ultrasound				\$Values			
BW +2.5	WW +48	%IMF +.65	Fat +.001	SW +24.20	SG +30.69		
YW +98	Milk +23	RE +.73		SF +39.73	SB +58.81		

Objective has crossed over as one of the great proven bulls of the breed. The Phil Abrahamson family is one of the great breeders in Angus history and Objective is one of their best sires yet. 6805 ranks in the top 30 among all Angus non-parent bulls for the \$Beef index.

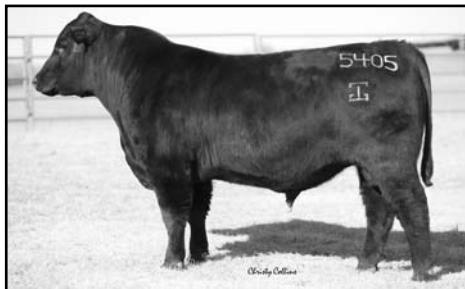
"Of the sale bulls, 349 head, or 73%, are the result of embryo transfer."



LOT 4 • GAR RETAIL PRODUCT S115

Ultrasound				\$Values			
BW +2.3	WW +55	%IMF +.43	Fat -.009	SW +27.95	SG +25.96		
YW +106	Milk +28	RE +.62		SF +45.43	SB +57.34		

S115 bull is stunning in his eye appeal combined with breed leading genetic merit.



LOT 5 • GAR RETAIL PRODUCT 5405

Ultrasound				\$Values			
BW I+2.5	WW I+47	%IMF +.61	Fat +0	SW +26.23	SG +30.33		
YW I+91	Milk I+26	RE +.64		SF +32.73	SB +56.65		

2536 is considered by many to be one of the good cows in Angus history. Her grandson helps show why.



LOT 7 • GAR PREDESTINED 6735

Ultrasound				\$Values			
BW +3.6	WW +50	%IMF +.51	Fat +.013	SW +24.84	SG +27.33		
YW +97	Milk +24	RE +.79		SF +37.84	SB +56.69		

Power, Presence, and Prepotency. This Predestined son will sire muscle pounds. One of the real studs of this sale.



LOT 476 • GAR 1407 NEW DESIGN 2413

Ultrasound				\$Values			
BW +1.1	WW +45	%IMF +.77	Fat +.012	SW +32.62	SG +31.39		
YW +90	Milk +33	RE +.66		SF +32.49	SB +56.17		

2413 is one of the significant females GAR has ever sold. She is the dam of the #1 \$Beef non-parent female of the Angus breed, in fact her daughter G A R Objective 2345 ranks \$1.96 above the #2 female who is a Predestined heifer out of 2536. It doesn't take a genius to know these genetics are "rare air". Genetics are predictable, just like dear old mom 810, and 614 before her, 2413 is a "pusher", she is not mean and is fine to handle and sort, but she will do all she possibly can to push through a "block" door.



LOT 477 • GAR PRECISION 183

Ultrasound				\$Values			
BW +2.5	WW +44	%IMF +.53	Fat -.007	SW +27.49	SG +30.60		
YW +87	Milk +30	RE +.83		SF +29.76	SB +55.33		

183 is the dam of G A R Objective 2445 who ranks as the 5th highest \$Beef Index female in the U.S. We believe that 183 is the best proven daughter of G A R New Design 1440 to date. 183 is truly an elite donor.



LOT 478 • GAR 1407 NEW DESIGN 1063

Ultrasound				\$Values			
BW +1.9	WW +52	%IMF +.68	Fat +.024	SW +33.29	SG +28.65		
YW +95	Milk +41	RE +.68		SF +34.90	SB +55.28		

To be blunt 1063 may be one of the best donors we have ever sold. She has it all, power, beauty, and elite genetics. This 819 daughter is the #36 ranked cow of the Angus breed for the \$Beef index.

"Each year since our first sale in 1980, we have sold 25% of our cowherd."

+50.33. These EPDs are a good example of how GAR's "pounds in the correct package" selection process is working. It is interesting to note that the AVERAGE BULL IN THIS SALE ranks in the top 20% of the Angus breed for direct calving ease, the bottom 40% (lighter BW) for birth weight while these same bulls simultaneously rank in the top 16% of the breed for weaning weight, and their yearling weight ranks them in the top 10% of the Angus

breed. Furthermore, this top percentile growth has been achieved in a package that is in the BOTTOM 37% of the Angus breed for yearling hip height. These bulls have exhibited an acceptable birth weight followed by explosive growth to the endpoint which was their off test weight, while ONLY having an average adjusted off test frame score of 5.9. We expect these



LOT 479 • GAR 1407 NEW DESIGN 803

Ultrasound		\$Values	
BW +.9	WW +46	%IMF +.43	Fat +.029
YW +92	Milk +34	RE +.79	SW +36.04 SG +24.04 SF +34.19 SB +49.78

803 is the dam of our lot 1 bull this year G A R Selective. His performance speaks for itself and is a shining example of 803's ability. She is a daughter of G A R Precision 1639, the # 16 cow of the Angus breed for RE.

bulls to sire similar efficient traits in their offspring. The great news of the Angus breed is that we are able to select for fast-growing cattle, while simultaneously selecting for superior carcass traits. This year's bulls have a %IMF EPD of +.44, a RE EPD of +.51. The average bull in this sale recorded a 14.32" REA. This places the sale bulls in the TOP 5% of the breed for %IMF and the top 12% of the breed



LOT 480 • GAR PRECISION 1193

Ultrasound		\$Values	
BW +2.9	WW +40	%IMF +.66	Fat -.013
YW +84	Milk +26	RE +.41	SW +16.09 SG +31.50 SF +28.28 SB +54.81

1193 is the dam of our lot 2 bull G A R Perspective. We believe that he has a chance to be one of the good bulls ever raised by GAR. Realizing the donor's calves were all in a contemporary group together, you can appreciate the level of competition. 1193 will add value and compete anywhere.

for RE. Finally, when you study where the bulls rank for the \$ indices it is interesting to note they rank in the top 15% for \$W, the top 8% of the breed for \$F, the top 7% for \$G, and top 2% for \$B. We believe these indexes help to illustrate how we have successfully bred cattle with acceptable stature, growth and end product in mind.

(Continued on page 4)

Free Delivery For The 28th Year

We offer free delivery to central locations in the lower 48 states for cattle purchased in the sale. We work with reputable livestock transportation companies. GAR will do everything possible to deliver your cattle to a point that is convenient for both you and the trucking company. If you would like to insure your cattle you can do so from Harding & Harding on sale day. Most of the cattle will be delivered within 45 days of the sale. If for any reason you desire an expedited delivery, please notify Garth Gardiner (620) 635-5632 to make arrangements.

A buyer may deduct \$100 from the purchase price if he provides for transportation from GAR within 2 weeks after the sale.

Since 1999, GAR customers using our USPB delivery rights have received over \$2,012,223 in premiums and dividends. If you retain ownership, that's valuable marketing information!

\$Beef comparison of top 1% of 2007 sale bulls show 26% Increase

—By Henry Gardiner

Welcome to our 28th Annual Production Sale. When we compare this year's sale bulls to sale bulls from previous sales it's hard to believe the rapid improvement that has been made. Angus breeders are very fortunate to have all the information provided by the American Angus Association. This would include John Crouch, Executive Vice President, the Angus Association Board of Directors, Bill Bowman, Director of Performance Programs, Sally Northcutt, Director of Genetic Research, Scott Johnson, Director of Angus Information Management Software as well as many other dedicated employees of the Association. The great thing about these people is that they never stop finding new ways to make the best better!

At GAR we started keeping data records on our cattle in 1960. In the first 17 years the average gain on bulls on feed test was only 2.7

pounds per day. It was taking an average of 7.48 pounds of feed to produce one pound of gain. They were eating a ration 4 which has a higher percent grain content than the ration 3 which they are on now when on feed test. The genetic improvement that we have been able to use has given us a daily gain on the average of about 5.75 pounds. Thus the bulls on test are gaining twice as fast. They are also putting on a pound of gain on about 4.43 pounds of feed on a dry matter basis or about 40% less feed.

We are using many tools that have been made available to us. All females are bred by AI or embryo transfer without the use of cleanup bulls. We use the Sire Evaluation Report from the Angus Association to identify the top bulls of the breed. Ultrasound is used on all of our yearling bulls and heifers to rank them on marbling, rib eye area and back fat.

There are 50 some donors picked using this data plus progeny information from their calves.

These donors then produce embryos for a year after which they are sold in our production sale and replaced by a new group of donors. About 75% of our registered calves are produced by embryo transfer. Our donors are the top 5% of our registered cows. We sell all of our registered cows by the time they are 5 years old and replace them with younger mainly embryo-transfer females.

As we started to put together this years catalog we quickly noticed that the top 1% of the \$Beef (\$B) bulls had a much higher percent total than the year before. It was also true of the top 2% and 3% bulls.

Below is an example:

2006 – Top 1% \$B Bulls

46 Head (9% of sale bulls)

2007 – Top 1% \$B Bulls

164 Head (35% of sale bulls)

The use of ultrasound is obviously doing a good job of identifying good donor prospects, however it has taken several years and several generations of turnover to get to where we are now. The \$B value includes the extra value or negative value of \$Feedlot (\$F) Performance as well as the extra value or negative value of

2006 – Top 2% \$B Bulls

39 Head (8% of sale bulls)

2007 – Top 2% \$B Bulls

94 Head (20% of sale bulls)

\$Grid (\$G) or carcass value. Adjustments are made to prevent double counting weights for feedlot and carcass segments.

This constant improvement of our Angus cattle by programs developed by the American Angus Association has made it possible for we breeders to produce better beef for

2006 – Top 3% \$B Bulls

36 Head (7% of sale bulls)

2007 – Top 3% \$B Bulls

69 Head (15% of sale bulls)

all of us to enjoy. With the tools that we now have for breed improvement in the Angus breed, it is now possible to have continuous improvement on our profitable traits.

I hope you can also make the best better!

THE FEMALES THAT SELL

Each year since our first production sale in 1980, we have sold 25% of our cowherd. Some producers call this a Mature Cowherd Dispersal. We prefer to call this our Production Sale. Our total AI program, without the use of clean-up bulls, is our assurance that you will be able to select daughters of the very best bulls in the Angus breed. We are proud of these females and believe they are some of the best cows in the entire Angus breed. If you are looking to build a superior herd of Angus females or enhance your current herd of Angus females, we invite you to consider these.

Embryo Transfer has allowed us to accelerate our genetics, increase the quality and quantity of our herd, while simultaneously allowing us to sell females at a more youthful, useful age to our customers. This year we will sell 50 cows that have worked as GAR donors. We believe there is unique value within this group. Every year the GAR donors have gone on to make money for their new owners. Seeing these cows succeed across the U.S. is one of our greatest satisfactions. Our 2007 female offering will include 96 cows with heifer calves. These cows and calves, as always, will sell as a three-in-one unit. The 96 pairs represent some of the best "values" in

this sale. These cows are all very young and their calves are sired by the best Angus bulls in the breed. Next we will sell 35 bred cows followed by 180 bred registered heifers. These heifers are selected by when they bred. We breed 10 days for GAR and any female that breeds after this time period is placed in the sale. These females represent a true opportunity to purchase some of GAR's very finest females. Every year females in these categories go on to be donors and high-value females in their new herds. The last registered heifers to sell are 79 elite, open, spring born, embryo-transfer heifers. These heifers truly offer some of the most genetic merit in the entire sale. We will finish the day with 125-bred commercial heifers. The commercial females will sell in groups of 7-10 head per group. All the heifers are descendants of Ralph Gardiner's commercial Angus herd he started in the early 1930s. Since 1964, they, too, have been bred total A.I. (no clean-up bulls), using the exact same sires as their 3/4 to 7/8 sisters in our registered herd. The only difference is that their ancestors were never registered. These heifers offer an opportunity to purchase some of the best purebred commercial Angus females in the business. We invite you to join us and take home cattle you can succeed in the beef business with.

GAR-influenced commercial females in demand at 5th annual cow sale

Pratt, KS—As in the past 4 years, progressive commercial beef producers traveled from eight states to purchase GAR-influenced Angus females at the 5th annual Profit Proven Sale. The all-female offering represented 11 diverse commercial operations located in Southwest Kansas and Eastern New Mexico. The bred females sold AI'd to some of the top sires in the Angus breed or bred natural service to GAR sires or sons of GAR sires. The entire offering was source- and age-verified through AngusSource® or Guaranteed Gardiner Genetics G3 program.

Sale Average & Totals

		Gross	Average
87	Fall pairs	\$155,675.00	\$1,789.00
189	Bred 2-3-yr.-old cows	254,585.00	1,347.00
214	Bred 4-6-yr.-old cows	249,630.00	1,167.00
182	Bred heifers	256,350.00	1,409.00
228	Open heifers	199,530.00	875.00
900	Individual lots	\$1,115,770.00	\$1,240.00

The 11 ranches represent diverse "gate to plate" beef operations sharing common goals of producing quality beef that fit today's value-added marketing systems. One of the first in the country to incorporate source and age verification tags, the Profit Proven Group continues to explore marketing opportunities that add value to GAR-influenced genetics up the food chain.

The sale offering was comprised from the following ranches: Giles Ranch Co., Bucklin, KS; Merrill Ranch, Wilmore, KS; Mule Creek Ranch, Wilmore, KS; Irsik Ranch, Ingalls, KS; XIT Ranch, Plains, KS; JO Cattle Co., Springer, NM; McCarty Land & Cattle, Ashland, KS; K-Ranch, Garden City, KS; HG Land & Cattle, Offerle, KS; Garden City, KS; Terry Eubank, Ashland, KS.

Take advantage of added value with a G³ tag

The Guaranteed Gardiner Genetics (G3) Tag Program has been established to add value to Gardiner-influenced commercial cattle. Through IMI Global, Inc., the program will also provide source and age verification using IMI's USVerified™ program. In addition, the G³ program will gather health and genetic information on enrolled cattle.

The Program Includes:

- Age verification (individual or group age)
- Source verification
- Cow herd make-up
- Breeding information (replacement females)
- Health/vaccination information
- Genetic information

Gardiner Angus Ranch will offer a \$2.00/head credit in the sale for all cattle enrolled by a producer in the G³ program.

For further information regarding eligibility, enrollment and fees, please contact Mark Gardiner (620) 635-2760, gar@ucom.net or Julie Tucker at Graphic Arts of Topeka, (785) 354-8596 X115, GGG@gathh.com.

Cashing in on Age Verified Premiums

—Reprinted with permission,
USPB Update, 2-12-07

U.S. Premium Beef's \$25 per head age verified (AV) premium for calves 20 months of age or younger is encouraging producers to record birth dates and verify their records when retaining ownership or selling calves to a cattle feeder. During fiscal year 2007, all USPB AV cattle have averaged \$46.38 per head in total premiums.

"We make sure our customers with age verified cattle understand that they have to keep their calving records for three years and that they are subject to an audit at any given time," explains Sam Hands, Triangle H Grain & Cattle Co., Garden City, KS. We're certified to market age verified calves and have found the program simple to administer."

There are two types of USDA programs for age verification: Feedlot programs which audit feedlot practices and can approve a feedlot as a supplier to manage AV cattle and deliver them to a processor; and Ranch programs which approve cattle and birth records from the ranch of origin and can be used for feeder cattle and calves before they leave the ranch of origin. Ranch programs are typically the only way cattle can be physically marketed through a traditional salebarn and remain eligible for age verification premiums.

Look Before You Leap—Crossbreeding Considerations

—By Brian Bertelsen, Director of Field Operations, U.S. Premium Beef (reprinted with permission)

Editors note: We have several customers who frequently ask for information and our advice regarding crossbreeding and the use of composites/hybrids. We believe cow-calf producers using high accuracy, predictable genetics, EPDs, ultrasound and \$Value indices in an AI or ET program can achieve all the benefits of heterosis with more consistency. However, many of our customers are using GAR genetics in some type of a crossbreeding system. It is important we continue to provide accurate information and the very best genetics we can produce, thus, enabling our customers to make the most profitable decisions based on their specific needs.

More and more over the last few years, industry experts have recommended a return to crossbreeding to regain heterosis and improve efficiency. This discussion is not meant to be for or against the concept of crossbreeding. U.S. Premium Beef provides its members value-based pricing with the freedom of utilizing different breeds and production systems to raise their cattle. Instead, this discussion is intended to give commercial cow-calf producers some things to consider if they are thinking about changing their breeding program.

The benefits of crossbreeding have been discussed for many years. However, traditional crossbreeding programs are complicated. They can involve multiple herds within a ranch. Often the calves produced with significantly different breed combinations make it difficult to sell uniform groups of feeder cattle in load lots or to retain ownership through the feedlot and have cattle that will finish together in the same pen.

As a result, producers decided to experiment with bulls of different breeds and join the "bull-of-the-year" club without following any program. This resulted in a lot of breed combinations and hide colors within the same herd. Since, then, many commercial producers have returned to straightbred herds by sim-

ply using bulls of one breed.

Heterosis is measured as the performance advantage of crossbreds over the average of their straightbred parents. This is referred to as "hybrid vigor". It affects many traits, but is known for improving traits not highly heritable, such as reproduction, early growth (survivability) and lifetime cow productivity. Traits that are highly heritable, such as carcass traits, show less improvement from heterosis. The table below lists average heterosis for beef cattle traits according to Dr. Jim Gosey, University of Nebraska. Also, the more different the genetics are between parents, the more heterosis in the offspring. For example, mating British breeds to Continental breeds produces more heterosis than mating Red Angus to Black Angus.

You've probably seen advertisements that talk about a free lunch and use a slogan like " $2 + 2 = 5$ ". This slogan is not realistic. First of all, genetics are not additive. Since both parents transmit 50% of their genetics, breeding values of the parents are averaged to make an estimate for the progeny.

A better slogan might be " $2 + 4 = 3.75$ ". Since heterosis is the difference between the AVERAGE of the parents (the average of $2 + 4 = 3$) and the actual performance of the offspring (3.75) then (in this example) the heterosis value of 25% (3.75 is 25% greater than 3). Remember these 25% values refer to lifetime cow productivity.

The other point to make about this is that carcass traits are much lower in heterosis. So, if a herd currently produces straightbred Angus calves that are 80% Choice and the producer decides to crossbreed those cows with a different breed that grades only 50% Choice, the new average of the parents is 65%. If heterosis improves by 3% (see table), then we could expect the crossbred calves to be about 67% Choice. If we assume the average carcass weight remains the same at 800 pounds and we use the average Choice>Select spread from last year of \$14.07, the carcasses would be worth \$14.63 per head less. If the percent Prime and Certified Angus Beef® (CAB) is decreased, the loss number increases.

This leads to complementarity. An example would be mating a high marbling parent to a heavy muscled parent to try to obtain a better overall combination across many traits in the crossbred progeny then either straightbred parent.

British cattle tend to excel in marbling, but on average across and entire breed, tend to have higher Yield Grades (YG). Continental breeds tend to be the opposite across an entire breed. Some producers are concerned with increased levels of YG4 and 5 carcasses within their herd. Keep in mind, however, that USPB grids calculate YG discounts relative to plant averages which have also increased over the years and Quality Grade (QG) premiums are typically the main driver of overall premi-

Average Heterosis in Beef Cattle Traits

Trait	Heterosis
Calf Crop Weaned	8%
Weaning Weight	13%
Yearling Weight	4%
Carcass Traits	3%
Lifetime Productivity	25%

(Continued on page 6)

Repeat Buyer Discount

Buyers who purchased cattle in our 2006 sale will receive **5% off their total purchases**. This policy is ongoing, and will be in effect every year. If you purchased GAR cattle in a sale previous to last year, but not in our 2006 sale, you are not eligible for the discount. However, if you purchased cattle in our 2006 sale, you will receive a 5% discount, should you decide to purchase cattle in our 2007 sale. This 5% discount is determined after all credits have been subtracted from the gross purchase price.

GARDINER BREEDING GUARANTEE

We guarantee all breeding cattle sold by Gardiner Angus Ranch, bulls and females, are fertile to the best of our knowledge. If a bull is injured at any time in the 12 months following the sale as so to make them functionally infertile, we will provide you with a satisfactory replacement (if available), or issue you a credit equal to the bull's purchase price minus the salvage value received for that bull. If a female is determined to be a non-breeder, then we would ask you to sell her and offer you the difference of her purchase price minus the salvage value as a credit in any future GAR sale.

All credit is good until it is used and does not expire. We simply ask you to contact us before you cull your infertile animal.

This is not a life insurance policy, however. We will not replace a dead animal if it is killed or dies for any reason. We suggest that normal care be exercised toward these animals and, particularly, yearling bulls not be allowed to get too thin.

This guarantee is in addition to the Suggested Sale Terms and Conditions of the American Angus Association, which also apply.

(Crossbreeding—Continued from page 5)

ums, especially on the Base grid.

Last year, the average YG discount was \$5.95 per head on the Base grid. Assuming no change in carcass weight, if you changed genetics to decrease the YG discount to zero, any decrease in QG would have to be less than 5.3% for Choice or better, assuming a \$14.07 Choice/Select spread (last year's average). If you eliminated YG discounts but decreased the percent Choice by more than 5.3%, you did not gain any gross income. This example does not factor in other quality grade premiums such as Prime or CAB.

Data from the U.S. Meat Animal Research Center (MARC) shows breed differences are now much smaller for yearling weight. Dr. Gosey reported an average heterosis value of 4% for yearling weight (see table). So, crossbreeding may not necessarily increase carcass weight significantly.

There are still strong breed differences in carcass traits, especially between British and Continental breed types and also bos indicus (Brahman) type cattle. Since heterosis is small for carcass traits, the improvement would be small.

One area that could potentially be improved quickly is muscling. This can also be done within a straightbred program, but the results may be slower. It could also mean spending significantly more money for purebred bulls that are predicted to excel in many different traits. However, don't forget that adding cutability from any breed could potentially have a negative effect on marbling. Yet, adding some muscling (ribeye area) will not only decrease YG, but can also add carcass weight and improve dressing percentage. The primary area where heterosis can make a real economic impact is in lowly heritable traits such as reproduction and cow longevity.

Research has shown crossbred females with maternal heterosis have earlier puberty, higher conception rates, rebreed more quickly, and stay in production longer, resulting in up to 25% greater lifetime producer as measured by pounds of calf weaned per cow exposed. These females also pass some heterosis on to their calves. This is individual heterosis, or the benefit of an individual calf being crossbred compared to purebred animals.

Reproduction is the foundation to building a profitable commercial cow calf operation and its merits cannot be overlooked. You need to assess your cowherd's reproductive performance and determine how crossbreeding will impact before making a decision to crossbreed. And finally, take a hard look at your current cow size, both frame score and body weight, with body condition scores taken into account. If crossbreeding will involve larger frame breeds, and heifers will be retained, then cow size may be affected.

Hybrids or composites can make crossbreeding much simpler. Hybrids are generally the F1 offspring from two purebred parents of different breeds. Composites are generally produced from parents that are crossbred. Purchasing hybrid or composite bulls with a consistent British/Continental breed makeup from a reputable genetic supplier will convert a commercial herd to a consistent, stable blend of British and Continental breeding over time just like purebred Angus bulls have done for "mongrelized" bull-of-the-year herds.

With composites, heterosis will not be maximized to the levels shown in the table, but if the seedstock supplier introduces new blood into the composite often, it can be maintained. If not, heterosis will begin to decrease over time.

One of the biggest concerns with purchasing composites is moving away from purebred

EPDs. Purebred EPDs are the best predictor of overall genetic merit we currently have and the large breed association databases have made the data valuable. Some breed associations are calculating EPDs for crossbred animals, but they tend to be from databases that are much smaller. In the future, with increased use and further development of DNA genetic markers, this may be less of a concern than it is today.

One of the most reliable ways to get consistent, predictable genetic progress is to use highly proven, predictable bulls with EPDs that have high accuracy values in an artificial insemination (AI) program. Today, there are not many crossbred bulls in that category.

Above all, remember that pounds and premiums are factors in the equation, but profit is the ultimate answer. Following a program will provide for more predictability compared to randomly experimenting with different purebreds. When breeding cattle, you still have a certain amount of antagonistic relationships between traits such as quality and yield grade. You still are blending genes. Crossbreeding is most valuable for traits that are hard to select for such as reproduction. It's less valuable for carcass traits that are more highly relevant to a USPB member who retains ownership all the way to harvest.



Don't just buy a breed.
Buy a brand.



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