GARDINER ANGUS RANCH

The GAR REPORT

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

Editor's note:

This issue will conclude "Reproduction, growth, carcass traits — can we have it all?"

In addition, you will find helpful information about freeze branding, which is the branding process used here at Gardiner Angus Ranch.

Also, a brief look at our 22nd Annual Production Sale offering.

GARDINER ANGUS RANCH 22ND ANNUAL PRODUCTION SALE SATURDAY, APRIL 7, 2001 AT THE RANCH

SELLING 825 HEAD INCLUDING:

325 BULLS

70 B/R New Design 036 sons
55 GAR precision 1680 sons
35 GAR Commitment sons
35 Plowman sons
20 Emulation 6148 sons

500 FEMALES

20 Registered donor cows
55 Reg. two year old cows with heifer calves (3N1's)
22 Spring calving pairs
175 Registered bred heifers
65 Spring ET heifers
85 Commercial bred heifers

5 QUARTER HORSE COLTS

A FEW OF THE SALE FEATURES:

- 6 Full sisters and 8 full brothers to GAR Pinnacle, GAR Paramount, RAB-GAR Summit and full sibs in blood to Kahn's 706 donor
- A Precision son out of GAR Expectation's (at Select Sires) full sister, 755, now a donor in the Don Meador herd in Texas
- Selling GAR EXT 2104, the grandam of Select Sire's Gridmaker and dam of GAR Precision 2536, now a donor in the Wehrmann program
- Selling GAR Evas EXT 1525, a full sister to GAR Evas Prescription out of GAR Bando 338, now a donor in the KMK program
- Selling GAR EXT 1204, a powerful donor out of the great 309 cow

Since 1885

The Brand of Quality in Quantity

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

GARDINER ANGUS RANCH

Rt. 1, Box 290
Ashland, KS 67831

Henry (620) 635-2932
Fax (620) 635-2930
Greg (620) 635-2752
Mark (620) 635-2760
Garth (620) 635-2361

email: gar@ucom.net
www.gardinerangus.com

Reproduction, growth, carcass traits — can we have it all?

Mark Gardiner
Gardiner Angus Ranch, Ashland, KS

PART III (Conclusion)

The genetic trend for carcass traits is going to "blast off" because the breed's commitment to ultrasound measurement of carcass traits. The Angus breed is now measuring nearly 100,000 head each year via ultrasound. Is ultrasound data accurate? Yes! It is more accurate than carcass data. Everybody assumes that kill data is perfect, when the reality is that gathering kill data is very subjective, it suffers from the variability among USDA graders to the speed at which this data must be gathered. I support the use of ultrasound and publishing of that data in the American Angus Association ultrasound report. As your Angus colleague I encourage you to embrace this system, and measure your cattle in order to contribute to the database. I predict that we will see more improvement in the Angus breed for carcass traits in the next 5 years than we have seen in the previous 30. As your competitor, I would say if you don't believe in it, that just gives me more opportunity to breed the best cattle.

If a breeder selects for carcass traits will he sacrifice the reproductive or growth performance of his herd? According to Dr. Twig Marston, Kansas State University, there is little or no evidence in the scientific literature that selection for carcass traits will impair reproduction or growth traits of a cowherd. Dr. Marston's review indicated that there is neither a positive nor a negative correlation between marbling and pregnancy rates. The American Angus Association's database shows a minimal correlation between marbling and percent retail product. So breeders may simultaneously select for both quality and red meat yield. Moreover, since the genetic correlation between fat thickness and marbling is near zero, Angus breeders can select for marbling while not sacrificing the easy fleshing cowherd, according to Dr. Marston.

Reproduction

Don't forget, reproduction is still the number one performance trait. Remember that fertility is a lowly heritable trait. According to Dr. Richard Saacke of Virginia Tech, semen evaluations can only account for 50% of the variation of fertility between bulls. On the female side, the environmental differences between neighbors may have more affect on cowherd fertility than differences in their genetics. I would love to place selection pressure on fertility that would allow me to effectively select bulls or cows with higher fertility, but I also think we should realize that we are dealing with very low heritabilities on fertility traits. Heterosis will have more of an effect on reproductive traits than genetic selection during two of my lifetimes. Therefore, I believe it is important to place a heavy emphasis on fertility as a threshold trait. In other words, make cows conceive during a time restricted breeding season. It is important that cows work for you and not vice versa. Cows that do not work under their job description, need to find a job elsewhere.

We have been able to make genetic progress and maintain a cow herd that is reproductively efficient. Since 1964, Gardiner Angus Ranch has had a total AI program with no clean-up bulls. Since the inception of this program the heifers were given 30 days to conceive, or they exited the herd. The cows have always been bred on a 60-day breeding season. Since 1964, our pregnancy rate (pregnancy rate = total cows that conceived divided by total cows serviced) has been 95% or greater. The bottom line is: we didn't have to compromise reproduction to achieve genetic improvement.

Conclusion

I have heard it said that EPDs are just a fad and they will not last long. Well this fad is well into its 21st year. Data based selection will become more and more a part of the beef cattle industry. As value-based marketing becomes more of a reality, it will be impossible to survive in the beef cattle business without a reliable database that allows cattle breeders to react to economic signals.

We believe in EPDs. Our goal has always been to produce a live calf that will grow as rapidly as possible to market weight and then quit growing. We believe that you cannot have too much growth as long as that growth is in the "right package". We use eighteen EPD traits to select our sires. We put a lot of selection pressure against birth weight; most of the bulls we use are in the 2.0-pound range or less for birth weight EPD. We also put a lot of selection pressure against mature size, so we select sires that are below breed average for the yearling hip height EPD, and below breed average for the mature daughter weight and height EPDs. After applying the previous selection criteria, we select bulls with as much yearling weight as possible. Then we select bulls with adequate milk EPD. In general we keep our milk in the 15-20 range, but we do select some bulls with less milk for our customers who get less rainfall. Next, we look at the carcass EPDs. We want the sires to be positive for marbling, ribeye area, and percent retail product. We want the sires to be negative for the fat EPD. Finally, we use the scrotal EPD to make our sire selection. We would prefer to select bulls that are positive, but we do use some bulls that are negative for scrotal EPD. We only select sires that fit the above criteria and are high accuracy bulls (>.80) for these EPD traits (progeny proven). This is not a complicated system, but it does require discipline. We believe it is very effective, based upon what it has accomplished for us.

I'm a living example of the economic reality of EPDs. Gardiner Angus Ranch would have gone bankrupt weaning 525 pound 10-

month-old steer calves. There would have been no ranch for us to come home to if my Dad had not chosen to use EPDs. I would like to thank Roy Wallace and John Crouch for all their help over the years and for helping implement data based selection. I would particularly like to thank Henry C. Gardiner for his tenacity to never give up, and the foresight to recognize the economic reality of EPDs, and especially for implementing the Gardiner Angus Ranch breeding program. My Dad and I have many "discussions" about our sire selection, but I usually end up reminding him "I'm only implementing the program you taught me."

Reproduction, Growth, and Carcass traits, can we have it all?

Yes!

U.S. Premium Beef Announces Grid Improvements

(Reprinted with permission from USPB News, January, 2001)

From its inception, U.S. Premium Beef's mission has been to respond to consumer desires by delivering higher quality cattle. U.S Premium Beef's quality-based grid has been the primary vehicle used to communicate consumer preferences to members. In October, USPB again made improvements in its grid to send a clearer message about what products consumers are demanding.

Specifically, USPB increased its Prime carcass premium from $9 per cwt. to $14 per cwt. The threshold remains at zero. In other words, every qualifying carcass earns the premium. USPB also added a $3 per cwt. Farmland Black Angus Beef (FAB) premium for every carcass that qualifies for the FAB brand. This is on top of the Choice premium. To qualify for FAB the animal must have at least 51% solid black hair coat, a minimum of small 50 marbling (the middle of lower one-third Choice or better), "A" maturity and YG 3.9 or lower.

In every grid change, USPB considers the type of carcass traits that would increase company profits while providing sufficient economic incentive for members to respond.

In total, USPB has paid out more than $22.8 million in premiums above the cash market on more than 1.76 million cattle marketed through USPB.

GARDINER
ANGUS RANCH
Rt. 1, Box 290
Ashland, KS 67831

RETURN SERVICE REQUESTED

Since 1885
The Brand of Quality in Quantity

Freeze Branding

Information gathered with the help of: L&H Manufacturing Co.http://www.lhbrandingirons.com/

A workable system of identification is basic to an accurate beef cattle records program. In addition to tattooing calves at birth, GAR has always has branded cattle. Hot iron branding was replaced with freeze branding at GAR in 1993. Each year we get many inquiries about the method we use for freeze branding. This is a brief description.

Freeze branding is a technique in which a super-cold branding iron, properly applied to the animals hide, kills the color pigment producing cells. The result is that white or colorless hair instead of colored hair, grows at the brand site. Freeze branding is effective on cattle, horses and dogs. One advantage of freeze branding is that it produces a permanent, readable brand at any time of the year.

Super-cooling of the branding irons can be done in liquid nitrogen (-240 F) or dry ice and alcohol (-160 F). We use dry ice and alcohol because it gives us more consistent results. Methyl, ethyl, or isopropyl alcohol can be used. We purchase Denatured alcohol from a local hardware and dry ice from a large chain grocery store. It is very important that any alcohol used be 99% in strength or it will begin to freeze at the extremely low temperature needed. After extensive use, alcohol will loose strength and should be changed because of its tendency to absorb moisture.

Branding Procedure

We use enough alcohol and dry ice in a plastic cooler to adequately cover the heads of the irons. The surface of the coolant will appear to boil when the irons are first placed in the coolant, when this boiling subsides the irons are ready to use.

Once the animal is restrained in a hydraulic squeeze chute we clean the dirt and manure from the brand site. If you clip the brand site as square as possible, particularly at the bottom, it aids in square placement of the brand. We clip the hair with surgical blades to remove as much hair as possible. It's important to squirt room temperature alcohol over the brand site right before applying the iron. This removes some skin oils and helps transfer cold from the iron to the skin.

Immediately after removing the iron from the dry ice and alcohol, place it firmly and squarely on the brand site. Apply 35 to 45 pounds of steady pressure, with a slight rocking motion. As the iron is pressed to the skin the stopwatch should be started. We apply the iron the yearling bulls and heifers for 55 seconds. When the appropriate time has elapsed on the stopwatch, the iron should be immediately removed from contact with the skin.

Branding times vary according to the type of metal in the irons and the age (skin thickness) and color of the animal. All times shown here are for brass freeze branding irons.

Animal	Coolant	Application Time
Calf	Liquid Nitrogen	21-24 sec
	Dry Ice & Alcohol	40-50 sec
Cow	Liquid Nitrogen	25-30 sec
	Dry Ice & Alcohol	50-60 sec

After branding, it is important to immediately place the iron back in the container of dry ice and alcohol. It should be re-cooled completely before it is used again.

Immediately after freeze branding you will see a frozen indentation in the animal's skin. Within five minutes the indentation will disappear and swelling will begin. The brand will be readable but the swelling will cause the mark to have two or three times the thickness that the actual finished brand will have. The brand will be swollen for 48 to 72 hours. After the swelling dissipates the brand may not be seen easily. After 20 to 30 days the brand area will begin to get flaky and scaly. By the third or fourth week the scab will start to turn loose. Once the scab is gone, white, peach fuzz type hair should appear in 30 days. Full hair growth will depend upon the time of year the brand is applied, but is usually in place within 3 months.

Precautions

Dry ice and the cold liquid can cause injury to humans, and precautions should be taken so these do not come in contact with your skin. Alcohol is flammable and should be used in open air or a well-ventilated building. Avoid smoking and keep this material away from open flames or electric cattle prods. Vapor from this liquid is also dangerous to the tissues of your eyes and nose.

We invite you to submit questions or industry related topics to be discussed in upcoming issues to Gardiner Angus Ranch.