



# Tenderness DNA Testing

## Embracing Technology for Better Beef



As we started Roseda Black Angus Beef, tenderness was of utmost importance. We determined early on that virtually 100% of our beef was considered tender by our customers. However, there was a detectable difference between our most tender and least tender indicating that there was still room for improvement.

Using a Warner-Bratzler machine to measure the force required to shear a sample of meat is the most accurate and objective method to measure tenderness but it is expensive. We opted to wait on the DNA tests that were being developed and they are finally starting to materialize. There are currently two genetic tests available that evaluate 3 markers that affect tenderness. They are GeneStar and TenderGene. The table below summarizes their effect on Warner-Bratzler Shear Force (WBSF). Remember...less force...more tender.

Marker	Genotypes	Warner-Bratzler Shear Force (lbs)
GeneStar	**	-.40 (more tender)
	*	0
	0	+.40 (less tender)
TenderGene SNP 316	CC	-1.11 (more tender)
	CG	-.39
	GG	0 (less tender)
TenderGene SNP530	GG	0 (more tender)
	GA	+.03
	AA	+.68 (less tender)

The effects of these genes appear to be additive so assuming a pure additive effect, the best combination of \*\*-CC-GG (-1.51 lb.) is 2.59 lb. more tender than the worst combination of 0-GG-AA (+1.08). To keep this in perspective, a typical WBSF measurement is 8 to 10 lb. As you can see, these genes have a significant effect on tenderness.

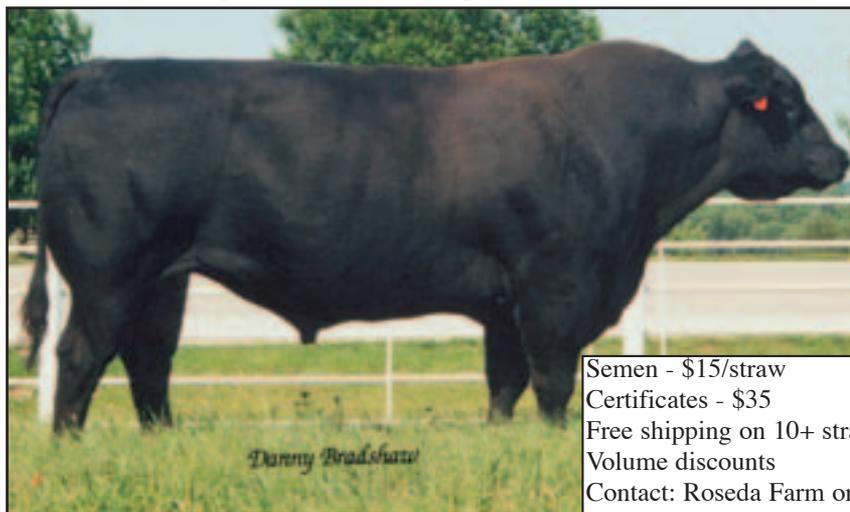
So how can you use this information? A reasonable goal would be to maintain or increase the frequency of the more tender genes in your herd. The first place to start is sire selection. Select A.I. sires and natural service sires that have acceptable genotypes.

Prairiedge Marbull Design931 would be a good choice. His, a genotype of \*\*-CG-GG (-.79), is among the more tender genotypes. He is the **top bull on our economic selection index and he is in the top 1% for the \$Beef index.** (See our Feb ad.)

At Roseda Farm, we have embraced this technology and are willing to help you move forward in the understanding and application of DNA testing. So whether it's answering a few questions about this ad or helping you select your next A.I. or herd sire, give us a call. I look forward to hearing from you.

Visitors Welcome

### Prairiedge Marbull Design931 13383630



Semen - \$15/straw  
 Certificates - \$35  
 Free shipping on 10+ straws.  
 Volume discounts  
 Contact: Roseda Farm or  
 Angus Semen Service

**Ranks No. 4 in the breed for Marbling EPD**  
**68% of the carcasses sired by Marbull Design graded Prime**  
**87% graded Prime and CAB®**  
**93% graded Choice or better**  
**All Yield Grade 3 or better**  
**Steers averaged \$80 more per carcass than contemporaries**  
**Seven commercial daughters had an average weaning ratio of 104 on first calf**  
**Profitable combination of growth, maternal, marbling and retail product**  
**\*\* for the GeneStar Tenderness marker (Homozygous Tender)**  
**CG GG for Tender Gene SNP316 & SNP530 (CC GG is ideal)**

Finks Marbull 68  
 Finks 5522-6148  
 Finks Pride 445 04 71  
 Eldorene of Prairiedge 12  
 Eldorene of Prairiedge 9  
 Emulation N Bar 5522  
 Finks Proud Formera 614  
 G D A R Traveler 71  
 Finks 04 of 85 5522  
 VDAR New Trend 315  
 B/R New Design 036  
 B/R Blackcap Empress 77  
 G D A R Executive 727  
 Eldorene of Prairiedge 6

	Birth	Wean	Milk	Yearling	Marb	REA	FAT	%RP
EPD	3.4	.54	.24	.89	+.85	+.04	-.031	+.43
acc	.80	.73	.56	.68	.78	.74	.72	.72

**\$Feedlot: +26.28 (Top 5%) \$Grid: +30.88 (Top 1%) \$Beef: +47.59 (Top 1%)**



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