

Breed It Into Them

The industry still tries to feed extra quality grade into cattle with unknown or limited ability to grade, but ranchers and feeders are working together to ensure quality from the start.

Story & photos by
STEVE SUTHER

In the formative years of commercial cattle feeding, marbling was almost automatic in the English-based yearlings that predominated. With the influx of Continental genetics, it was harder to make respectable quality grades, even after the target was lowered in 1976. Large-framed calves began skipping the yearling phase, and a lot of these calf feds had neither the genetics nor the management to marble.

Crossbreds were an unpredictable compromise that might grade if you fed them longer.

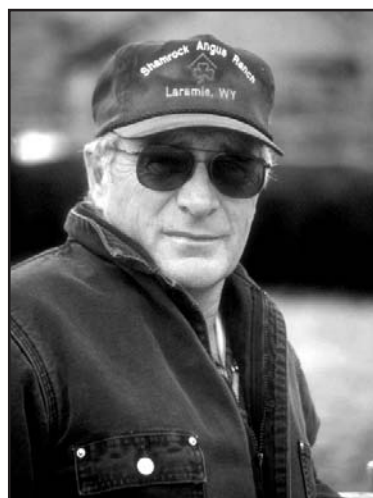
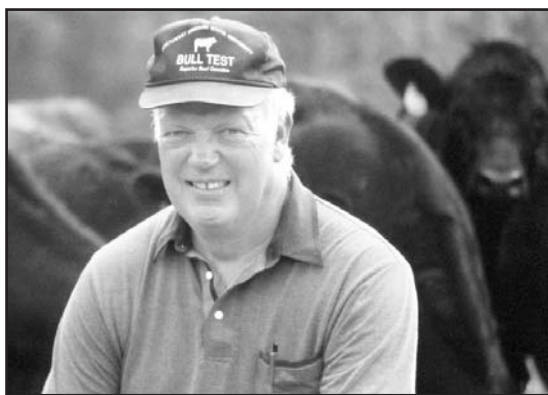
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The industry still tries to feed extra quality grade into cattle with unknown or limited ability to grade. However, a growing number of ranchers and feeders are working together on a better plan. Coordination allows producers to include carcass value in their herds' genetics and nurture that potential like a candle in the wind of unpredictable challenges until payday in the packinghouse.

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“There is no doubt that both genetics and management have a large role to play in determining marbling,” says Texas A&M geneticist Andy Herring. “Some cattle have the ability to grade Prime, given the opportunity, while others do not have that ability given the same circumstances.”

Herring isn’t talking about special circumstances, either — just grain-feeding to 0.4 or 0.5 inches (in.) of external fat. “In research cattle we have evaluated over the past 10 years, we have seen cattle with 0.2 inches of fat grade Choice, and some with 0.8 inches of fat grade Select.”

Time and money

“The disconnect between cow-calf producers and the end product has been the biggest challenge to making genetic change industry-wide,” Herring says. “However, we have been doing better.”

That’s a function of time and money. The market stepped up to a more sustained level of demand for higher-quality beef in 1999. That’s when the premium for Choice over

Select jumped up and remained at more than \$8 per hundredweight (cwt.) for three years. After a \$2 dip in 2002, the spread was record-wide last year, jumping to more than \$35 per cwt., and trended higher than last year for the first half of 2004. Premiums paid for *Certified Angus Beef*® (CAB®) brand acceptance skyrocketed to \$50 million during those years as well.

“The generation interval in cattle is about five years, the time it takes to replace

a generation of parents,” Herring says. “Genetic change observed is due to both the generation interval and the intensity of selection

pressure — which is how much above the contemporary average are the individuals chosen to be parents.”

Herring sees evidence that several breeders have stepped up selection intensity for marbling in

the past five years, “but it will take a while, at least five years, to show up.” In the Texas Ranch-to-Rail project, percent Choice was historically around 38%, but in 2000 and 2001 it was 51% to 53%. Summaries for years since then are not available.

Cattle must have the genetic ability to marble if they are to hit the CAB target at 0.5 in. of fat, Herring says. “There are many cattle that will hit this marbling level if fed long enough or if they get fat enough, but we must work within our management environment. It is harder to mess up cattle that have a higher genetic ability to marble, just like it is harder to mess up cooking a steak that has more marbling.”

Genetic payoff

Former Angus executive C.K. Allen agrees. The Savannah, Mo., seedstock producer and 2002 CAB Commitment to Excellence Award winner says, “We have worked very hard to get the right kind of cattle, the kind that don’t need special things like creep feed or ‘high carb’ diets to make CAB as calf feds. The thing we have selected for more than anything is carcass marbling score, but we also plug in high ribeye and low fat.”

Commercial calves from that program fed at Gregory Feedlots Inc., Tabor, Iowa, topped the steer division of the 2003 National Angus Carcass Challenge (NACC). Allen knows the importance of management — and the risks of sickness and bad weather.

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Table 1: CAB-acceptance rate examples from Angus Journal articles,* 1999-2004

Producer	Location	CAB/Prime	Example	Year sold
Jimmy Thomas	Homedale, Idaho	74%	50 steers	1999
Namminga Farms	Springfield, S.D.	85%	173 str/hfrs	2000
Willow Creek Farm	Glen Ullin, N.D.	85%	41 steers	2000
Means Ranch	Valentine, Texas	68%	57 heifers	2000
Roseda Farm	Monkton, Md.	65%	52 steers	2000
A.C. Freeman	Holdenville, Okla.	62%	68 heifers	2000
Aaron Jacobson	Crosby, N.D.	70%	40 steers	2001
David Ranch	Lenora, Kan.	65%	112 steers	2001
Nolan Farm	Scott City, Kan.	57%	43 str/hfrs	2001
Monte Moore	Oberlin, Kan.	55%	50 steers	2001
Borrell Ranch	Alamota, Kan.	79%	508 steers	2000-02
Wickstrum Farms Inc.	Westmoreland, Kan.	92%	160 steers	2002
Greeley Creek Ranch	Livingston, Mont.	75%	80 steers	2002
Maassen Bros.	Hershey, Neb.	75%	82 steers	2002
Brooks Chalky Butte	Bowman, N.D.	66%	82 steers	2002
Mike Kasten	Millersville, Mo.	61%	82 steers	2002
GG Genetics	Ida Grove, Iowa	59%	42 steers	2003
C.K. Allen & Gregory Feedlots Inc.	Tabor, Iowa	53%	40 steers	2003

*Cited when CAB-acceptance rate exceeded 50%, Aim High, Best of the Breed and NACC articles.

how you manage them,” he says. “I don’t believe that, but this stuff is heritable.”

The simplest way to take advantage of heritability in carcass traits is to stick with Angus, says 2003 CAB Commitment to Excellence winner Gary Parker of Shamrock Angus Ranch, Laramie, Wyo. Many bull customers crossbreed with disappointing carcass results, he says, “but they keep trying, picking up a little heterosis advantage on the front end.”

Parker’s calf-fed Angus steers at Hergert Feeding Co., Mitchell, Neb., were gaining 3.6 pounds (lb.) per day in May, with a 42¢ cost of gain, “and we know they will grade.” Lately, Parker says his Continental-based customers have been selecting low birth weight, high growth and “way up” on marbling. “They go for the extremes to get the complementarity they want,” he notes, “while Angus producers go for balance.”

Allen has been on the other end, seeking those extremes for marbling among the Continentals. He maintains a composite program in addition to registered Angus, and has found these highly selected crossbred cattle can grade.

There are documented heterosis effects on calf health, Allen says, “but it’s hard to compare here, and we have seen no difference within our herd. We do know crossbred cattle can have health problems the same as straightbreds, and if they do, they are not going to do well.”

If crossbreds have an advantage, there’s an anomaly in health data from the 2002 Iowa Tri-County Steer Carcass Futurity, where purebred- to 75%-Angus calves were four times less likely to need treatment than crossbred calves with less than 25% Angus (see Table 2).

David Trowbridge, who fed many of them at Gregory Feedlots, theorizes the purebred herds are managed better. “Maybe those with crossbred calves are expecting too much out of heterosis,” he offers.

According to Allen and Parker, genetic quality of Angus composites and crossbred cattle is improving along with the more obvious improvement in Angus genetics in the past five years. “Maternal traits still lead the Angus breed,” Parker says. “But without a doubt, ultrasound has helped identify more carcass cattle with the right kind of growth, and they are being widely used, as they probably should be.”

Both men see signs pointing toward an increase long-term in the CAB-acceptance rate. “I think we are at a point where CAB acceptance will begin to change drastically. In the next four or five years, we could see it double,” Parker says.

“We’re due a breakthrough, just from the economic incentive if nothing else,” Allen says. “We have cattle within the Angus breed that will do it, with much better yield grade than we have ever had before. The problem is, most people just keep their cows without trying to make changes, not buying the better bulls, not realizing the incentive.”

Table 2: CAB®-acceptance rate and treatment rates by breed makeup

% Angus	CAB® acceptance	No. times treated	Treatment cost, \$	Mortality, %	Feedlot gain
0%-25%	9.4%	0.47	\$8.36	1.36%	2.88
26%-50%	21.3%	0.33	\$6.38	0.78%	2.97
51%-75%	27.8%	0.28	\$5.08	0.94%	2.92
76%-100%	40.0%	0.20	\$4.06	1.12%	3.11

Source: Iowa State University.