

# SUPPLYING THE brand

SPECIAL REPORT



This special section contains a segment-by-segment discussion of factors that affect beef quality and tips for how to breed and manage cattle to enable them to reach their quality grade potential.

## Contents

- 204** Red-Hot Demand
- 205** The Market Signals
- 206** Angus-Sired Feeder Calves Command Premiums
- 207** Keep 'em Healthy
- 208** Cattle Should Do It All
- 209** Strategic Implants Only, Please!
- 210** You Are What You Eat
- 212** Missing the Mark
- 213** Setting the Standard
- 214** Convenience Pays
- 215** Building a Brand
- 216** How It All works
- 218** Your Information Source
- 220** By the Numbers

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Free copies of the original report are available by contacting 330-345-2333 or [mconley@certifiedangusbeef.com](mailto:mconley@certifiedangusbeef.com)

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# Red-Hot Demand

The future belongs to producers who adapt their herds to meet consumer demand. Your *Certified Angus Beef*<sup>®</sup> (CAB<sup>®</sup>) brand is leading the way to those consumers — and fast becoming a “destination product.” Consumers go to certain restaurants or retail stores because that’s where they can buy the CAB brand.

The same thing is going on in the country. Buyers from the next segment in the production chain look for ranches and feedlots where they know the cattle have a history of excellence, where promises have been kept and premiums received for the money invested.

Angus has become the destination breed in the U.S. cattle industry, and Certified Angus Beef LLC (CAB) assists in bringing out the best that Angus cattle have to offer.

In 1978, when the CAB program began, annual Angus

registrations were on a downward trend that did not turn until 1987. Angus seemed less relevant to an industry enamored with the latest Continental breeds. Market data showed significant discounts for straightbred commercial Angus cattle in those days.

We worked together to turn those trends around in dramatic fashion. By 1988, when

the first fed-cattle premiums were paid for CAB-accepted cattle, straightbred Angus feeder calves had recovered to par value with other breeds. By 1998, they were typically worth \$12 to \$15 more per head than non-Angus cattle, and 2006 market research shows the premiums have doubled to about \$30 per head.

Packers have paid more than \$200 million in grid premiums since 1998 for finished cattle with carcasses that qualify for the brand. That has meant as much as \$80 per head, and

typically at least \$40 per head, for individual cattle premiums.

A Cattle-Fax model in 2000 associated CAB brand sales with the increased value of Angus bulls — every million pounds sold added \$1 to each Angus bull. Since then, the brand has sold more than half a billion pounds each year, which should mean about \$500 of every bull’s value. With nearly 40,000 registered Angus bulls sold last year, that adds up to a

sizeable contribution.

No matter how you figure it, CAB has helped Angus producers capitalize on the hottest demand in the industry, with many millions of dollars percolating through every segment. It all starts with the consumer, who is the source of new money in the industry.

**“Certified Angus Beef<sup>®</sup> set the performance bar for the industry and the quality bar in the minds of consumers.”**

**— Mark Akin,  
Circle A Angus Ranch,  
Iberia, MO**

## The scope of the CAB brand

The company’s mission is to increase demand for registered Angus cattle through a specification-based, branded-beef program to identify consistent, high-quality beef with superior taste.

The Certified Angus Beef (CAB) program was established in 1978, as a nonprofit subsidiary of the American Angus Association, after Angus producers grew discouraged by a U.S. beef industry that had embraced larger and leaner Continental cattle and ignored end-product quality. When in 1976 that industry persuaded the U.S. Department of Agriculture (USDA) to widen its Choice and Prime grades to fit the lower quality, Angus producers decided to act.

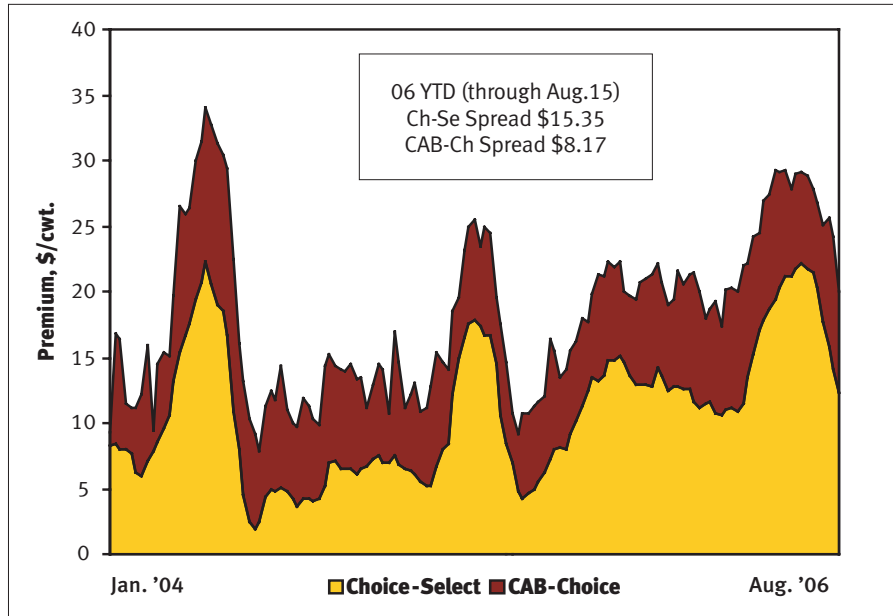
Today, the *Certified Angus Beef*<sup>®</sup> (CAB<sup>®</sup>) brand is the largest, most successful brand of beef, accounting for more than 86% of Angus-influenced beef with Modest or higher marbling through USDA brand certification. One out of every three carcasses certified by the USDA are for the CAB brand.

Partnering with all major packing companies, the brand has the greatest availability, being produced in 29 licensed packing facilities — 26 in the United States (more than 85% of the U.S. packing base) and three in Canada (more than 80% of the Canadian packing base).

More than 13,000 businesses partner with the CAB brand in more than 30 countries. About 1.6 million pounds (lb.) are sold daily through foodservice and grocery channels, generating an estimated \$2.5 billion in consumer sales annually.



Fig. 1: 2004-2006 boxed beef cutout premiums



# The Market Signals

From its earliest days, the beef industry has operated with a commodity mindset. Cattle were sold at an average price, by the pound, at nearly every stage of production.

In late 1990, a National Cattlemen's Association task force identified a better way: Fed cattle should be valued on an individual-carcass basis rather than on an average live-price basis. The industry embraced that concept.

Since that time, value-based grids have helped pull better beef through to the consumer. Despite all-time high average beef prices, consumers continue to pay more for better flavor. That shows in the dramatic spread between Choice and Select wholesale beef values. It shows in the record spread between Certified Angus Beef® (CAB®) brand and Choice boxed beef values.

In the early 1980s, the Choice-Select spread was typically \$3-\$4 per hundredweight (cwt.). That increased to \$7 per cwt. in the 1990s, and averaged more

than \$10.50 per cwt. in 2005. The added CAB premium over Choice typically ranges from \$6 per cwt. to \$10 per cwt.

Larger spreads in boxed beef pricing

lead to higher premiums on value-based grids. Less than half of finished cattle today sell on such grids. However, Cattle-Fax projects the grid share to hit more than 60% of the market by 2010.

As more cattle are sold on grids, the economic importance of quality grade grows. Today, the value spread between a Select- and CAB-qualifying carcass of the

same weight is \$150 to \$200.

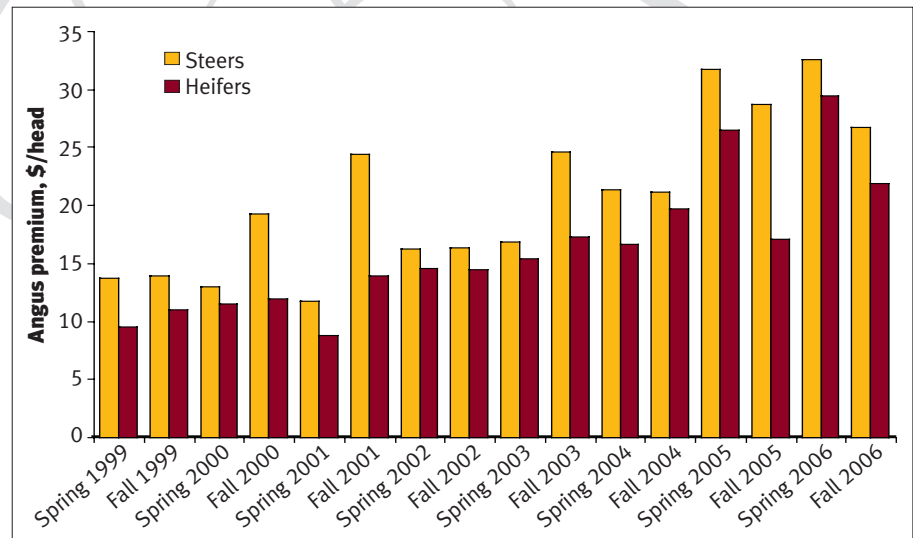
"We are seeing the widest price spreads, up and down this system, that we've ever seen in history," says Randy Blach, executive vice president for Cattle-Fax. "That's a market that is making a transition from a commodity to a brand-driven market."

**Editor's Note:** Comments contained in this article were made in the winter of 2006-2007 and reflect market values at the time.

CONTINUED ON PAGE 206

# Angus-Sired Feeder Calves Command Premiums

**Fig. 2: 1999-2006 Here's the Premium study price difference between Angus and other breeds**



Since 1999, Certified Angus Beef LLC's (CAB's) "Here's the Premium" study has tracked a growing Angus advantage. It has compared prices for Angus and non-Angus counterparts at auction markets across the U.S.

In spring 2006 data, these Angus premiums set records again for both steers and heifers. Those data represented 14,254 head in 721 lots. They were marketed through 10 auction markets in late February, March and April.

When compared to steers representative of other breed types, Angus steers weighing 699 pounds (lb.) returned an extra \$32.63 per head. Angus heifers weighing 687 lb. were worth an additional \$29.40 per head

vs. their non-Angus counterparts. Across 16 reporting periods, all but three reports have revealed some new record for the Angus price advantage. During the span of the study, premiums have nearly doubled. That's on 236,889 cattle sold in 10,850 lots.

In another study analyzing feeders sold through Superior Livestock video auctions, Angus-sired calves continued to top the market. Looking at 1.7 million calves in the data from 2001 to 2005, breed type had a significant effect on calf price in every year of the study.

Breed types were separated into five categories, based on seller description.

Those were grouped as mixed English or English crosses, English-Continental crosses, primarily Angus, black or black-white-faced, and cattle with "ear."

Adjusted to a constant weight, the primarily Angus calves had a \$4.60 per hundredweight (cwt.) advantage over those with some Brahman influence ("ear") in 2001. By 2004, that advantage had increased to \$6.77 per cwt. The average premium for primarily Angus calves for every year was higher than for any other type, including the crossbred black and black-white-faced calves.



# Keep 'em Healthy

**K**eeping cattle healthy from birth to harvest keeps the green in your wallet. Cattle that never have a bad day are the most efficient in conversion and gain, save money by staying out of the sick pen, and are most likely to produce the high-quality beef consumers want.

That's more of a challenge than ever because feedlot calves are younger than ever and lucky to have a 45-day conditioning period before moving straight to the feedlot. Most calves still sell at auction and enter the feedlot with thousands of other cattle of similarly unknown immunology and health status.

"A lot of people in the industry say cattle performance is going up, but health is going down," says Sam Hands, manager of Triangle H Grain and Cattle Co., Garden City, Kan. "They say we're pushing cattle too hard for their health status. If it's true, I think it's because cattle are more youthful coming in now."

Since the mid-1990s, calves have taken over an increasing share of feedlot inventories. "Some of that is the result of more efficient genetics — we produce more pounds of beef with the fewest cows we've ever had. We don't wean a 350- to 425-pound (lb.) calf today; it's 500 or 600 lb., big enough to go right into the feedyard. You can't beat

the young cattle for production efficiency, but health is more of a concern."

A 13-year (1992-2004) evaluation of Kansas feedlots showed an annual trend of increased death loss in both steers and heifers. It was linked to a decrease in placement weight, and a seasonal high death loss in April and May closeout months. That coincides with a wave of calves going straight from the cow to the feedlot in the fall. Vetlife's benchmark data confirms a seven-year trend of higher mortality and per-head treatment costs.

To stay in a comfort zone, Hands recommends vaccinations and 45- to 60-day preconditioning, on grass if possible.

"Health is our top issue, but it includes age, background, weaned status, nutrition and degree of drought stress," he says. "If they don't start right, take to the feedbunk and get consumption going, we're going to have problems. And, if drought or mineral deficiencies limit their response to vaccines, a lot of our efforts might go in vain."

Looking at so many variables on health and age differences, feedlots are at the tip of the iceberg in figuring out how to keep calves healthy. Cooperation and communication are the tools that will continue to get at what lies beneath.

**"Certified Angus Beef® acceptance is like a lifetime achievement award for cattle, where they never had a bad day."**

**— Mark Gardiner,  
Gardiner Angus Ranch,  
Ashland, KS**

"We know we have to keep cattle healthy to make them grade," says Iowa State University Extension Beef Specialist Darrell Busby. Data on 13,000 cattle (see "Black Ink Basics," Vol. 1, No. 1) show those that never got sick netted \$201 more than calves that had to be treated twice for respiratory disease.

In the Iowa Tri-County Steer Carcass Futurity, healthy cattle had a 44% greater chance of making USDA Prime and a 33% greater chance of reaching the *Certified Angus Beef®* (CAB®) standard than cattle that had to be treated twice for bovine respiratory disease (BRD).

Busby suggests two rounds of modified-live vaccine (MLV) for BRD, at least one of them prior to weaning. Early weaning (120 to 150 days of age) may also help reduce health problems and increase quality grades, especially when you start calves on a high-energy, corn-based ration.

Stress causes health problems, and South Dakota State University's Robbi Pritchard says we can prevent some of it with smaller pens and less sorting. Filling pens with single-source cattle is an option that usually helps maintain cattle health.

Minimizing stress on the farm takes a holistic approach to calving, nutrition, housing and health, says Kansas State University Extension Veterinarian Bob Larson. Among the first considerations are colostrum intake, sanitation and disease avoidance. At weaning, don't stack castration and trucking on top of the separation anxiety (castration should be done by 3 months of age), and pay attention to facilities.

You can wean into a drylot or pasture, but to safeguard health and profit potential, they need to gain well.

"Stress can be reduced by minimizing the amount of mud and dust," Larson says. "Calves should receive adequate energy, protein and minerals so that skeletal and muscle growth, and immune function are all optimized. This may require earlier weaning if forage quality or quantity decreases because of drought or other problems."

Vaccination to pre-expose cattle to the disease agents they are likely to encounter helps decrease the occurrence and severity of disease, he notes. "Increased communication and cooperation between all segments will improve animal health, birth-to-slaughter growth efficiency and, likely, product quality."



PHOTO BY MICKY WILSON

# Cattle Should Do It All

Imagine a cow that's a moderate-framed easy keeper; that raises a big, efficient calf; and breeds back on time each year — all that, and the calves consistently qualify for the *Certified Angus Beef*® (CAB®) brand.

Cows that can do it all aren't a figment of somebody's imagination. They exist, and if you plan it right, they can exist in your herd.

"Net profit to the commercial cow-calf producer will rise only if a balance can be achieved between product quality and cow herd production costs," says Twig Marston, Extension beef specialist at Kansas State University.

The balance begins with multiple-trait selection. It's not a new concept, but it's significant because a narrow focus in one area can lead the herd astray in another. The American Angus Association has provided

dollar-value indexes (\$Values) to simplify the process.

The array of more than 20 expected progeny differences (EPDs) must be considered in light of other production and economic factors. The \$Value indexing system blends these into a few economically important areas, such as beef value (\$B) and weaned calf value (\$W).

Carcass traits, unlike reproductive traits, are highly heritable. "This means that genetics greatly influences traits like marbling, much more than pregnancy," Marston says.

Including carcass traits as part of your selection doesn't lead to any decrease in maternal traits, says Marston, who reviewed more than 60 research articles on the subject.

Notions that marbling affects puberty in heifers have been disproved. Also, there's no

evidence that high-marbling females will wean lighter-weight calves or that marbling and pregnancy rates are related.

"Many of these theories about carcass and maternal traits have circulated for years," says Mark McCully, director of supply development for CAB. "But the



reality is simultaneous improvement can be made for both carcass and maternal characteristics."

Breed has tremendous influence on carcass traits. On average, British breeds like Angus combine maternal traits and ability to marble. Selection within the breed is extremely important to produce above-average cattle.

Even though management plays a large role, it all starts with genetics. "Marbling has to be bred into the offspring," Marston says. "It cannot be fabricated from a special environment. No amount of feed will express more marbling than is genetically possible."

Genetic improvement is a long-term project, with several generations required to reach goals. For example, the Mike Kasten Beef Alliance in Missouri tracked genetics in a pen of steers, noting generations of sires that were above breed average for marbling. The results speak volumes about the potential for genetic selection (see Table 1).



**Table 1: Tracked generations of Angus bulls above average for marbling**

	Generations			
	Start	1	2	3
% Prime	0	8	31	53
% CAB®	25	52	56	47
% Low-Choice	31	36	13	—
% Select	43	4	—	—
Avg. premium	\$20.21	\$40.63	\$52.86	\$82.30

Average daily gain = 4.07 lb. per day, Feed-to-gain ratio = 5.55 lb.

Source: Mike Kasten Beef Alliance

## Angus genetics offer complete package

Some crossbred cattle deliver part of the package, but the bottom line is that Angus cattle gain and grade. That means more dollars in your pocket.

Iowa State University Tri-County Steer Carcass Futurity data on nearly 10,000 head showed high-percentage Angus cattle returned \$67.93 per head more than cattle that were 25% or less Angus (see "Black Ink Basics," Vol. 1, No. 2). That's mostly because they had higher average daily gains (ADGs) and more carcass merit.

The analysis shows Angus genetics dramatically increase quality grade potential. Cattle that were 75% or more Angus made Prime six times more than the low-percentage Angus calves. The ability to

reach acceptance into the *Certified Angus Beef*® (CAB®) brand was more than 25 percentage points greater for calves that were high-percentage Angus, compared to those with no more than a quarter Angus breeding.

Any discounts for higher yield grades were more than offset by quality premiums.

Choosing Angus genetics is the first decision in building better beef. Next, you must sort through all choices offered.

The dollar value indexes (\$Values) were developed by the American Angus Association to simplify selection. For example, beef value (\$B) measures postweaning performance and carcass

value. Progeny of bulls in the top 10% of \$B for the breed produce three times the number of Prime carcasses compared to the bottom tenth of \$B bulls (see "Black Ink Basics," Vol. 2, No. 3). The top cut of \$B bulls also produce progeny with better yield grade — 20% more Yield Grade (YG) 1s and 5% fewer YG 4s and 5s.

Using \$Values help maintain balance. Maternal traits are unaffected between the highest- and lowest-performing \$B groups.

"Dollar-values combine a variety of economically significant traits," Mark McCully, director of supply development for Certified Angus Beef LLC (CAB) says, "and selecting for beef value is an accurate first step in targeting CAB brand acceptance."



# Strategic Implants Only, Please!

**G**rowth implants can wreck quality grade — if the wrong ones are used at the wrong time. However, strategic use can deliver better gains without compromising quality. The key is matching implant potency with the amount of energy consumed.

Timing is especially important, says Robbi Pritchard of South Dakota State University (SDSU). If cattle are entering a stressful period, such as weaning, or if they have been on high-forage diets, it's best to delay implants. Fleshy cattle can be given higher-potency implants earlier.

For cattle to realize their quality potential, producers must apply a steady growth curve, rather than fast gains that spike and drop off. That's because marbling can only accumulate at a steady rate, Pritchard notes, adding, "You cannot increase marbling beyond genetic potential. All you can do is screw it up."

Implanting cattle stimulates lean growth, causing a shift that delays fattening. Aggressive implanting distorts the normal growth curve even further, Pritchard said. You can increase growth by a full frame score, but that may not be a good thing if management and marketing don't adjust.

Beef quality problems arise when implanted cattle fall behind their increased gain potential. Backgrounding on stalks, a non-implanted steer is not growing at his full potential, but he is not as far behind as an implanted steer.

"With a higher level of energy, such as corn silage, diet allows them to be closer to their lean gain potential, and they come off a little bit fleshy," he says. "The implanted steer here is probably better off."

At the finishing stage, cattle may move past the lean growth line to where they are just putting on external fat. "Over-implanted cattle gain remarkably less than their lean

gain potential and fall short of grade potential," Pritchard says. But two implants are right for many pens of cattle.

SDSU research by Kelly Bruns shows the benefit of delayed implanting (see "Black Ink Basics," Vol. 2, No. 1). Whether 680-pound (lb.) Angus-cross steers were implanted 97 or 155 days prior to harvest, carcass weight was similarly improved. However, the delayed-

implant steers achieved nearly the same *Certified Angus Beef*<sup>®</sup> (CAB<sup>®</sup>) acceptance rate as non-implanted (23% vs. 24%), while the steers implanted at the start managed only 8% CAB.

"If you impede marbling on the front end, you may permanently affect quality grade," Pritchard says. "If we interrupt marbling deposition on calves, they never get over it."

The implications are far-reaching. Calves grade just as well as yearlings, he says. "When they don't grade, the problem is we pull the

trigger too early. On a calf-fed, flesh does not change very much in one week, but on a yearling, it can change a lot in one week. Calf-feds have a wider marketing window."

The typical growth curve for marbling and back fat suggests older cattle are more likely to put on waste fat. Cattle that are set up for "compensatory growth" are more likely to put on that waste fat faster than marbling, and implanting only makes it worse, Pritchard says.

A yearling rumen cannot handle the level of calories required to make those older cattle exceed their potential and put on marbling, he explains. Research continues to look for ways to recover grading potential for cattle that spent too much time on too few calories early in life or cattle that were over-implanted, "which is really the same problem," Pritchard says.

The idea that marbling starts early in life helps explain why sick-pen cattle typically don't grade. "When do the pulls happen? Usually early on, right after an implant heightens growth demand, but you have low intake that stays even lower because they've been sick," he says.

All of those factors come into play every day in a feedyard. "The growth curve says you can't have more implant than you have calories," Pritchard says. "With a hodgepodge set of cattle, you don't know how old they are, they don't all have the same previous nutrition, and the implant can create a lot of problems. When you can combine and get 150 in a pen from one place, done right, you can plan a strategy that maximizes profit and grade."

**For cattle to realize their quality potential, producers must apply a steady growth curve, rather than fast gains that spike and drop off.**



# You Are



**W**hat cattle eat affects everything from their health, to rate of gain, to beef quality. If you want your calves to be all they can be, you have to start early and think at the cellular level. Genetics can help or hinder quality, but growing evidence suggests the environment may be six times more important.

Animal scientists at Ohio State University (OSU) and the University of Illinois make a case for getting calves on a high-grain diet not merely for their last 100 days, but starting after their first 100 days.

Marbling begins much earlier than we used to think. “Early nutrition is a key to better beef,” says Larry Berger of the University of Illinois. “We need to change the dogma that fat development must be in the order of internal, subcutaneous, intermuscular and, only then, intramuscular. There are things we can do to alter that.”

One of those is early weaning and a swift transition to a feedlot ration that is at least 75% grain-based. “It is crucial to start and keep a high-propionate fermentation going, to generate glucose early and often,” Berger says. Rumen fermentation yields volatile fatty acids — mostly acetate from forage but twice as much propionate from grain.

“Growing cattle on pasture or silage won’t increase later marbling scores but could set a course for external fat growth,” he notes. Illinois research also suggests high levels of vitamin A and D<sub>3</sub> from summer grazing may limit marbling deposition.

Comparisons of early-weaned calves with their long-yearling siblings, as well as creep-



PHOTOS BY MICKY WILSON



# What You Eat

feeding studies, support the existence of an early window for marbling deposition, given proper nutrition through weaning. But it takes high starch, not just high energy. Lush grass won't foster the propionate reactions needed to jump-start marbling.

"If after weaning, traditional 7-month-old calves go on to a lower plane of nutrition, the calves go backwards in marbling," Berger adds. Go-slow growing programs could be a waste of time and marbling potential. Evidence does not support theories that calves need more age to grade. "Calf-feds had 0.2 inch less back fat at the same marbling score," he says, "or a full marbling score better at the same yield grade as yearlings."

OSU work supports the idea that nutrition and health management start with the pregnant cow. Colostrum intake the first two days provides immunity for about five months. Early weaning allows for a transition to independent living while still under that umbrella, but special care must be taken to manage stress. Calves must find new sources of feed and water, so it is best to introduce them to these before weaning.

Feeding calves a corn-based creep for 100 days before weaning can raise marbling by 100 points, or a full score. In an Illinois trial, Angus-type calves averaged 95% Choice with or without creep, but those on creep went 79% CAB compared to 49% CAB for the

control. Creep that is less than half corn may have no effect on grade, but any creep ration promotes better health later in the feedlot.

Feed is the biggest cost item for cattle, and it can produce some of the greatest variability in quality.

Cattle feeders recognize the benefits of feeding ethanol coproducts. Dried distillers' grains (DDGs), corn gluten meal and wet distillers grains (WDG) can be cheap substitutes for traditional grain-based rations. They may not negatively affect feedlot performance, but they may have negative effects on quality grades.

Research by Chris Reinhardt at Kansas State University showed a 20-point drop (1,000-point scale) in marbling when cattle were fed a diet of 30% or more distillers' grains on a dry-matter (DM) basis compared to none in the diet.

"That may not sound like much of a drop, but it is significant, especially when grid premiums are on the line. For producers trying to hit a high-quality target, like the *Certified Angus Beef*® (CAB®) brand, this is one of dozens of little things that can add up," CAB Vice President Larry Corah says.

The lower starch level in DDGs may shift metabolism to make fewer cells into taste fat — marbling — and more into external waste fat, he adds. Today, distillers' grains are commonly fed at 10%-40% of the DM in feedlot diets.

In 2005, nearly 15% of the corn crop was used in ethanol production, according to the National Corn Growers Association (NCGA). More ethanol plants are being built, and producers in those areas may try distillers' grains as 60%-70% of the DM in their feedlot rations.

"More research is needed to find the threshold of feeding them that won't sacrifice quality grade, not to mention intake and performance," Corah says. Diluting DDGs with processed grain may help, but it varies by grain type.

A 1999 summary of extensive feeding trials showed that steam-flaked corn rations resulted in a lower marbling score than whole-grain or dry-rolled corn. The average marbling score was "Small" (USDA Choice > 500) at 512 with whole corn and 524 with dry-rolled, but fell to "Slight" (USDA Select) at 482 for steam-flaked corn.

Most large feedlots steam-flake to improve efficiency. That means fewer days on feed, which could partially explain the lower quality grades, and increased ribeye areas that could dilute marbling scores.

The type of grain helps determine marbling, too. Milo and wheat may shift the site of rumen digestion, reducing quality grades by 13 and 14 points, respectively.

"If you lose a dozen points here and a dozen points there, the next dozen points begin to affect your bottom line," Corah says. "When there is a difference of \$200 or more between CAB and Select, it pays to take the little things into account."

**If you want your calves to be all they can be, you have to start early and think at the cellular level.**



CONTINUED ON PAGE 212



# Missing the Mark

Think quality grade doesn't rule? Think again. The 2005 National Beef Quality Audit (NBQA) identified quality grade as the No. 1 contributor to lost economic opportunities. It accounted for nearly half, or \$26.81, of the \$55.68 loss per head. Yield grade, carcass weights and defects accounted for the remainder.

The 2005 NBQA was the fourth conducted, preceded by audits in 1991, 1995 and 2000. The findings serve as a scorecard for the beef industry.

We can see that quality grade is a top economic trait on the production side. That's because the sources of beef demand named insufficient marbling as their top concern. Those restaurateurs, supermarket operators and purveyors are the final industry links to our ultimate customers. Part of the problem is a lack of focus. Management, environment and marketing often derail quality grade in cattle with greater potential.

There are so many factors lined up to reduce marbling deposition in cattle today, so it's no wonder the beef industry struggles to maintain 55% Choice or better grades. Acceptance levels in cattle identified for the Certified Angus Beef® (CAB®) brand languish in the 15% area.

"That's a problem. Consumers prove every day they will pay more for higher-quality beef," says Larry Corah, vice president of Certified Angus Beef LLC (CAB). "Consumers want three things from beef: flavor, tenderness and juiciness. All of these add something, and tenderness alone doesn't cut it. Consumers want beef primarily because of its unique flavor."

**Table 2: The 2005 NBQA audit identified the ideal quality grade mix and where the industry is today**

	Ideal	Actual
USDA Prime	7%	3%
Top-Choice	29%	19%
Low-Choice	33%	35%
Select	31%	37%
Standard & lower	0%	6%

Meats scientists know beef flavor and aroma come from the carbonyl compounds found in marbling. That's why, as the USDA quality grade increases from Standard to Prime, flavor intensifies and improves, Corah explains.

"The problem is quality grades are in decline," Corah says. According to the U.S. Department of Agriculture (USDA), the number of carcasses grading Choice has fallen more than six percentage points and Prime more than a point from 1975 to 2005. The related decline in consumer demand was reversed by the influence of premium brands, new beef cuts and new products in the past eight years, he says.

CAB saw declining acceptance rates and, in 2004, set out to study the influence of each CAB carcass specification in limiting acceptance. After checking 26,707 carcasses at 12 plants owned by the top four licensed packers, CAB found that 75% of the cattle lacked adequate marbling. Another 13.4% had been fed too long, resulting in too much external fat to qualify.

Producers control the decisions that affect those cattle, says Mark McCully, CAB supply development director. Focus varies with

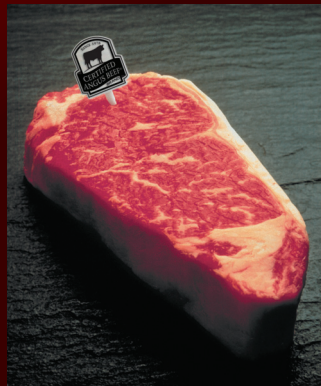
management and marketing distractions, however. "What could be better profit opportunities often go unheeded," McCully says, "due to a series of unfortunate events."

It may start with genetic selection. Although an estimated 60% of the nation's cows are now Angus-based, many still are of unknown genetics or not focused on carcass value. The American Angus Association has the best selection tools in the world, but most bulls are still purchased based on appearance or the most basic numbers, such as individual weights.

Market incentives, leadership from Angus producers and interaction with their customers will improve genetics, which account for about 40% of the average ability to marble. The rest is environment. The growing complexity of the beef industry distorts market signals and creates management challenges, Corah and McCully say.

That's why CAB compiled a comprehensive research review titled "Declining Quality Grades: A Review of Factors Reducing Marbling Deposition in Beef Cattle." The white paper is available at [www.cabpartners.com](http://www.cabpartners.com). It identifies the leading factors affecting quality — many of which are discussed in the remainder of this special report.

By recognizing the many factors working against beef quality today, the industry can regain focus and adjust selection, management and marketing decisions to take advantage of opportunities for greater profit while meeting consumer demand.



## Setting the standard

*Certified Angus Beef®* (CAB®) product lives up to its promise because of its science-based specifications. These high standards set it apart from other beef, ensuring that the consumer has a superior product every time.

Only about 8% of beef has what it takes to be accepted. Once qualified, however, the brand is widely accepted by consumers, who have purchased more than half a billion pounds annually since 2000.

So, what makes the CAB brand stand above the rest? Since there are at least 40 “Angus” programs out there, we’d like to clarify CAB standards.

### Step 1 – Live Animal Identification

► Phenotypic: Predominantly (51%) solid black hair coat

or

► Genotypic: AngusSource® program enrollment

AngusSource, a U.S. Department of Agriculture (USDA)-approved Process Verified Program (PVP) since fall 2005, documents source and group age while ensuring cattle have a minimum of 50% Angus genetics.

Eligible cattle must be sired by a registered Angus bull and enrolled by the ranch of origin with month, day and year of birth for the oldest calf in the group. For more information visit [www.angussource.com](http://www.angussource.com).

### Step 2 – Carcass Specifications

1. *Modest or higher marbling.* That qualifies a carcass for average Choice and ensures superior flavor and juiciness. Not all Angus programs

have this level of marbling, and it is the single largest barrier to CAB acceptance.

2. *Medium- or fine-textured marbling.* Many small flecks of fat, as opposed to fewer, larger and coarser characteristics. Smaller flecks ensure consistent flavor and juiciness in each bite.
3. *Maturity.* All CAB carcasses are of “A” maturity, which is typically less than 30 months of age. Beef from younger animals is more tender than that from older animals.
4. *10- to 16-square-inch (in.) ribeye.*
5. *Less than 1,000-pound hot carcass weight.*
6. *Less than 1-in. fat thickness.*

On Jan. 29, 2007, new CAB brand uniformity specifications (4-6) were implemented. The specifications replaced the brand’s Yield Grade (YG) 3.9 limit. The specifications enhanced product consistency by addressing factors that are of top concern to customers—ribeye size, large subprimals and excessively fat product.

7. *Free from dark cutting characteristics.* Typically a problem in animals that are stressed prior to harvest and caused by a drop in muscle glycogen levels, the beef appears dark brown to purplish and is not appealing to consumers.
8. *Practically free of capillary rupture.* Limiting internal hemorrhaging in beef provides a more attractive meat

**In a 2002 study by Oklahoma State University, CAB brand strip steaks were three times more tender than Choice steaks.**

case display.  
9. *No neck hump exceeding 2 in. in height.* This limits the influence of *Bos indicus* (Brahman-type) cattle to address tenderness

concerns.

10. *Moderately thick or thicker, beef-type muscling.* This screens out the influence of dairy-type cattle to maintain consistent yields and plate presentation.

Based on the 2005 National Beef Quality Audit (NBQA), the CAB brand specifications are exactly in line with the top 10 beef quality concerns from purveyors, restaurateurs and retailers:

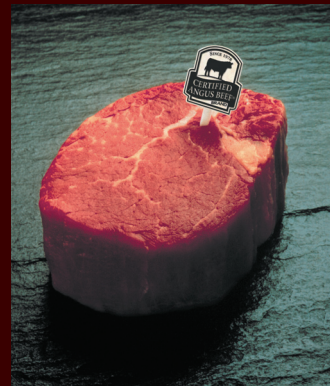
1. Insufficient marbling
2. Cut weights too heavy
3. Lack of uniformity in cuts
4. Inadequate tenderness
5. Excess fat cover
6. Inadequate juiciness
7. Inadequate flavor
8. Inadequate overall palatability
9. Low cutability
10. Too large ribeyes

Aiming for the CAB brand target is the right thing to do for your bottom line, as well as for the long-term good of the entire beef industry.

There are enough reasons to make CAB product your next purchase at the restaurant or supermarket. That’s reason enough to aim your herd toward the CAB target. Join the effort to profitably produce “Angus beef at its best.®”



CONTINUED ON PAGE 214



# Convenience Pays

**M**ost producers cull wild cattle rather than risk injury or facility damage, but they consider temperament a convenience trait. However, data suggest higher profits come from calmer cattle.

An Iowa study of disposition, feedlot and carcass data found losses of more than \$62 per head on aggressive cattle (see “Black Ink Basics,” Vol. 1, No. 3). Docile calves are more likely to earn higher grid premiums and perform better in the feedlot. Their more aggressive penmates tend to be leaner, but producers pay for higher death loss, carcass-quality discounts and higher feed-to-gain ratios.

“Compared to calm penmates, aggressive calves are 15 percentage points lower on Choice, with double the Standards,” says Iowa State University Extension beef specialist Darrell Busby. “The cattle are leaner, but we are cutting the percentage of *Certified Angus*

*Beef*® (CAB®)-accepted cattle in half for Angus-influenced calves when we look at disposition alone.”

## Adjusting attitudes

The good news is temperament can be manipulated through adjustments in genetics and management, Busby says. The trait is approximately 40% heritable, and the attitude of sires within breeds can vary.

Janice Swanson, Kansas State University animal science department professor, says environment plays a big role. “Range cattle haven’t had a lot of exposure to people, so you may have to be more attentive when you work them,” she says.

Breeding adjustments should come into play when repeated exposure shows attitude — not environment — is to blame.

Scoring cattle temperament is easy, using a six-point chute behavior system developed

by the Beef Improvement Federation (BIF). One is “very docile,” while six is considered “aggressive.” The Iowa study evaluated each calf’s temperament at least three times.

Flighty animals tend to be more reactive to sudden movements and hollering from unexpected sources. “Cattle are prey animals, not predators,” Busby says. “Understanding how they see the world can go a long way to improving handling techniques.”

## Understanding cattle

Human behavior can set up cattle dispositions. “It is always a good idea to check your attitude at the pickup door,” Busby says. “If things aren’t going well for you, taking it out on the cattle will not help.”

Assuming a calm posture, using a cattle-friendly working facility and finding knowledgeable employees can help cattle understand that no harm is intended. Contrary to tradition on some farms, there’s no place for yelling around cattle, says renowned animal behaviorist Temple Grandin, Colorado State University.

“The only noise people should make is a slight ‘shhh,’ because fear hurts production and beef quality,” she says. “Excited cattle produce tough meat and more dark cutters.

“It is important that an animal’s first experience with a person, place or equipment is good,” Grandin says. Otherwise, cattle develop specific fear memories. To eliminate anxiety and balking, she emphasizes the need to avoid high-contrast or flapping objects in the chute area.

Stock dogs should not have free access to closely confined cattle, and electric prods should be used sparingly. Ninety-five percent of the time, shocks are not needed or helpful, Busby and Grandin say.

Taking the time to walk feedlot pens and interact with cattle can improve disposition. They will literally get to know you. No one likes high-headed cattle, and feedlots bid accordingly.

The market for seedstock has long discriminated against aggressive bulls. “Anybody who is breeding cattle bears a direct responsibility for what they produce and sell,” Swanson says. She urges producers to consider the effect on safety and quality, as well as breeder reputation.



PHOTO BY M.D. BOYATT

## The CAB brand Natural niche

By definition, niche production isn't for everyone. But if you want to raise Angus cattle with detailed records that document no implants, antibiotics or animal-derived feed, there's good news. Certified Angus Beef LLC (CAB) licensed two companies to produce *Certified Angus Beef*® (CAB®) brand Natural

— Tyson Fresh Meats Inc. and Niman Ranch. Beef earning the CAB brand Natural name must first meet all of the brand's eight specifications for flavorful, juicy and tender beef. Producers must also comply with procedures to verify their cattle never received antibiotics (fed or injected), hormones or animal byproducts, in order to meet the additional requirements of CAB brand

Natural:

- Animals never given hormones or antibiotics
- All animals traceable to place of birth
- No artificial ingredients; minimally processed
- 100% vegetarian diet



# Building a Brand

**W**hat does it take to build the largest, most successful brand of fresh beef in the world? Just three things, really: product, people and integrity.

## The best product

The *Certified Angus Beef*® (CAB®) brand specifications were established through science. No smoke, no mirrors. The specifications consistently deliver a superior beef-eating experience to consumers. Period. (See "Missing the Mark," pages 212-213.)

## The right people

CAB has more than 13,000 partners worldwide and their staff — many thousands of people — supporting the brand. Committed to managing Angus cattle to their potential, licensed feedlots work with the same dedication as retailers and restaurant managers who sell the brand to consumers.

Nearly 100 CAB employees within 16 divisions, including brand assurance, foodservice, international, packing, retail, value-added products, marketing and supply development areas, support our partners and drive the company's mission to increase demand for registered Angus cattle.

We make sure our partners have what they need in unrivaled marketing services to do the job. That includes custom design work, product photography, and advertising to suit radio, television and print. It includes person-to-person, web- and computer-

based programs to train the people standing behind the meat counter and beside the restaurant table.

Marketing and training efforts build the brand at every level. That's equally important in the relatively new CAB niche markets. Restaurant demand led to the brand's expansion into CAB brand Prime in 2001. Retailers whose customers did not want to give up quality to get "natural" products fueled the expansion into CAB brand Natural in 2004. A few licensees now even offer CAB brand Natural Prime products. Regardless of the program, from mainstream to niche, one core message is the focus of all training — the CAB brand is *Angus beef at its best.*®

## The highest integrity

Consumers don't care that our licensees in more than 30 countries around the world sell half a billion pounds of the brand each year. They do care about integrity.

We can't stop consumers from buying some other brand and concluding that it's nothing special. But by tracking each pound

of CAB product once it is identified, we can ensure it's the real thing when they buy CAB brand products from a licensed outlet.

Items may change hands more than a few times from packer to fabricator to further processors to distributors and outlets. But each licensee is required to report those transactions, thus guaranteeing product quality and integrity at every step.

CONTINUED ON PAGE 216



# How it All Works

Like any system, organization or engine, the *Certified Angus Beef*® (CAB®) brand works best when you allow it to run on all cylinders.

For the last few years, just being average has been a paying proposition for many breeders. But competition and supply and demand will work against settling for average. The average CAB acceptance rate for Angus-influenced cattle is only about 15%.

Yet, hundreds of producers have learned to cooperate with neighbors, customers and feedlots, using data to guide their decisions.

Their results are far beyond average. The Aim High feature stories and demonstration projects, such as Best of the Breed (BoB) in 2002 and the National Angus Carcass Challenge (NACC) after that, highlighted producers from all across the U.S.

Those who aim high can't imagine settling for average. They set goals, such as developing progeny that gain faster and at less cost than poorer-quality cattle, but achieve greater than 90% Choice, 40% CAB and 10% Prime with more than half Yield Grade (YG) 2 or better.

They see in the world's largest genetic

database at the American Angus Association that they can make simultaneous progress toward greater marbling, the ideal ribeye of 10 to 16 inches (in.) and less external fat while improving cow herd function.

Of course, they see black cattle selling for more at the local auction. Buyers are so eager to acquire Angus feeders that they bid on speculation that unknown blacks are a high-percentage Angus. Studies consistently show known-Angus-type calves sell for still more than the merely black calves. And there is no way to make progress toward quality goals based on hide color alone.

The market is increasingly based on individual cattle values. Buyers demand more and more information before they bid, and the answers to those questions have a greater influence on the price.

Those who aim high see a network of dozens of licensed CAB feedlots spanning the United States, managed by professionals who

## Rise to the challenge

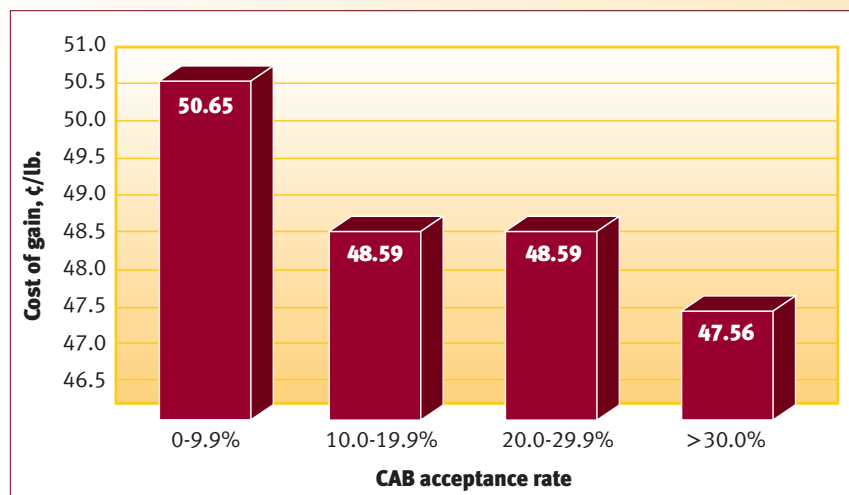
It's not hard to produce generic calves and drop them off at the market to wait for your check. It takes more effort to produce for the *Certified Angus Beef*® (CAB®) brand. But those who won't settle for average see a world of possibilities in that challenge. Millions of dollars separate those who look no farther than a black hide and those who focus on the CAB target.

Just ask Larry Wickstrum, Westmoreland, Kan., whose 160 steers in the 2002 Best of the Breed (BoB) contest managed greater than 90% CAB and CAB Prime. Ask fellow Kansan Tory Borrell, Dighton, whose three-year average on more than 500 steers is 52% CAB brand Prime. Ask Mike Kasten, of Millersberg, Mo., who saw three generations of selection for above-average marbling net 100% CAB and Prime in steers that gained more than 4 pounds (lb.) per day. Indeed, aiming for carcass quality need not leave you shortchanged on performance.

Certified Angus Beef LLC (CAB) feedlot records show that the highest grading calves in an Iowa database of 10,000 steers were 75% or greater Angus genetics. That figures, but some producers are surprised to learn those cattle also had the highest gains and lowest morbidity rates, compared to cattle with less Angus heritage.

Another CAB study compared groups with less than 10% CAB acceptance, to those with 30% CAB or more. Individual data points on 12,000 head show that the highest CAB acceptance cattle have the lowest cost of gain, while other feedlot performance traits are comparable across groups.

Fig. 3: Cost of gain by CAB acceptance rate





know how to get the most out of top-quality Angus genetics, and who want to build relationships with commercial and seedstock Angus producers. They see many of these feedlot managers offering to partner on as few as 50 or as many as 5,000 head, or even helping to get individual information back without retained ownership.

There are opportunities to build relationships within these networks, helping to evaluate promising new Angus bulls through progeny testing from customer herds, partnering on bulls and cooperating on heifer development.

It is easier to join in and be a part of the beef industry than most producers have

imagined. It is as simple as clicking a mouse, dialing a phone or driving into a yard.

Organize your herd and recordkeeping systems. Seek information and informed opinion to help plan, and then use the information to carry out the plan. Monitor results at all times, and make course corrections when necessary, being careful not to overreact at any time. Include carcass value in overall cow ranking, and cull from the bottom of the herd each year. Look for cow families that do it all, and draw replacements with proven ability on local resources.

Assess your assets and how they are being used, take action to correct any abuses and pursue opportunities for underutilized resources, including management and marketing skills. Keep looking for the weakest link in every phase of production and management to shore up problems.

Look for new ways to join the growing network of Angus producers. Work toward the common goal of producing and getting paid for the best, the CAB brand.

Ask your Angus bull customers and suppliers to meet with you about opportunities for your mutual advantage. Contact several CAB feedlots (see the list at [www.cabpartners.com](http://www.cabpartners.com)) to discuss the possibilities in store. Ask about health programs, weaning and preconditioning, and work together to develop a plan that

## How to participate

Participating in the CAB program is easy. Here are some ideas:

1. Talk to your potential partners in seedstock, commercial and feedlot businesses.
2. Work together to discover current herd genetics and performance benchmarks.
3. Coordinate health and management at every step to maximize genetic potential.
4. Don't compromise long-term quality potential for short-term interests.
5. Market cattle in ways that capture value and reward quality.
6. Use information feedback to ...
  - a. cull from the bottom end;
  - b. choose balanced-trait bulls that complement herd needs; and
  - c. adjust management from ranch to rail.
7. Chart your progress in generating still more demand for your cattle.

starts today. Sooner than you think, you will reap the growing reward for focused beef production.

  
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**Producers successful in aiming high for the CAB® target are routinely profiled in the Angus Journal and the Angus Beef Bulletin.**



# Your Information

The Certified Angus Beef LLC (CAB) Board of Directors approved the concept of CAB supply development in 1981 to establish one-to-one producer contact in the field. It was time for Phase II. That's the name the Board used, figuring it would follow Phase I, brand development.

Today, supply development efforts focus on identifying genetic, management and marketing practices that positively influence *Certified Angus Beef*® (CAB®) brand supply and producer profitability. Then, utilizing research, education and a growing network of industry partners who believe in producing high-quality beef, supply development communicates those opportunities.

Research studies headline the process. CAB coordinates research with third-party sources, including land-grant universities, allied industry partners and our licensed feedlot network to promote data that show

**Since 1998, the CAB Feedlot-Licensing Program has built close, working relationships with all sectors in the production of Angus cattle and high-quality beef.**

the profit in raising high-quality beef at every industry segment.

Since 1998, the CAB Feedlot-Licensing Program (FLP) has built close, working relationships with all sectors in the production of Angus cattle and high-

quality beef. Despite the diversity in feedlot companies (more than 60 partners across 14 states), one thing remains the same — their commitment to providing quality service in marketing cattle. Capturing more than 1 million individual carcass records, the FLP functions as a valuable source for identifying genetic and management decisions and their influence on end-product quality.

Articles, summaries and news releases follow to provide a national voice for industry issues. The recognition created by the award-winning "Black Ink" column built demand for an offshoot piece. The *Black Ink Basics Technical Series* offers producers easy-to-read research from leading sources and is finding its place in feedlot newsletters, state Angus news and Angus sale books across the nation. Educational seminars give feedlot managers, as well as seedstock and commercial Angus producers, the tools to





# Source

work together, increase profits and tie to the success of the CAB brand.

Recent programs include the Brand Builders seminar for seedstock producers at CAB headquarters in Wooster, Ohio, and state-level Black Ink Basics seminars for commercial Angus producers. Specific to each audience, the seminars provide information on the brand and focus on management practices that best satisfy consumer demand and bottom-line profitability.

Supply development's latest endeavor is to create a manual that will communicate those practices and act as a road map for producers when making ranch decisions. As new trends in the branded beef industry offer more incentives to Angus producers, the supply development team will continue leading the way as one of the nation's best sources for information.



CONTINUED ON PAGE 220



PHOTO BY CRAIG SIMMONS

## Use the logo

Use the Targeting the Brand logo and show your operation stands for quality. It can be used at events and sales as well as in sale books and even routine communications. In this approved form, the mark can be used in advertisements, company letterhead and farm or ranch signs. Web downloads at [www.cabpartners.com](http://www.cabpartners.com) and decals are available, free.

### Questions?

Call Lance Zimmerman, CAB supply development marketing manager, at 1-800-225-2333.



## www.cabpartners.com

[www.cabpartners.com](http://www.cabpartners.com) is the online resource for producers, feedlots and industry leaders wanting to know more about raising quality Angus cattle for the Certified Angus Beef® (CAB®) end point. Relevant marketing and management information helps build stronger relationships that keep the consumer in focus through all facets of the CAB supply chain.

The *Cow-calf Producers* section offers information on fed-cattle marketing, identifying with the CAB brand and building a beneficial information network with cattle customers.

Explore the *Education Center* for answers to *Frequently Asked Questions*. *Program History* identifies how Certified Angus Beef LLC (CAB) became the world's leading branded-beef company. And *Black Ink Basics* technical sheets illustrate how adjustments in cattle genetics, management and marketing can increase profitability.

CAB's supply development team regularly commissions research papers and literature reviews from the nation's leading land-grant universities, and those can be downloaded from the *Education Center*.

The *News Room* provides access to the *Black Ink* column featured regularly in livestock and agricultural publications nationwide with information on every aspect of beef production, from long-term planning to calf health programs.



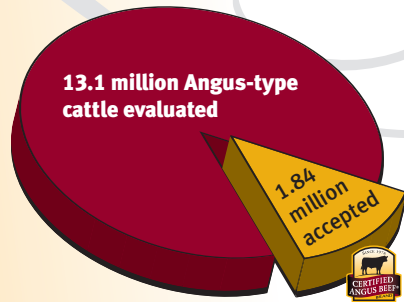
Improving quality is the key theme.

Watch the *Upcoming Events* page or educational seminars and activities focused on quality beef production. Through relationships with allied industry partners, the supply development team is able to extend its outreach efforts throughout the country.

Reference the extensive list of CAB licensed feedlots under the *Feedlot Section* of [www.cabpartners.com](http://www.cabpartners.com). CAB feedlot licensees are committed to sourcing and managing high-quality Angus cattle toward the CAB target and facilitating information exchange with cow-calf producers.

# By the Numbers

**Fig. 4: Percent of Angus-type cattle that qualified**

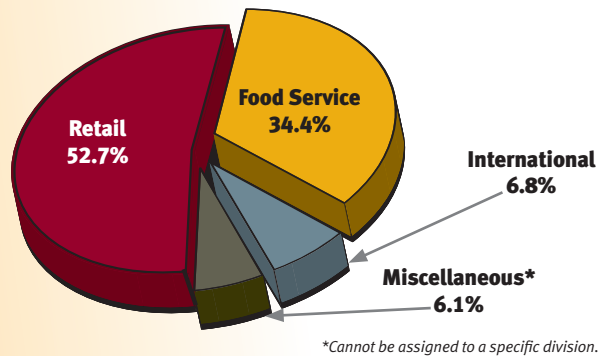


2.6 million pounds sold

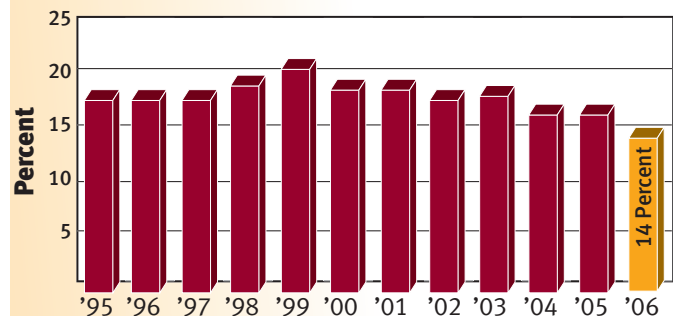


5.2 million pounds sold

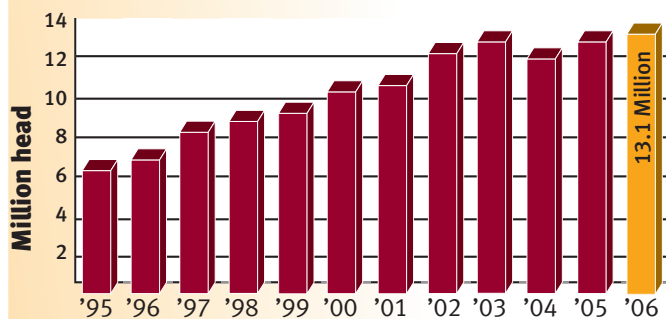
**Fig. 5: CAB pounds sold by division**



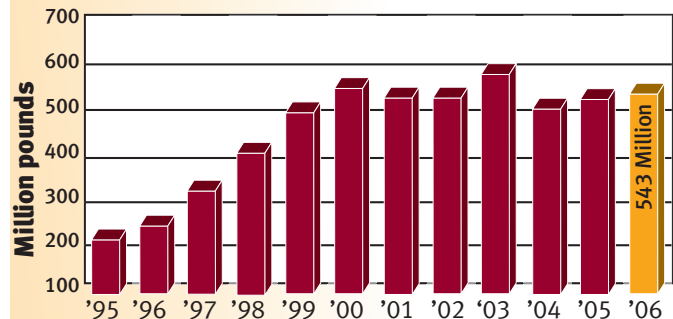
**Fig. 8: Identified cattle earning the CAB brand**



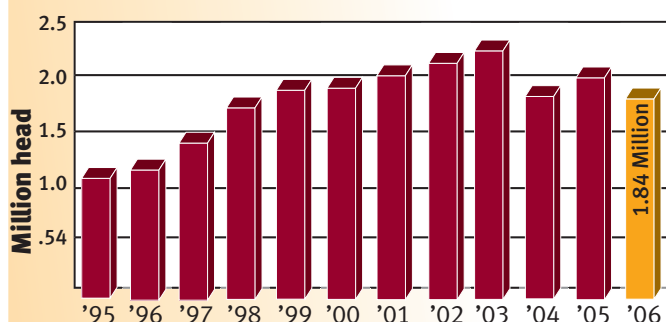
**Fig. 6: Angus-type cattle identified**



**Fig. 9: CAB pounds sold**



**Fig. 7: Carcasses certified**



**Fig. 10: Pounds sold per head**

