

# Yield Grades

Out of control or just a blip?

Story & photos by **Steve Suther**

**W**hen Angus producers get carcass data, they like to see the high percentage of USDA Choice and *Certified Angus Beef*® (CAB®) brand acceptance. But their eyes can't help seeking out the potential bad news first: Any Yield Grade (YG, or Y) 4s?

The American Angus Association's *Sire Evaluation Report* tracks cutability through its expected progeny difference (EPD) for percent retail product (%RP). As measured by ultrasound, %RP has moved higher every birth year since 1998, and not at the expense of marbling or maternal traits. However, within individual Angus herds, cutability can be more or less of a challenge.

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feeding and packers having to trim to meet specifications, says John Unruh, Kansas State University (K-State) meat scientist. A YG 4.5 carcass represents a 7.4% loss of retail product compared to YG 2.5, he notes, and retail is moving toward zero trim and case-ready packaging. As each sector loses money, lower bids must be passed up the line to affect all cattle prices.

## Arithmetic

Yield grades quantify cutability through a formula developed in 1976 to assess external fat thickness (FT) and ribeye area (REA) at the 12th rib; hot carcass weight (HCW); and the percentage of internal kidney, pelvic and heart (%KPH) fat. It's not the kind of math most people do without a calculator, Unruh admits, but it is represented as  $YG = 2.5 + (2.5 \times FT) + (0.0038 \times HCW) + (0.2 \times \%KPH) - (0.32 \times REA)$ .

External fat is often considered the key to the formula, he explains, and "preliminary yield grade" (PYG) is simply  $2 + (FT \div 0.4)$ . Computations link the range of HCW values with a "required REA," and that minus actual REA times 0.3 is one of the adjustments to PYG. After a final adjustment,  $(\%KPH - 3.5) \times 0.2$ , PYG becomes final yield grade.

Had enough math? Meat graders learn it as second nature, but Unruh notes a couple of simple ratios for the rest of us. "If we move fat thickness by a tenth of an inch, we move a quarter of a preliminary yield grade — or, every four-tenths of fat thickness is one PYG. Also, if we move ribeye area by 1 square inch, that's one-third of a yield grade score," Unruh says.

Obviously, a larger ribeye can compensate for too much external fat, but those who have fed cattle know it is easier to add external fat than ribeye. In fact, the current trend of increasing carcass weights helps explain a parallel increase in overfat, YG 4 cattle. "When you add pounds to cattle beyond their optimum," Unruh says, "ribeyes become smaller per hundredweight (cwt.) of carcass."

## Trend effects

The bad news is industry-wide. The incidence of YG 4s in federally inspected beef is at a 20-year high, having climbed every year since 1997 to 6.2% in 2004 (see Fig. 1). YG 5s typically trend at 10% of the YG 4 level, and the 2004 incidence was in line with that at 0.6% of the mix.

The problem is most severe in the Northern Plains — the last week of October saw 13.78% YG 4 and 5 cattle in Nebraska — but that's also where the highest-quality-grade cattle are. With grids accounting for approximately half of sales, a lot of cattle are being discounted \$15-\$20 per cwt. That was tolerable when the Choice-Select spread was setting records, but it began to sting by fall.

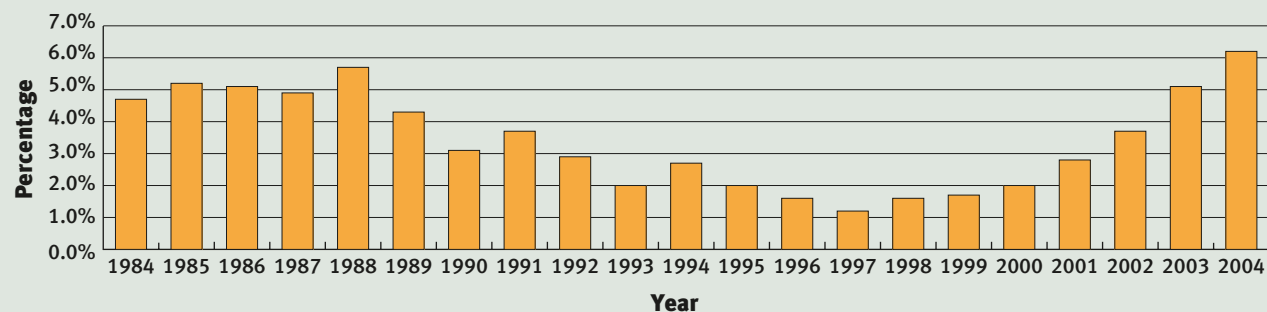
Still, most market signals are being muffled by the combination of cheap corn and scarce placements on feed, says Cattle-Fax analyst Dave Weaber. "With a wide disparity between cost of gain and either grid or live-cattle selling price, there is incentive to make more pounds," he says, "regardless of yield grade. If you have 86¢ cattle and 43¢ cost of gain, you double your money with every pound." That's especially true in the Northern Plains, where flat rail bids with no YG discounts are common.

The cash offers may even carry a \$2-per-cwt. premium for CAB brand qualifiers. "Pounds dictate price now more than ever," says South Dakota Angus producer Dale Suh. With cheap corn and efficient cattle, "if I can get \$132 per hundredweight of carcass, plus \$2 more for the CABs, that beats starting at \$130 per hundredweight on the grid and



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**Fig. 1: Percent of cattle grading YG 4, by year**



worrying about discounts,” says the manager of Cannon River Ranches, Highmore.

Over time, the result of such pricing can increase supply with heavier carcasses wrapped in too much external fat. The industry has had problems with YG 4s before, Weaber notes, but never before was beef so valuable on the product side as to make up for much of the trim waste.

### Effect on CAB

The gradually increasing share of Choice cattle serves to fill some of the demand for high-quality beef, but the situation is negative for CAB supply development, says CAB Packing Director Clint Walenciak. An increasing share of cattle that would have achieved CAB acceptance overshot the target and ended up YG 4.

Walenciak explains how the combination of tight supplies and overfeeding makes a bad combination for the brand. The estimated 27 million head of fed steers and heifers harvested in 2004 is down 4.3% from 2003. Although the Choice percentage is up by about a point, the net supply of Choice cattle is still down 2.2%, he says. YG 4s and 5s increased from 7% of Choice cattle to 8.8% through October 2004, and that made a huge difference in the net number of cattle not eligible for CAB. Those excluded cattle were up 22.9%.

“For every 10 carcasses moving up to Choice from more days on feed, only about half meet the brand’s live specifications,” Walenciak notes. “And if two of the 10 could meet the other CAB standards, one of those is failing because of so many Y 4s.” That helps explain why the CAB-acceptance rate was at an all-time low last year.

Packers can’t be choosy now, says K-State ag economist Ted Schroeder. “When you have lost a million head from Canada and you have a short supply here as well, you have to get beef into the system,” he says. “You do what it takes to keep running at the level you need. In the long run, we either reduce our capacity to get back to an efficient level, increase our herd size or increase imports.”

The cattle market situation is the reverse of that in the hog trade of the late 1990s, when there were more hogs than capacity could handle, he notes. “In cattle, we had several shocks to trade on top of the cyclical low in supply. It is a unique, short-term market,” Schroeder says, “and in the long run it will return to the stable trajectory of what the consumer wants.”

### Grading recalibrated?

Many cattle feeders and packers say another factor has exacerbated the trend to more YG 4s. “You have to include the widely held conviction that USDA (U.S. Department of Agriculture) graders are calling yield grade more stringently in the last two years,” Weaber says. “I wish I had the data, but there is a lot of what you might call circumstantial evidence.”

According to the theory, the advent of video and instrument grading has “dialed graders into exactly what Y 4s look like,” and increased the incidence of such grading, Weaber says. The same theory says graders used to grade with a slight bias in favor of producers, with a borderline YG 4 invariably staying on the YG 3.9 side.

It adds up, Weaber says, because it doesn’t add up otherwise. “We haven’t made the changes in cattle or management that should have resulted in such a trend. We have implanted the cattle harder, if anything. All last year and most of this year we have been current in marketing. Granted, we have a few more days on feed, but last year we shortened the feeding period and still had the increase in Y 4s — there’s a disconnect in the system.”

There are more Angus-influence cattle than ever, “but you can’t blame all the Y 4s on that,” Weaber says. “This isn’t a genetic issue.”

Some voices in the industry would like to blame the most popular breed and its high-quality product target, but the grading issue cuts across all cattle, says Tom Field, Colorado State University animal scientist. He agrees with Weaber: “Genetics would not be on my list of causes.”

Field was among those who developed industry goals after the 2000 National Beef Quality Audit (NBQA), and high on that list was the ideal, “Eliminate Yield Grade 4s and 5s.” Significant movement in the wrong direction is disappointing, but must be considered in context with the unprecedented market forces, Field says, noting, “This has been the weirdest 12 months of my professional career. I try to be skeptical of every development that goes against what I expect.”

### Trying to make hay

Producers with a Continental focus see the yield grade trend as a marketing opportunity, Field says. “I tell them the signals haven’t even been out there long enough to elicit a response. But if you go



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through two turns of cattle without getting banked for making these mistakes, bad signals get into the system.”

Of course, Angus cattle tend to have higher yield grades than Continentals, but Weaber says, “much of that is because we feed them longer to get the grade we expect.” In the Iowa Tri-County Steer Carcass Futurity (TCSCF), a controlled program where all steers are sorted to market at 0.4 inches of back fat, there is a linear relationship between percent Angus and higher yield grade. CAB qualifiers in that database have a YG 3.13 compared to 2.78 for other cattle. This is statistically significant, but not alarming.

Field puts genetics in perspective. “Do we have cattle that will go Y 4 too easily? Yes. Do we have cattle that are absolutely blank for marbling? Yes. Do we have cattle that produce way too heavy a carcass? Yes. Too little? There are still some of them. But I don’t see a groundswell of movement.”

And the idea that only Continental cattle can save the industry? “I just don’t see that today’s English cattle are at much of a disadvantage,” Field says. “The notion that economic pressure to use English genetics has made our fed cattle little is just not true.”

On the contrary, genetic trends say breeders have made English cattle bigger, widening opportunities and flexibility for feeders. “I just don’t buy it as a genetic argument — we can make cattle that are acceptable in yield grade and exceptional in marbling,” Field says.

Maybe greater accuracy in grading means no more YG “gifts.” That’s not a problem, just another part of the reality that says the higher level of YG 4s won’t suddenly go away. “We can manage our way out of this as the market signals dictate, but it may be the latter half of 2005,” Field says.

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