Your Link to

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Time and pressure

The price spread between USDA Choice and Select beef played around above the $20 per hundredweight (cwt.) neighborhood most of last summer. Adjusted to plant averages and what packers can pay on the grid, that could be a $70 difference on an 800-pound (lb.) carcass. Qualifying for the *Certified Angus Beef* ® (CAB®) brand could bring the difference to more than $100. To quote many feedlot operators, "That's real money."

It's also a real message, a flashing strobe sent by the market with increasing frequency. Of course, the reward for quality grade isn't always that lofty, and the spread may slip below $5 per cwt. seasonally. There are moments between the strobe signals. But herd improvement takes long enough we could call it herd evolution. And the strobe lights the way for a gradual shift toward genetics that excel in converting feed to pounds of high-quality beef.

Let's review the pricing mechanisms that differentiate quality in grid marketing. Packers pay a premium for cattle that beat their plant grading averages for percent Choice and higher. In Nebraska, weekly Choice numbers often hit 60% while those in the Southern Plains may be 15 to 20 points lower. The take-home message is that we'd better shoot higher than those numbers to achieve a premium. Otherwise, discounts start to add up and take the fun out of the business.

To keep your marketing options open, it's prudent to shoot higher than 70% Choice, given that the cattle owner usually pays at least some of the freight to the packing plant. The owner also stands the risk of carcass trim, dark cutters, weight discounts, disappointing dressing percentages and yield grade (YG) 4s and 5s. With these pitfalls lurking, you'll want to aim high.

While there's no magic bolus to improve carcass quality, the genetic traits are moderately to highly heritable. That means well-planned selection pressure and management can create shining results. High-percentage-Angus cattle are positioned well to achieve more than the 60% or 70% Choice mark. They can surpass 90% Choice and 50% CAB with enough selection. Like making diamonds, it just takes time and pressure.

It takes guided pressure — regular evaluation, starting with individual identification (ID), weights and performance over time. Pounds still add up to dollars, but to produce pounds that add up to the most dollars, you need to gather and use carcass data.

All postweaning data is like a jeweler's lens to the cow-calf operator. It reveals the true picture of the calf crop and provides a chance to understand the value determinants in the feedlot and the packinghouse.

These data sets, properly collected and dissected, define how each calf falls on the bell-shaped curve of profit and loss. Regardless of ownership at harvest, the data has value if it's used to create information and profit-driven change in the cow herd.

Table 1: USDA five-area weekly weighted direct slaughter premiums and discounts

	Head count	Percent (by head)	Total lb.	Grade prices, carcass cwt.	Net result prem./disc.
Quality grade:					
Prime	0	0.0%	0	$16.56	$0.00
Choice		91.2%			
CAB brand	15	26.3%	10,532	$14.78	$1,556.84
No CAB	73	64.9%	25,192	$10.28	$2,590.24
Select	5	8.8%	3,256	($9.72)	($316.42)
Standard	0	0.0%	0	($24.73)	$0.00
Hard bone	0	0.0%	0	($37.51)	$0.00
Dark cutter	0	0.0%	0	($38.13)	$0.00
				Quality grade premium/discount:	**$3,830.66**
Yield grade:					
YG 1	2	3.5%	1,452	$4.20	$60.98
YG 2	30	52.6%	20,131	$1.98	$398.59
YG 3	23	40.4%	15,965	($0.17)	($27.14)
YG 4	2	3.5%	1,432	($14.04)	($201.05)
YG 5	0	0.0%	0	($21.13)	$0.00
				Yield grade premium/discount:	**$231.38**
Weight:					
535 lb. and down	0	0.0%	0	($23.38)	$0.00
975 lb. and up	0	0.0%	0	($23.29)	$0.00
				Weight discount:	**$0.00**
				Total premiums/discounts:	**$4,062.05**

Break it down

It's helpful to break the data translation process down into parts. Certified Angus Beef LLC (CAB)-licensed feedlots have access to a "Carcass Value Worksheet" that allows for a quick read. Inserting simple carcass data [YG, quality grade (QG) and hot carcass weight (HCW)] into an example grid shows the resulting dollar values and variations for any group of cattle (see Table 1).

Using weekly market data from the USDA as a base, we can derive real-time market figures to show if the cattle would have been profitable on a grid. The CAB worksheet summarizes premiums and discounts for such grid components as quality grade, yield grade, hot carcass weight and CAB brand acceptance.

It also shows the variation from the highest- to the lowest-priced carcass, graphing the average dollar return of the top 25% vs. the bottom 25% (see Table 2). That is a useful snapshot of what could be achieved by culling out the poorest cattle. Another summary shows premium or discount across the entire pen and by grid component.

The worksheet isn't perfect and doesn't match any one grid, but it acts as a barometer to show the relative returns on a group of cattle had they been sold on a similar quality-based grid during that marketing window. As a barometer of economic pressure, this tool can help producers make those diamonds.

Table 3: High- and low-profit percentile groups

Percentile group	In wt., lb.	Est. out wt., lb.	Carcass wt.	Dressing percent	REA, sq. in.	Marbling score	YG	Backfat, in.	Days on feed	ADG, lb.	Carcass price/cwt.	Total carcass value	Profit
Top 20%	623	1,305	795	60.9%	13.8	1,072	2.84	0.50	180	3.81	$145.08	$1,153.23	$96.32
Bottom 20%	531	1,177	705	60.0%	12.3	1,044	3.05	0.52	192	3.39	$138.64	$976.59	−$95.71

Table 2: Carcass price summary

Base price (USDA weighted average)	$124.42
Premium or discount/cwt.	$10.42
Net final carcass price/cwt.	$134.84
Net equivalent live price/cwt.	$85.97
Highest carcass value/cwt.	$141.18
Lowest carcass value/cwt.	$114.53
Top 25% average values/cwt.	$138.13
Bottom 25% average values/cwt.	$129.27

Net premiums and discounts by category

	Per cwt.	Per head
Quality grade	$9.83	$67.20
Yield grade	$0.59	$4.06
Carcass weight	$0.00	$0.00
Net effect	$10.42	$71.26

Feedlot summary

Detailing feedlot performance can be a bit trickier than pricing carcasses by individual merit. More feedlots are trying to provide individual weights, but the most common approach for other data is to summarize into a pen average. You get average daily gain (ADG) and feed conversion across the entire pen.

Measuring final live weight of fed cattle prior to shipment is a laborious process that can add stress and take away harvest weight. Sellers try to avoid both of those consequences. That's why many feedlots forego this step in the interest of reaping more pay weight while avoiding bruises and dark-cutting carcasses.

However, final weights can be reasonably estimated using the pen-average dressing percentage and individual carcass weights. Subtract the receiving weight from the estimated final weight and you're left with total feedlot gain for each animal. Divide total gain by days on feed and you're now equipped with average daily gain for each calf.

Some of the more sophisticated feeders apply computer-generated growth models to estimate individual feed intake and the derived feed-to-gain ratios. Even the simple average daily gain data can provide sound measures to aid in culling the cow herd and selection of sire lines. Listing each calf's performance in a line-by-line comparison is an effective way to identify the nonperformers and the big achievers.

Taking this a step further, we can categorize each animal by profit per head, and then compare the top 20% to the bottom 20%. This helps analyze those traits that brought about differences in net return (see Table 3). Perpetuating the cow or sire lines represented in the top 20% group should be a step in the right direction.

We do need to look at individual animals in the data to make sure the reasons for high or low net return make sense. For instance, a Select, YG 2 steer that gained more than 4 lb. per day with a final carcass weight of 1,450 lb. may have brought back a high net return yet not represent the genetic package that will create an efficient set of cows. Human judgment must act as a control on computer analysis.

A balanced approach to selection is always appropriate, but steady pressure can be applied to the economically significant carcass and performance traits without detracting from other areas. If 20% of the cow herd is typically culled each year, there is room to include these parameters in deciding which cows need to find a new home.

Likewise, if you manage your cattle in a way that allows for individual sire ID, you've put yourself in a position to know which bulls are improving or detracting from these traits. Without doing any single-trait selection, a data-minded producer can steadily make the changes that will ultimately create not just diamonds, but added dollars at the feedlot and packing plant.

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[PHOTO BY MICKY WILSON]