Threshold to Profit

Cattle price breakeven calculators put quality into the equation for educated decisions.

Story by
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Cattle enterprises are risky business. You can invest a year's input into one annual calf sale, or look into ownership in the growing and finishing phases. As market prices move up and down, you have to appreciate a new tool that calculates "breakeven," the threshold to profit. Paul Dykstra, beef cattle specialist with Certified Angus Beef LLC (CAB), developed a calf price breakeven calculator to do just that.

"This tool helps you understand the market and make the tough calls on whether to accept a bid," he says. "It can also help you make an informed decision on whether to retain ownership and finish your cattle."

Available at *www.cabpartners.com/ facts/breakeven.php*, the breakeven calculator is a spreadsheet that can establish a reference point for producers. But an accurate calculation can only be determined if users enter precise data.

"Numbers you plug in must be solid, either taken from herd history,

futures markets or a feedlot manager who has records of similar calves with similar history," Dykstra says. "The more you can document similarities, the more accurate [the] results."

The calculator begins with an ending price for fed cattle, projected from the Chicago Mercantile Exchange (CME) Live Cattle Futures. It works backward to predict some aspects of how your calves will perform in the feedlot, accounting for input costs and the final premiums and discounts.

"All these factors interact in the educated — or calculated — guess at a breakeven price for the day when your calves would be sold," Dykstra explains.

This calculator is unique because it factors in the premiums and discounts associated with percent Prime, the *Certified Angus Beef®* (CAB®) brand, Choice and lower quality grades, yield grades and carcass weights. It's easy to use for a technical tool: Just hover the cursor to see instructions for each cell, or download the cell-by-cell guide.

"We didn't completely reinvent breakeven, but there are new features

that are often overlooked, including freight charges and dressing percentages," Dykstra adds.

With enough detailed information, producers can decide whether to retain ownership or when to sell the calves after evaluating the input costs. And when the decision is based on more than a hunch, it can be a topic of discussion at the bank.

Knowledge is the key in deciding whether to hedge cattle, forward-contract or wait to sell. "The more you can educate yourself about your cattle, the better your prediction will be," Dykstra points out.

Herd history provides average daily gain, feed conversion and carcass quality. If those are unknown, feedlot managers or nutritionists can help find logical numbers from calves of similar genetics, weight, age and nutritional background. When all the numbers are entered, the calculator shows cost of gain and breakeven.

"If you're the seller, you might see that as a floor price," Dykstra notes. "On the other hand, a buyer might see breakeven as the ceiling. The market works because no two

producers plug in the same numbers. One bidder may walk away because the numbers don't work for him, while another may bid significantly higher and see room for profit."

The "fed-cattle price calculator," also available on the *www.cabpartners.com* site, works in the same way. When evaluating the futures price for the probable harvest month, those who use this calculator — whether calf buyers or those who have retained ownership of their calves — can know their target floor.

Overall, these are user-friendly tools, Dykstra adds. "All the calculations are performed by the spreadsheets, leaving just the data collection and entering to the producer."

Buying or selling, "nobody wants to just break even," he allows. "But with quality cattle and a cultivated awareness of the market, these tools can help you cross that threshold and harvest some profit."

Editor's Note: *Author Julie Vrazel is the spring 2010 CAB Industry Information intern.*

Cattle Breakeven Analysis

Finished Cattle Marketing Parameters	
Live Cattle Futures Price for Delivery Month	$95.00
Basis	-$2.00
Age/Source Verified Premium per Head	$35.00
Checkoff per Head	$1.00
Other Premium per Head (natural, etc.)	$0.00

Live Market	
Live Price	$95.57
Equivalent Carcass Price (at 63.5% yield)	$150.50

Grid Market	
Carcass Price (with grid and freight to packer)	$154.01
Equivalent Live Price (at 63.5% yield)	$97.80

Feeder Calf Delivery Parameters		
Number of Head	160	
Weight per Head	625	
Trucking Cost / Mile	$3.10	
Trucking Mileage	900	
Number of Loads	2	
Cattle Weight per Truck	50,000	
	$ / Cwt.	$ / Head
Trucking Cost	$5.58	$34.88

Feeding Parameters	
In Date	10/1/10
Average Daily Gain	3.2
Feed Conversion (DM)	6.10
Pay Weight Out (after shrink)	1325
Yardage Charge / Head / Day	$0.35
Vet/Med./Processing Cost Per Head	$12.00
Death Loss Percentage	1.0%
Ration Cost Per Ton (DM)	$168.00
Equity per Head at Purchase	$150.00
Interest Rate % (Cattle)	6%
Interest Rate % (Feed)	6%

Instructions

1. Only blue cells can be changed to modify assumptions
2. **All blue cells must be properly filled** in order for calculations to return accurate results
3. If cattle or feed will not be financed, then make "Interest Rate %" equal to zero
4. Quality Grade percentages for Prime, Choice, Select and Standard must equal 100%
5. CAB® % (cell F16) is not included in the percentage total for cell F20, it is considered separately.
7. The Choice premium and Select discount are calculated together and placed against the
   "Plant Average % Choice" to derive the net premium/discount from Choice and Select.
7. All Feeding Parameters are figured on a "pay weight to pay weight" basis.
8. Click on red triangle for explanation of specific data to enter into cell.
This spreadsheet guarantees neither performance nor market conditions for cattle, commodities or services.

Grid Marketing Parameters				
Quality Grade				
Category	Percentage	Premium or Discount $/Cwt	Net Effect	$ / Cwt
Prime	5%	$10.00		$0.50
CAB®	30%	$3.00		$0.90
Choice	90%	CH/SE Spread	$8.00	$2.48
Select	5%			
Standard	0%	($20.00)		$0.00
Total	100.00%		Net QG Effect	$3.88

Yield Grade				
Category	Percentage	Premium or Discount $/Cwt	Net Effect	$ / Cwt
YG 1	5%	$4.00		$0.20
YG 2	25%	$2.00		$0.50
YG 3	55%	$0.00		$0.00
YG 4	15%	($7.00)		($1.05)
YG 5	0%	($20.00)		$0.00
Total	100.00%		Net YG Effect	($0.35)

Weight				
Category	Percentage	Discount $/Cwt	Net Effect	$ / Cwt
<550 lbs.	0%	($30.00)		$0.00
>1,000 lbs.	0%	($20.00)		$0.00
			Net Wt	

The above shows a portion of the calf price breakeven calculator available at *www.cabpartners.com/facts/breakeven.php*. Producers fill in shaded areas to arrive at an estimated breakeven price for the day calves are sold.