

Application of Selection Indexes

Understand your operation goals to use the correct index.

by *Kindra Gordon*, field editor

Don't make sire selection more cumbersome than it needs to be," emphasized University of Nebraska Extension beef genetics specialist Matt Spangler as he kicked off the genetics session during the second day of the Range Beef Cow Symposium in November.

Sire selection "would be simpler if only one trait affected a cow herd's profitability," Spangler acknowledged. "In truth, there's a multitude of traits."

So how should a producer approach the sire-selection process? Spangler shared a list of three questions producers should ask themselves:

1. What are my breeding and marketing goals?
2. What traits directly impact the profitability of my enterprise?
3. Are there environmental constraints?

Regarding the traits that impact profitability, Spangler emphasized it is important to recognize the difference between "economically relevant traits," or ERTs, and indicators of those traits. He defined ERTs as traits that are directly associated with a revenue stream or cost.

For example, calving ease is an economically relevant trait, whereas birth weight is an indicator of that trait.

"Producers don't get paid for birth weight or have a direct cost for that, but they do have a cost if they have to provide labor when a calf is born or if there is calf mortality due to calving ease," Spangler pointed out.



► Matt Spangler advised producers, "Know your costs; select on profit, not just revenue."

As a second example, he noted that ribeye area is an indicator of the economically relevant trait yield grade.

As producers wade through the abundance of traits, selection indexes are a powerful tool, Spangler noted, adding, "You have to use the one appropriate for your breeding objectives."

For example, he said, "The Angus \$B index (beef value index) is the most popular index, and it is a great index, but if you sell at weaning and retain heifers, it's not the index to use for your marketing goals."

Looking to the future, Spangler emphasized that improvements in current indexes still need to be made by increasing the number of economically relevant traits that have expected progeny differences

(EPDs). Additionally, he expressed concern that many ERTs are not currently evaluated nor collected routinely in the seedstock sector, even though they drive value downstream.

He pointed out that, for the future, enterprise-level profitability needs to move closer to industry-level profitability. For instance, he gave the example that currently no direct economic benefit for a producer exists to improve tenderness, even though it is valued by the industry.

In closing Spangler advised producers, "Know your costs; select on profit, not just revenue."

He added, "Multiple-trait selection is critical and could become more cumbersome, but economic indexes help alleviate this. Find and use index values that meet your breeding objective."

Spangler shared the following websites as helpful resources: <http://beef.unl.edu>, www.beefefficiency.org, www.nbceec.org, www.ebeef.org. He also referenced the across-breed EPD tables as a tool to compare traits between breeds. View the 2015 table at www.angus.org/Nce/AcrossBreedEpdAdjFactors.aspx.



Editor's Note: Kindra Gordon is a cattlemaster and freelance writer from Whitewood, S.D. This summary is part of the Angus Journal's online coverage of the 2015 Range Beef Cow Symposium Nov. 17-19, 2015, in Loveland, Colo. For additional coverage, to review this presentation's PowerPoint or to listen to the presentation, visit the Newsroom at www.rangebeefcow.com. The Angus Journal's coverage of the event is made possible through collaboration with the event committee and sponsorship of LiveAuctions.tv.

Table 1: Traits of importance

Terminal traits	Maternal traits
Calf survival	Female fertility
Male fertility	Maternal calving ease
Disease susceptibility	Maintenance requirements
Calving ease direct	Longevity
Growth rate	Maternal weaning weight (milk)
Feed efficiency	Disease susceptibility
Carcass quality/composition	Adaptation
	Temperament

As part of the Angus Journal's full meeting coverage, you can listen to Matt Spangler's presentation at <http://bit.ly/10r3B4b>.