



Balanced Selection Includes Carcass

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Commercial ranchers are acutely aware of costs and of the importance of reproductive and production traits in the genetics they buy. Long lived commercial cows that consistently wean large healthy calves over time are a key to profitability of most commercial farming and ranching operations. Over the last several years the ability to deal with volatility in both markets and weather has been paramount to survival. While sire selection is a day to day activity in the operation of a cowherd, the results can impact an operation for many years into the future. When selecting sires, it is now more important than ever to think forward about potential marketing strategies and value adding, 3 or more years into the future.

This thinking forward raises the issue of carcass merit with increasing frequency. Cattle that are direct marketed to the feedlot, or fed out and sold to an endpoint market such as a carcass grid will see carcass characteristics directly impact the profitability of the base cowherd. With emerging information technologies and traceability becoming ever more a reality, the inclusion of carcass characteristics in sire selection represents both a risk mitigation and potential profit strategy at the cow/calf level. Carcass data collected by the Canadian Simmental Association shows tremendous variation in the cattle population, both in terms of carcass characteristics, but also in other traits such as days to finish and overall carcass value.

Lee Nilsson of XL Foods reinforces these value differences. “There are seasonal differences in value between AA and AAA marbling, but what we rarely see is a dependable demand for A carcasses. The single A discount can quite often be twice as much as the difference between AA and AAA”, he says. Meat is sold by the cut and demand is determined by the consumer and relayed through the retailer. The “cutout” value of the carcass determines what the meat and ultimately the live animal is worth. “We have to provide what the consumer wants and the retailer ordered, and that may not be the whole carcass. We deal with feedlots where we have a pretty good idea what we will get in terms of days on feed, breed makeup and age.” Nilsson states. “Genetic background is an important part of the equation when trying to come up with marbling predictability, which is vital to filling customer orders.”

Stewart Ainsworth of Lazy S Ranch at Mayerthorpe, Alberta sees large value differences in the cattle that they feed out, and that is translated into seedstock. “The goal of every purebred breeder should be to add value to their bull customer. There are huge differences in value. Through scanning and carcass data, we have identified cow families that only produce single A cattle. It doesn’t matter how good they look, they don’t fit our program.” Lazy S uses both chute-side feedlot and UGC seedstock scanning and see the relationship between the two in terms of dollars and sense. Ainsworth’s have several customers who have made tremendous strides with carcass merit in their cowherds without giving up the maternal qualities of the herd. Stewart speaks from experience when he says, “There are thousands of dollars of difference between progeny of sires that make the grade and those that don’t.”

Lee and Tina Robson of Lockhart Valley Simmental feed out their own cattle and also buy some bull customer calves to feed. They agree that there is a lot of variation within pens of cattle representing big differences in value. “There can be several hundred dollars difference between calves”, says Tina. Lee



adds “We can buy cattle with known backgrounds for more money. I can name groups of sires where I would pay more for the calves.” Both stress balance and moderation in selection. “Avoid the fads and use a good crossbreeding program,” they both advocate. Their customers that use numbers carefully and breed good cattle, see big value differences in their fed cattle and feeder calves. They have found that despite their relatively small size as a feeder that “You have a track record, and buyers know who you are, even if you are a smaller producer. We are fortunate that we can use the variation within our breed to obtain the performance we need.”

The Leedale colony buys a lot of Simmental bulls and is one of the Robson’s customers. Danny Hofer firmly believes in buying good bulls, and will spend extra for the bulls he wants. “The bulls you buy become your cowherd”, he says. “Cross breeding and performance is important. You don’t have to buy a bull just because you are at the sale.” The colony has sold calves and obtained carcass information back. “Our carcass data last year was pretty good. With good bulls and crossbreeding you can have calves with good performance and good carcass.”

Rod Wendorff of Windy Ridge Ultrasound has a lot of experience scanning both feedlot and seedstock cattle. Feedlot ultrasound late in the feeding period is highly related to the finished animal. Several of Rod’s feedlot customers realize value by using ultrasound to direct cattle to appropriate markets and may also dramatically reduce days on feed in specific groups of cattle. While he uses chute-side technology on feedlot cattle to sort them into value based outcomes, he recommends that seedstock producers use the UGC certified approach in order to take advantage of breed association programs and participation in carcass EPD. The cost to scan using the UGC protocol is roughly \$20 per head, which includes labour, travel costs and lab fees. Rod says “with our coordinated travel schedule the cost of getting a technician there is quite small.” The CSA has also offered a carcass program to cover part of this cost. The ultrasound rebate program provides a credit of \$10 per head for members who collect UGC seedstock scans on cattle in valid contemporary groups.

“The people I scan for run very balanced selection programs. It is gratifying to see people using the results in their program,” Rod says. “Many of these same producers are having difficulty knowing where to turn for their next herd sire since many of the cattle that may interest them are in herds that don’t scan.”

Seedstock ultrasound is highly predictive of relative performance of carcass progeny. Mark Henry Director of Operations for the Centralized Ultrasound Processing, CUP Lab®, the largest processor of ultrasound images for beef cattle in North America, sees producers that are serious about making progress on carcass traits using ultrasound in balanced selection programs. “Some are using ultrasound and EPD to remove animals from the bottom, while others are using it to determine top end animals with which to produce more progeny”, he states. “Producers who may be waiting for a silver bullet and want to do all of their carcass selection in one shot, may not be seeing that the world is passing them by while they wait. The technology of ultrasound lets them make real progress now.”

Jim Pritchard, an ultrasound technician and livestock data management specialist with West Virginia University says that producing cattle that “feeders remember and come back for” is one key to long term profitability and echoes the balanced approach. “We have a lot of small producers in our state and serve a largely high end regional white tablecloth trade. I recommend that they use ultrasound as a culling method for the bottom end of their cows, after all other criteria for weaning a



good calf have been met.” He states the example of a producer who was “dragged into scanning” in 1996 through a joint production sale. The producer has used ultrasound to trim the bottom off his herd, after everything else has been covered, and he hasn’t chased carcass outliers. “While he has improved his whole cowherd across the board, most of his progress in carcass traits has been achieved by identifying and culling the bottom end. This has added 1 to 1 ½ inches of rib-eye, while maintaining finish weight at around 1250 pounds and has moved his quality grades from a significant number of selects, to 100% USDA choice or better.”

While very useful in an individual program, it may not be fair to directly compare raw ultrasound results between farms due to differences in feeding programs and age. For the purpose of comparing cattle between operations the carcass EPD are a much better tool as environmental influences are removed and the evaluation pools seedstock ultrasound and feedlot carcass information across a wide range of cattle. If the sires you have been using have carcass EPD or other information, take time to investigate and if these sires are working for you, then you probably need more of the same.

The amount of emphasis that should be placed on carcass merit in sire selection varies depending on a variety of factors. Key among these is the marketing end point and method, and the role of the sire. If the sire is to be used in a strictly terminal role, with all calves going to slaughter then significantly more emphasis should be placed on carcass characteristics than a sire that is being used to produce replacement females. Additionally, if a producer is direct marketing to a feedlot, retaining ownership through feeding, or retaining ownership onto the rail then more emphasis and attention should be paid to the impact of carcass merit, since it has increasing influence on profitability. As stated before, this needs to be thought out into the future as a new sire will not have progeny ready for market for 1 ½ years (in the case of a weaned calf) at the earliest.

Carcass traits are part of a balanced selection program at the cow/calf level. It is often difficult to see the exact impact of superior carcass genetics on the bottom line, but there is significant value to be created and obtained from the marketplace. It is right and appropriate for commercial cattle operations to ask their seedstock suppliers for ultrasound or other carcass information. The vast majority of seedstock suppliers are concerned with their customers’ success and want to provide the tools necessary for that success. In many cases they may not be aware that you as a commercial producer are concerned or thinking about carcass characteristics.

Example of Value Differences In Feeder Cattle				
		Per Calf	Per Sire/Year (25 Calves)	Per Sire Cycle (3 years)
Feed Cost Savings	Based on meeting endpoint while saving 30 days on feed at \$0.39 yardage and \$1.50 per day for feed (\$2.50 Barley)	\$56.70	\$1,417.50	\$4,252.50
Yield	1% increase in yield on a 1350 pound live weight (13.5 pounds of carcass weight at Canfax 2008Alberta average Rail Price)	\$20.17	\$504.25	\$1,512.75
Marbling	\$5 Choice/Select Spread on 750 pound carcass	\$37.50	\$937.50	\$2,812.50
	\$15 Choice/Select Spread on 750 pound carcass	\$112.50	\$2,812.50	\$8,437.50



Yield & Marbling	\$5 Choice/Select Spread on 763.5 pound carcass	\$38.18	\$954.50	\$2,863.50
No Roll Discount	Value difference between A (\$20 Discount from AA) and AAA (\$10 Choice Select Spread) on 750 pound carcass	\$225.00	\$5,625.00	\$16,875.00

Meeting Mainstream Market Targets (Y1, AAA Target)			
	Cow Type		
	British	British x Continental	Continental
Sire Marbling	Moderate	Moderate to High	High
Sire Yield	High	Moderate	Moderate to Low
REA	High	Moderate	Moderate
Fat	Low to Moderate	Moderate	Moderate

Simmental Carcass EPD					
EPD	Units	Values	Top 25%	Average	Top 75%
Carcass Weight (CW)	Pounds	Larger > Heavier	15.0	3.4	-9.0
Rib-Eye Area (REA)	Square Inches	Larger > Bigger	0.12	-0.03	-0.18
Fat Thickness (Fat)	Inches	Larger > Fatter	-0.014	0.005	0.021
Marbling (Marb)	Marbling Units	Larger > More Marbling	0.18	0.11	-0.70