

Carcass Information

As most of you are probably aware by now, the new genetic evaluation has been released. Some of you will have noticed changes in some sires, and very little in others. The largest change has been in the area of carcass EPD. The new evaluation, using only Canadian data has many fewer animals with carcass EPD. This is being driven almost entirely by the lack of Canadian producers working on collection and submission of carcass and ultrasound data. To put it bluntly, you and your customers are facing an increasing need for carcass information.

Carcass EPDs are generated primarily by ultrasound from bulls, ultrasound from heifers, carcass records and the relationships between these three data sources. The EPD are expressed in terms of differences expressed in harvested carcasses.

How Carcass Value is Assigned

In Canada, carcasses from feeder cattle are paid based on weight and combination of yield grade and marbling. Yield is calculated from a measurement of rib-eye and fat thickness. As fat thickness increases, yield decreases and yield grade goes from 1 to 2 to 3. As rib-eye area increases yield increases and yield grade decreases (3 to 2 to 1). In the plant, for purposes of speed, a ruler is used to measure the length and width of the rib-eye and the fat thickness and cattle are classed into yield grade categories. There is good detail on this procedure at www.beefgradingagency.ca.

Yield Grade	Yield	Fat	REA
1	59% +	Less	More
2	54-58%		
3	53% -	More	Less

Carcasses are also assigned a value based on the degree of marbling they express. This is termed Quality Grade. Marbling is classified in 5 categories.

Quality Grade	Description
Canada Prime (AAAA)	Slightly abundant
AAA	Small
AA	Slight
A	Trace
Devoid	None

Work done in Canada has indicated value differences well in excess of \$0.20 per pound of carcass weight from the top of the scale to the bottom. Based on a 750 pound carcass that \$0.20 equates to \$150 per head. If we compared two sires producing 25 calves a year at the extremes of value, that equates to a \$3750 value difference each year. Even for producers who do not “rail” cattle, a portion of this value difference will be reflected in the bid price on live cattle.

This Isn't Good Enough for Genetic Evaluation

In order to assess the genetic merit of an animal, we require its pedigree, but we also require the component measures that produce yield and quality grades. In other words, when we collect carcass

data for genetic evaluation we require measurements on rib-eye area, fat thickness and marbling score, rather than the broad grade results of Y1/AAA. The reason for this is that we need to know the direction that a sire will take a breeding program, as well as how genetics will match up for commercial customers.

Let's look at an example of a breeder collecting data on his Simmental calves. The breeder has a Simmental bloodline that produces Y1/AA calves that are near the bottom of each category for both yield and quality grade. When your commercial customer uses these genetics on British cows he may experience Y2/AA calves. The same Simmental breeder has another bloodline that produces the same Y1/AA calves both these calves are near the top of the AA category and well in excess of 59% yield. On the same commercial customer's cows, the result is Y1/AAA feeder calves and a significant market premium.

By collecting weight, rib-eye, fat thickness and marbling grade and score measurements, we are able to accurately assess the merit of individual animals through genetic evaluation. This allows breeders to use carcass EPD to better match cattle together in their own and their customers breeding programs. We can consider using cattle with higher or lower levels of backfat for use in production of maternal genetics, or match large rib-eye areas across cows that may suffer in that department. It also allows targeting of specific levels of product marbling.

Detailed carcass knowledge also allows targeting of other potential value markets that may be very different from mainstream. Some of the best examples of this include Laura's Lean and some of the other regional markets in Canada. Targeting carcass characteristics can help prevent marketing mistakes where the type of cattle sold into a specific market, are mismatched to that market.

Collecting the Data

Ultrasound data can be collected by a UGC certified technician on your calves between 320 and 430 days of age. A listing of certified technicians is available at www.ultrasoundbeef.com. The data will be processed through an accredited lab and reports will be returned from the CSA office. The data will then be included in the next genetic evaluation.

Carcass data can be collected on a variety of animals and options are varied. As well, it is possible to enter sires into the CSA progeny testing program. If you are considering collecting carcass data it is worth consulting with the CSA office to ensure that the right data can be collected and to ensure that events are coordinated.

The CSA offers a carcass and ultrasound rebate program that provides a credit to member's CSA accounts for ultrasound and carcass records.

Breed Average EPD and Description

Breed Average EPD as well as the top 25, 75 and 100th percentiles are shown for the following traits:

CWT – carcass weight EPD in pounds, a larger value indicates heavier carcass weights

REA – rib-eye area in square inches, a larger value indicates larger rib-eye muscle area (more yield)

Fat – fat thickness in inches, a larger value indicates more fat (less yield)

Marb – marbling score, a larger value indicates higher levels of marbling

	CWT	REA	Fat	Marb
Avg	3.35	-0.03	0.005	0.06
25	15.0	0.12	-0.014	0.18
75	-9.0	-0.18	0.021	-0.06
100	-50.0	-0.89	0.112	-0.70