Breed Improvement Article

Carcass EPD
By Sean McGrath

The Canadian Limousin Association will release with its' Spring 2005 EPD evaluation new EPD for carcass traits. The new EPD are calculated using a combination of carcass and ultrasound information and are the result of a joint research project with NALF and Colorado State University. This is a basic overview of the new EPDs.

Carcass Weight (CW) – similar to other weight traits, a larger value indicates heavier carcass weights in pounds at a set age.

Rib-Eye Area (REA) – rib-eye area describes the difference in eye muscle area between the progeny of two sires in square inches. A larger value indicates more eye muscle area at a constant age.

Fat (Fat) – fat indicates the differences in fat cover around the rib-eye between the 12 and 13th rib. This difference is expressed in tenths of inches with a smaller number indicating less backfat.

Marbling Score (Marb) – the marbling score EPD is expressed in USDA Marbling Score Units. Animals with higher Marb EPD will produce calves that express more marbling at a constant age.

These new EPD are important tools for breeders who are trying to effect change in carcass characteristics. By measuring carcass characteristics on their cattle, Limousin seedstock suppliers can make informed decisions when placing genetics in customer cow herds.

Let's compare 2 sires.

	CW	REA	FAT	MARB
Sire A	35.0	1.00	-0.01	-0.20
Sire B	-10.0	0.25	0.01	0.30

If we were to mate these two sires to the same group of cows, we would expect very different results in the calf crop. We would expect calves from Sire A to have 45 pounds more carcass weight at slaughter than calves from Sire B (35.0 - -10.0 = 45). We would also expect the calves of Sire A to have rib-eyes that are ¾ of a square inch larger than those from Sire B (1.00 - 0.25 = 0.75). The calves from Sire A would also have 2/10 of an inch less backfat (-0.01 – 0.01 = -0.02). This is approximately 5 millimetres of fat. In terms of marbling, we would expect calves from Sire B to exhibit much higher marbling scores with a difference of ½ of a USDA marbling score in EPD (-0.20 – 0.30 = -0.50).

These are two very different bulls, with two very different purposes in the industry. Sire A is a logical choice for use on high marbling British based cows to increase yield and produce a premium product. As well, he is a logical choice of the two bulls to produce product for a program such as Laura's Lean that rewards high lean yield with minimal marbling.

Sire B is a better fit in a program that rewards marbling over yield, or for use on cow herds that have high yield characteristics.

Knowing the carcass characteristics of our cattle does not identify what is right or wrong in our cattle, rather it gives us the knowledge and power to advance our seedstock in the direction that your customers require.

For breeders that are interested in the carcass characteristics of their cattle, consider ultrasounding your yearling bulls and heifers or working to collect carcass data on your non-select calves or customer cattle. For more information contact the CLA.

Current Population EPD Averages

	CW (lbs)	REA (in2)	Fat (in)	MARB (units)
Average	13.7	0.11	0.01	0.00