

Notes on the New TGE Evaluation

Breed Average Carcass EPD						
	Num	CWT	REA	FAT	LY	MARB
Calves	10,266	9.69	0.07	0.39	-0.45	0.03
Sires	1,337	9.85	0.07	0.35	-0.35	0.03
Dams	15,387	8.35	0.04	0.24	-0.26	0.02

The Spring 2010 Total Genetic Evaluation (TGE) for Canadian Charolais Cattle represents an evolution in the way the CCA evaluation is conducted. The new evaluation was conducted by Dr. Denny Crews and Dr. Scott Speidel at the Centre for Genetic Evaluation of Livestock, located at Colorado State University. The former evaluation included only those animals with carcass records, their direct relations and their contemporaries. The new evaluation utilizes the entire carcass and CHARM datasets for evaluation and includes ultrasound records collected and submitted by CCA members. Ultrasound traits used in the evaluation include Rib-Eye Area (UREA), Back Fat (UFat) and Intramuscular Fat (UIMF).

Published EPD include all animals that were previously published, as well as any animals with a scan record, animals that have progeny with a scan record, or animals that have a sire or dam with their own scan record or a sire or dam with a scan or carcass record on their progeny. Published animals are tied directly through parents or contemporaries to the carcass and ultrasound datasets.

Heritabilities and Genetic Correlations Used in the Canadian Charolais TGE										
	BW	WW	PWG	CWT	REA	Fat	Marb	UREA	UFat	UIMF
BW	0.50	0.33	0.29	0.39	0.21	-0.21	0.00	0.16	-0.16	0.00
WW		0.25	0.39	0.72	0.19	0.30	0.00	0.30	0.23	0.00
PWG			0.21	0.49	0.38	0.21	-0.38	0.35	0.16	0.27
CWT				0.33	0.47	0.18	-0.21	0.24	0.10	0.10
REA					0.39	-0.35	0.00	0.72	-0.30	0.00
Fat						0.43	-0.19	-0.20	0.77	0.10
Marb							0.34	0.00	0.00	-0.71
UREA								0.39	-0.30	-0.10
UFat									0.48	0.20
UIMF										0.33

Heritabilities are on the diagonal, Genetic Correlations are above the diagonal

While ultrasound data is included in the genetic evaluation, the EPD as published reflect predicted differences between progeny on a Finished Steer Carcass basis.

EPD are reported for:

Carcass Weight (CWT) – The difference in progeny carcass weights in pounds.

Rib-Eye Area (REA) – The difference in progeny rib-eye area in square inches

Fat (FAT) – The difference in progeny backfat thickness in millimetres

Lean Yield (LY) – The difference in progeny lean yield in percent (LY is a combination of Fat thickness and Rib-eye area and represents the amount of meat in the carcass)

Marbling (MARB) – The difference in progeny marbling levels presented in marbling score units

Calves – the current population of calves born from January 1st, 2008 to December 31st, 2009. Calves are used in the calculation of Percentile Rankings

Sires – sires of calves born from January 1st, 2008 to December 31st, 2009.

Dams – dams of calves born from January 1st, 2008 to December 31st, 2009.

Percentile Ranking Carcass EPD					
Pctl	CWT	REA	Fat	LY	Marb
N	10,266	10,266	10,266	10,266	10,266
Avg	9.7	0.07	0.39	-0.45	0.03
Min	-26.5	-0.51	-1.04	-5.39	-0.18
Max	42.1	0.79	1.90	3.55	0.20
SD	8.9	0.12	0.33	0.84	0.04
1	30.4	0.38	-0.35	1.57	0.13
2	27.8	0.34	-0.25	1.29	0.12
3	26.2	0.31	-0.20	1.13	0.11
4	24.8	0.30	-0.16	1.01	0.10
5	23.8	0.28	-0.12	0.91	0.10
10	20.6	0.22	-0.02	0.61	0.08
15	18.5	0.19	0.06	0.40	0.07
20	16.9	0.17	0.12	0.23	0.06
25	15.6	0.15	0.18	0.10	0.06
30	14.3	0.13	0.22	-0.01	0.05
35	13.3	0.11	0.26	-0.13	0.05
40	12.2	0.09	0.31	-0.23	0.04
45	11.1	0.08	0.35	-0.34	0.04
50	10.0	0.06	0.39	-0.45	0.03
55	9.0	0.05	0.43	-0.55	0.03
60	7.9	0.03	0.47	-0.66	0.02
65	6.7	0.02	0.51	-0.77	0.02
70	5.4	0.00	0.55	-0.89	0.01
75	4.1	-0.01	0.60	-1.01	0.01
80	2.5	-0.03	0.66	-1.15	0.00
85	0.7	-0.05	0.72	-1.31	-0.01
90	-1.8	-0.08	0.80	-1.51	-0.02
95	-5.8	-0.13	0.94	-1.79	-0.03
100	-26.5	-0.51	1.90	-5.39	-0.18

Calves	N	Avg	SD	Min	Max
CWT	10,266	9.7	8.9	-26.5	42.1
REA	10,266	0.07	0.12	-0.51	0.79
FAT	10,266	0.39	0.33	-1.04	1.90
LY	10,266	-0.45	0.84	-5.39	3.55
MARB	10,266	0.03	0.04	-0.18	0.20

Sires	N	Avg	SD	Min	Max
CWT	1,337	9.9	11.3	-36.0	47.6
REA	1,337	0.07	0.16	-0.6	1.02
FAT	1,337	0.35	0.43	-1.21	2.17
LY	1,337	-0.35	1.07	-4.72	3.86
MARB	1,337	0.03	0.05	-0.34	0.26

Dams	N	Avg	SD	Min	Max
CWT	15,387	8.4	8.9	-24.3	45.0
REA	15,387	0.04	0.13	-0.71	0.86
FAT	15,387	0.24	0.36	-1.28	1.89
LY	15,387	-0.26	0.92	-5.27	3.73
MARB	15,387	0.02	0.05	-0.22	0.22

Genetic Trends for Carcass Merit						
YEAR	Num	CWT	REA	Fat	Marb	LY
2009	2,661	9.3	0.07	0.43	0.03	-0.54
2008	7,605	9.8	0.07	0.38	0.03	-0.41
2007	9,540	8.8	0.05	0.33	0.03	-0.38
2006	10,821	8.4	0.05	0.31	0.02	-0.38
2005	11,602	8.4	0.04	0.26	0.02	-0.30
2004	14,211	8.0	0.03	0.24	0.02	-0.29
2003	18,268	7.3	0.02	0.19	0.01	-0.23
2002	21,857	7.4	0.02	0.16	0.01	-0.15
2001	24,248	7.1	0.02	0.11	0.01	-0.08
2000	23,167	7.1	0.02	0.08	0.01	0.01
1999	24,391	6.5	0.01	0.05	0.01	0.03
1998	25,165	6.2	0.01	0.03	0.01	0.05
1997	19,429	6.0	0.00	0.03	0.01	0.06

