



Breed Improvement Article

Carcass Data – The Basics

By Sean McGrath

Several Limousin breeders have expressed interest in collecting carcass data on their genetics. As customers are looking at retained ownership, and other marketing options whether by design or otherwise, carcass characteristics become important to a customer when they own cattle through to slaughter.

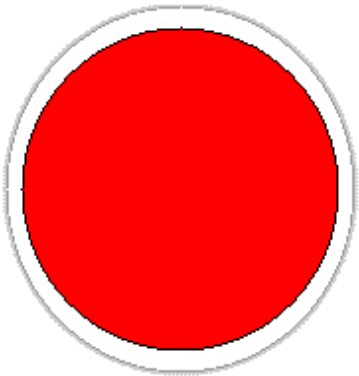
I thought it would be useful to discuss in brief what some of the basic carcass data means.

All cattle are graded based on a few select criteria. Youthful cattle fall into the A grades. This is typically what our feedlot steers and heifers fall into. Older animals fall into the D grade, or E grade in the case of bulls. Off grades of youthful animals are usually put into the B category.

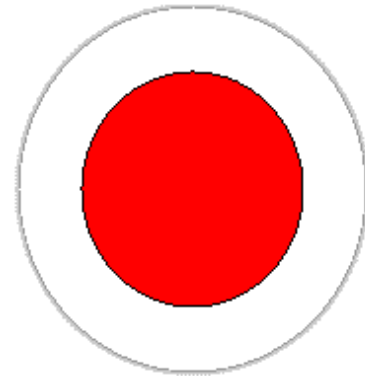
For the purposes of genetic evaluation, what we are interested in is data on young or A class cattle.

Cattle are graded by assessing the entire carcass and then grading the rib-eye between the 12th and 13th rib.

Yield



Y1



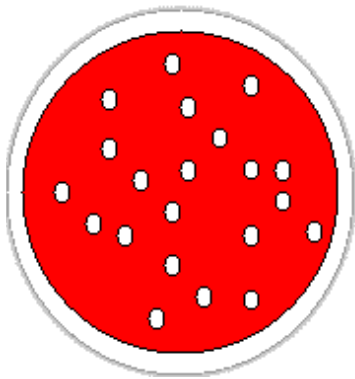
Y3

Yield is a classification of how much meat is in the carcass. A Yield Grade 1 or Y1 has more meat than a Y2 which has more meat than a Y3. Yield grade is assessed by looking at the overall muscling of the animal, and the size of the rib-eye relative to the amount of fat surrounding it. If the circles below represent a rib-eye with the surrounding fat, it is easy to see the difference between a Y1 and a Y2, or Y3.

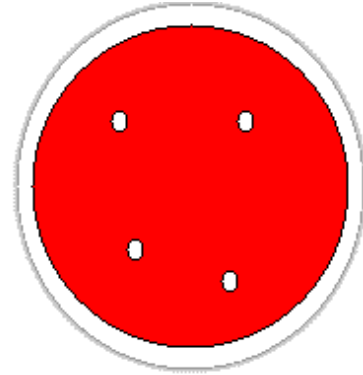
Quality Grade

Quality Grade is the level of marbling as measured on the ribeye. Marbling is the flecks of fat in the rib-eye. Grading is done after the carcass is chilled as this allows the grader to see the fat, since it turns white when cooled. This is similar to what happens if you leave a frying pan with oil in it to cool on the stove.

Marbling is graded on the rib-eye as well. Cattle with the highest level of marbling are termed Prime, followed by AAA, and AA, with A having the least amount of marbling. If we look at the rib-eye circles below we can see the difference between a Prime or AAA and an A.



AAA



A

Off Grades

Off grades are used for Youthful cattle that don't fit the criteria for an A grade.

B1

Occasionally you may see a B1 grade assigned to a young animal. This classification is for animals that are devoid of fat (less than 2 mm) around the rib-eye or are devoid of marbling.

B2

The B2 grade is used to designate cattle that have distinctly yellow fat cover. This grade is rarely used in Canada, where we finish calves on high concentrate diets.

B3

This grade identifies cattle with extremely deficient muscling characteristics. Typically this grade is not a factor with beef breeds of cattle.

B4

A B4 designates what is typically known as a dark cutter. These are bad news and typically are heavily discounted. Often dark cutting is caused by reaction to stress prior to slaughter.

Why We Grade

Cattle are graded to separate them into specific markets based on their characteristics. Grading is also often used for a term of payment. This is typically referred to a grid pricing. A typical grid example is shown in the table. Generally cattle within a carcass weight range that exhibit higher yields and more marbling command a higher premium.

	Y1	Y2	Y3
Prime	\$\$\$\$	\$\$\$	\$\$
AAA	\$\$\$	\$\$	\$
AA	\$\$	\$	
A	\$		

In other programs such as Laura's Lean the grid would look more as follows.

	Y1	Y2	Y3
Prime			
AAA			
AA	\$\$\$		
A	\$\$\$\$	\$	
B1	\$\$\$\$	\$	

Since overall fat level and yield are antagonistic, the challenge for breeders is to maintain or increase yield and target specific fat deposits (marbling) in their cattle without increasing overall fat levels. This is why breeders are starting to collect and use ultrasound and carcass data in their breeding programs.

Knowledge of carcass genetics allows breeders to target their genetics into specific markets that may be very different and yet rewarding.

We will touch more on carcass data for genetic evaluation in future articles, however there is some great information available on the internet for those who are interested:

Canadian Beef Grading Agency – www.telusplanet.net/public/cbga/

Canadian Beef Export Federation – www.cbef.com

Check out the Grading, Inspection and Product Catalogue menus at the top of the page.