



Profile Results Key for Beef

The **IGENITY** Beef Profile uses a single DNA sample from an animal to make a number of genetic tests. The results of these tests will enable beef producers to make Breeding, selection and management decisions with greater precision and confidence than ever before.

IGENITY Scores should be used as an additional layer of information, to compliment the tools currently employed in selecting and managing animals (ultrasound, EBVs, performance data, etc.).

The values listed in the table below, reflect the relative difference, on average, expected in a group of animals compared to contemporaries with an **IGENITY** profile score of 1. A brief explanation of each trait follows the table.

IGENITY profile results and associated values*											
IGENITY Result	Tenderness in lbs. of WBSF	USDA Marbling Score	% Choice Based on Quality Grade	Yield Grade	Hot Carcass Weight lbs.	Back Fat Thickness in Inches	Ribeye Area in Square Inches	Heifer Pregnancy Rate	Stayability	Maternal Calving Ease	Docility
10	-2.3	96.0	53.7	1.2	44.6	0.23	2.1	10.2	23.2	12.9	30.3
9	-2.0	84.7	47.1	1.0	40.0	0.20	1.9	8.9	20.4	11.4	26.8
8	-1.9	74.0	41.2	0.9	34.8	0.18	1.6	7.8	17.7	10.0	23.2
7	-1.5	63.6	35.5	0.8	29.7	0.15	1.4	6.7	15.3	8.6	20.0
6	-1.2	53.2	29.7	0.7	24.9	0.13	1.8	5.6	12.8	7.2	16.9
5	-1.1	42.9	23.9	0.5	19.7	0.10	0.9	4.5	10.4	5.7	13.5
4	-0.8	32.5	18.1	0.4	15.0	0.08	0.7	3.5	7.9	4.4	10.3
3	-0.4	22.0	12.4	0.3	9.8	0.05	0.5	2.4	5.5	3.0	7.1
2	-0.2	11.3	6.6	0.2	4.7	0.03	0.3	1.3	3.1	1.6	3.5
1	0	0	0	0	0	0	0	0	0	0	0
P-value	1.9 x 10 ⁻⁰⁸	1.1 x 10 ⁻⁰⁵	1.5 x 10 ⁻⁰⁵	3.0 x 10 ⁻¹²	5.0 x 10 ⁻⁰⁵	7.1 x 10 ⁻¹³	7.3 x 10 ⁻⁰⁵	2.4 x 10 ⁻⁰⁷	7.5 x 10 ⁻¹⁶	1.3 x 10 ⁻²⁰	6.4 x 10 ⁻¹⁰

*Data available on request. Results expressed represent differences expected in animals compared to contemporaries with IGENITY Profile scores of 1.

Yield Grade:

Lean yield is an estimation of the percentage of the carcass that is red meat; it is not dressing percentage. When a carcass grades A or higher in Canada it is also graded for yield. A group of animals with a score of “10” for Yield Grade can be expected to receive a Yield Grade score that is 1.2 of a grade higher than animals that receive a score of “1”. Lower scores reflect higher percentage red meat yield (Y1 being the highest yield possible) Higher scores reflect lower red meat Yield (Y3 being the lowest yield possible),

Quality Grade (% Choice)

The score for Quality Grade reflects the percent AAA or higher. In a group of animals with a score of 10 for quality grade, expect 53.7% more of them to grade AAA than animals that score 1.

Ribeye Area:

In a group of animals with a score of “10” for Ribeye Area, the average ribeye area is expected to be 2.12 square inches greater than in a group of animals that score “1”. Lower scores reflect smaller ribeye areas, with higher scores reflecting larger ribeye areas.

Hot Carcass Weight:

In a group of animals with a score of “10” for hot Carcass Weight, the average hot carcass weight is expected to be 44.6 lbs greater than animals that score “1”. Lower scores reflect lighter carcass weights assuming the cattle are harvested at the same fat thickness

Fat Thickness:

In a group of animals with a profile score of “10” for Fat Thickness, the average fat thickness is expected to be 0.23 inches (5.8mm) greater than in a group of animals that score “1”. Lower scores indicate less external fat, while higher scores reflect more external fat. A minimum of 2mm of backfat is required to grade A or better in Canada

Marbling Score:

Canada AAA has the same minimum marbling as USDA Choice. USDA Marbling score is based on a 999 point scale. In a group of animals with a score of 10 for marbling, the average marbling can be expected to be 96 points greater than animals with a score of 1. Marbling points indicate how much intermuscular fat is present in the carcasses, and thus the propensity to grade Canada AAA

Tenderness:

The score for tenderness represents an animal’s genetic potential for tenderness, as measured by Warner-Bratzler Shear Force (WBSF), with “10” the most tender and “1” the least tender. Lower shear force means more tender beef. In a group of animals with a tenderness score of “10,” 2.27 lbs less shear force is required than a group of animals with a score of “1.” This means higher scores represent animals that are more tender than those with lower scores.

Maternal and Reproductive Traits:

Reproduction is arguably the most economically important trait for Cow/Calf producers. Heifer Pregnancy Rate is a heifer’s chance at becoming pregnant over a normal breeding season, relative to other heifers. Stayability is the chance a heifer will remain in the herd until at least six years old, relative to other animals. Maternal Calving Ease is measured as the percentage of unassisted births – a higher value is greater calving ease. These profiles can be used to make replacement heifer decisions as well as be used to select future maternal sires.

Docility:

Calm cattle are not just about handler safety – calm cattle eat more, have better response to vaccinations and preconditioning, and are more tender. The profile for docility is the animal’s genetic potential to be extremely calm, or to have calm offspring. Higher scores for this trait indicate a higher percentage of calves that possess acceptable behavior.

NR: (No Result)

Some samples may look normal, but still are unable to produce acceptable results. This often occurs due to contaminants that are undetectable to the naked eye; dirt, mold, manure, or other foreign matter.