

EPD Definitions

Listed below is a partial list of the definitions of American Gelbvieh Association EPDs and the units in which they are published..

MATERNAL TRAITS

Calving ease direct (CED): Percent of unassisted births of a bull's calves when he is used on heifers. A higher number is favorable, meaning better calving ease. This EPD can be vital to a rancher looking to decrease the amount of calves pulled in his herd.

Milk (Milk): The genetic ability of a sire's daughters to produce milk expressed in pounds of weaning weight.

Calving ease maternal (CEM): Represented as percent of unassisted births in a sire's first-calving daughters. A higher number represents more favorable calving ease. This EPD is important to a rancher's bottom line because it predicts which animals produce daughters with a genetic pre-disposition to calve unassisted as heifers.

Stayability (ST): Predicts the genetic difference, in terms of percent probability, that a bull's daughters will stay productive within a herd to at least six year of age. The stayability EPD is one of the best measures currently available to compare a bull's ability to produce females with reproductive longevity.

GROWTH TRAITS

Birth weight (BW): Predicts the difference, in pounds, for birth weight of the calf.

Weaning weight (WW): Predicts the difference, in pounds, for weaning weight (adjusted to age of dam and a standard 205 days of age). This is an indicator of growth from birth to weaning.

Yearling weight (YW): Predicts the expected difference, in pounds, for yearling weight (adjusted to a standard 365 days of age). This is an indicator of growth from birth to yearling.

CARCASS TRAITS

Yield grade (YG): Differences in yield grade score, which is a predictor of percent retail product. Smaller values suggest that progeny will have a better lean to fat ratio.

Carcass weight (CW): Differences in pounds of hot carcass weight, adjusted to an industry standard age endpoint.

Ribeye area (REA): Differences in ribeye area in inches between the 12th and 13th rib. Greater ribeye areas are preferable.

Marbling (MB): Predicts the differences in the degree of marbling within the ribeye as expressed in marbling score units. Greater marbling numbers are preferable and are an indicator of higher carcass quality grades.

INDEXES

Indexes are tools that allow producers to select for several EPDs at once, making selections more efficient than selecting on one trait at a time. Indexes weigh traits based on their importance to a producer's bottom line by using a trait's economic and genetic value. Indexes are a good way to put selection emphasis on traits that are economically relevant.

Total maternal (TM): An index that combines growth and milk information as a prediction of the weaning weight performance of calves from a sire's daughters. As an index, this value is not reported with an accompanying accuracy. A greater TM value means a mother that returns comparatively higher weaning weights on her calves. $TM\ Index = MK\ EPD + \frac{1}{2} WW\ EPD$.

\$Cow: Represents the genetic value in dollars of profit of an animal when retained as a replacement female relative to other animals in the herd. A higher number represents more profitable genetics for maternal productivity. \$Cow will serve producers in selecting bulls that will sire daughters with stayability and reproductive efficiency as well as other traits that lead to profitability in a production system, such as milk, calving ease, moderate mature weight and the ability of calves to gain. A female's genetics also influence the performance of her calves in the feedlot and at slaughter, so traits such as feed efficiency and carcass value are also included in \$Cow.

Efficiency profit index (EPI): An economic selection index developed to aid producers in selecting for more feed efficient cattle that still have acceptable amounts of gain. The EPI provides slight negative pressure on intake, while keeping gain at a constant value. By selecting on this index, producers will be able to find those animals that gain the same amount as their contemporaries while eating less.

Feeder Profit Index (FPI): An economic selection index designed to aid producers in selecting sires whose progeny will perform in the feedlot and are sold on a grade and yield standpoint. Well ranking sires for FPI have higher marbling and carcass weight than their contemporaries. As a terminal index, little emphasis is put on maternal traits such as stayability and calving ease.

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How Genomic-Enhanced EPDS Impact Bull Buying Decisions

American Gelbvieh Association's (AGA) Genomic-Enhanced EPDs (GE-EPDs) provide Gelbvieh and Balancer® breeders and their commercial producers the ability to more accurately identify young individuals with the right genetics needed to accelerate genetic improvement in their respective herds.

GE-EPDs result in more accurate EPDs for bulls and females two to four years sooner when compared to using pedigree and performance information alone. The information can be used to more accurately select sires that excel in feedlot and carcass traits or choose bulls that can be used on replacement heifers with increased confidence.

Bottom line, GE-EPDs allow bull buyers to make smarter, better informed bull and female buying decisions backed by more accurate EPDs. This saves time and money, reduces risk and accelerates the rate of genetic progress.

Contact the AGA to find out more about GE-EPDs by calling 303-465-2333 or visiting the AGA website at <http://www.gelbvieh.org/education/epdresearch/research.html>.

HOW TO FOLLOW THE DNA "TRAIL"

HOW DO I KNOW IF A BULL HAS GENOMIC ENHANCED EPDS?

On the left side of the bull box, just under the lot number it says: EPDs
GEN Y or GEN N

GEN Y = GENOMIC ENHANCED YES (YES TESTED FOR THE ENHANCED EPDs)

GEN N = GENOMIC ENHANCED NO (NOT TESTED FOR THE ENHANCED EPDs)

FOR HOMOZYGOUS BLACK DNA RESULTS:

Black (Homo - D) = DNA tested homozygous black

Black (not Homo - D) = DNA tested but not homozygous black

FOR HOMOZYGOUS POLLED DNA RESULTS:

Polled (Homo - D) = DNA tested homozygous polled

Polled (not Homo - D) = DNA tested but not homozygous polled

GELBVIEH—The Continental Breed of Choice, red meat/yield grade, early puberty, good disposition, maternal, and growth.

BALANCERS—Registered Gelbvieh x Angus (Red or Black), combines the desirable traits of both breeds, fastest way to achieve benefits from crossbreeding which includes hybrid vigor.

RED AND BLACK ANGUS—For years Angus have been the mainstay for cross breeding programs with their traits that compliment the Continental Breeds—carcass traits and maternal.

**VEL COLORADO VANGUARD VIII 28E BA75%**

Black (Homo - D)/Scurred

EPDs
GE - Y

CED	BW	WW	YW	MK	ST	CEM	RE	MB	FPI
12	-0.80	61	88	31	6	9	0.4	0.17	72.99

KCF BENNETT VANGUARD Y122 AGA#: AMGV1379114
 VEL VANGUARD COLORADO 10B (GV) B.D.: 3/2/2017
 OZZ GOV LADY 82R BW: 82#
 TYBAR NEW STANDARD 44F (GV) 205WT: 686#
 VEL MISS MADELYNE PAP: 43
 ACOV MISS 764T (AN)

Black Angus Balancer You will appreciate this homozygous black bull when you see him. He is square-made, thick and deep-ribbed.



LOT 93

**DBOW MR BOW K 71E PC38%**

Black (Homo - D)/Polled

EPDs
GE - Y

CED	BW	WW	YW	MK	ST	CEM	RE	MB	FPI
19	-5.10	57	86	30		7	0.5	0.39	83.65

DBOW MR BOW K 304A AGA#: AMGV1400475
 DBOW MR BOW K 541C (GV) B.D.: 4/1/2017
 DBOW MISS BOW K 271Z BW: 64#
 HOOVER DAM 205WT: 618#
 BOW K BLACKCAP B45 (AN) PAP: 35
 BOW K BLACKCAP Y14

Black Angus Balancer Check out this young, super heifer bull with good carcass traits and an 8 for docility! He is homozygous black and homozygous polled (by pedigree) with a low PAP score of 35.

**JCOV MR 732E PC25%**

Black/Polled

EPDs
GE - N

CED	BW	WW	YW	MK	ST	CEM	RE	MB	FPI
14	-1.30	70	114	28	5	5	0.8	0.38	83.94

TAU OUTRIGHT 162A (GV50,AN50) AGA#: AMGV1383213
 TAU MR OUTRIGHT 200C B.D.: 3/15/2017
 TAU MS ABERDEEN 166Y (GV50,AN50) BW: 65#
 JCOV MISS TUGBOAT 11-5 (AN) 205WT: 742#
 PAP: 38

Black Angus Balancer An attractive, big, stout, heavy-muscled bull that has the power and structure to go anywhere and do well. Good calving ease numbers and great carcass EPDs.

**GRNH SAM'S TOWN 205E BA75%**

Black (Homo - D)/Polled

EPDs
GE - Y

CED	BW	WW	YW	MK	ST	CEM	RE	MB	FPI
13	-2.70	59	86	29	9	7	0.6	0.14	73.96

VRT LAZY TV SAM U451 (GV) AGA#: AMGV1391303
 GRNH GRNH MR SAMUEL 154B B.D.: 3/3/2017
 GRNH REESE (GV50,AN50) BW: 75#
 DBOW MR BOW K 904W (GV) 205WT: 732#
 GRNH GRNH MISS 139A PAP: 44
 GRNH MISS LAYNIE BETH (GV50,AN50)

Black Angus Balancer This homozygous black heifer bull is above average for milk, fertility, and yield grade. His dam has a perfect udder and this bull is square, thick, and clean.

**MCCA EMINEM 716E BA75%**

Black/Polled

EPDs
GE - Y

CED	BW	WW	YW	MK	ST	CEM	RE	MB	FPI
12	0.30	64	92	21	7	1	0.6	-0.12	65.15

RWG TRACTION 741Z AGA#: AMGV1376457
 MCCA CORNHUSKER RED 524C (GV) B.D.: 1/31/2017
 MCCA ZIVA BW: 74#
 B C C BUSHWACKER 41-93 (AN) 205WT: 704#
 MCCA YASMINE PAP: 38
 ADDG TEQUILA ROSE (GV)

Black Angus Balancer This maternal brother to Capitol Hill is thick, deep, and stylish. Sired by Cornhusker Red who has added muscle and body to his calves.

**DBOW MR BOW K 723E BA75%**

Black/Polled (Homo - D)

EPDs
GE - Y

CED	BW	WW	YW	MK	ST	CEM	RE	MB	FPI
12	0.00	85	118	34	11	1	0.6	0.03	83.23

VRT LAZY TV SAM U451 AGA#: AMGV1378503
 DBOW MR BOW K 304A (GV) B.D.: 2/19/2017
 DBOW MISS BOW K 850U BW: 92#
 BUF BFCK CHEROKEE CNYN 4912 (AR) 205WT: 700#
 DBOW MISS BOW K 952W PAP: 39
 DBOW MISS BOW K 028K (GV)

Black/Red Angus Balancer Long and thick with plenty of muscle in this high performing homozygous polled bull, like his sire, Mr. Bow K 304A. Top 1% of the breed for total maternal and top 20% for feeder profit index.



LOT 96