

Common Terms and Definitions

BULL INFORMATION

Special Additions - This logo signifies bulls that are a part of the ABS Special Additions semen collection and marketing program.

ORIGen – This logo signifies the sires that are accessed through the ORIGen marketing network.

Elgin - These bulls are part of the ABS/Elgin Alliance. Semen has been produced by Elgin Breeding Service.

Angus Sire Alliance - ABS reached an agreement with Circle A Ranch to market the winners of their innovative Angus Sire Alliance program. The Angus Sire Alliance has put together one of the most comprehensive progeny test programs in the industry; by using economic modeling programs and relative economic weights they have combined the various genetic components into an overall Profitability Value (or EPD).

Calving Ease - Star ratings are a subjective estimate of a bull's calving ease. In assigning stars, objective data (such as birth weight and calving ease information for heifers and cows) is used. Stars may generally be interpreted as follows:

**** Bull proven for a high level of calving ease based on calving ease scores, birth weight EPD, and accuracy level.

*** Bull who can be used on heifers of the same breed.

** Bull who can be used on cows - no assists should be expected.

* Bull who should only be used on mature cows - expect large birth weights.

Carcass Rating - Steak ratings are a subjective estimate of a bulls overall carcass merit based on his percentile ranking within his breed for carcass traits and/or ultrasound body composition.

In the Angus breed, bulls receive one steak for Marbling/IMF, REA and %RP, if they rank in the top 50% of the breed. They also receive an additional steak if they rank in the top 25% for Marbling/IMF.

Red Angus, Charolais, Gelbvieh and Limousin bulls receive one steak each for Marbling, REA and Fat, if they rank in the top 50% of the breed and an additional steak if they rank in the top 25% for Marbling.

Simmental bulls receive one steak each for MARB, REA and PRC, if they rank in the top 50% of the breed and an additional steak if they rank in the top 25% for MARB.

Polled/Scurred - These bulls are polled with scurs.

Homozygous Polled - These bulls have a 99.9% of being homozygous polled, having been test mated to horned and heterozygous polled cows. You should expect these bulls to sire all polled calves.

Heterozygous Polled - These bulls are polled but carry one horned gene. They may sire calves with horns when mated to cows that also carry the horned gene.

Double Polled - These bulls are young, unproven sires whose sire and dam are both polled. Through progeny testing, we will be able to determine if they possess two polled genes (homozygous polled) or one polled and one horned gene (heterozygous polled).

Homozygous Black - These bulls have a 99.9% probability of being homozygous black, having been test mated to red and heterozygous black cows or tested with Genmark technology. You should expect these bulls to sire black calves when mated to non-diluted red or black cows.

Heterozygous Black - These bulls are black but carry one red gene. When mated to non-diluted red cows, 50% of their calves should be red and 50% black.

Dilution Gene - The dilution gene causes cattle with black coat color to be diluted to gray, and red to be diluted to yellow. Non-diluter cattle will appear black or dark red, while those that carry a single or double dilution gene will appear gray or yellow.

Non-diluter – A red animal that has been bred to black cows and has sired no gray progeny. A red animal that is the offspring of two black parents is a non-diluter.

Composite - A breed made up of at least two component breeds, designed to retain heterosis in future generations without crossbreeding and is maintained as a purebred.

MPPA (Most Probable Producing Abilities) - An estimate of a cow's future productivity based on her past productivity of weaning ratios and number of progeny.

PPA (Probable Producing Ability) - Combination of a cow's MPPA and genetic evaluation for maternal weaning weight (MWW).

PERFORMANCE DATA

Birth Weight - The bull's own birth weight taken within 24 hours of birth.

Adj. 205 Weight - The bull's own weaning weight adjusted to 205 days.

NR (Nursing Ratio) - Nursing ratio at weaning. Same as weaning ratio.

Adj. 365 Weight - The bull's own yearling weight adjusted to 365 days.

Ratio - A measure of an animal's relative performance compared to his contemporaries.

No Cont. or N/C - The bull had no contemporaries, there could be no comparison.

ET - The bull is the result of embryo transfer. In this case, ratios are not calculated because of the recipient dam effects.

Scrotal Circumference - The bull's own scrotal circumference measurement in centimeters. Adjusted 365-day measurements provided when available.

Weight - The bull's most current or mature weight.

Height - The bull's most current or mature hip height.

Yearling Frame Score - Frame score at 12 months of age using Beef Improvement Federation (BIF) Frame Score Chart, incorporating age and hip height.
Ultrasound Body Composition EPDs

SIRE SUMMARY

The best measure of a bull's transmitting ability based on an objective evaluation designed and conducted by the individual breed associations. Their purpose is to identify a bull's true genetic merit and increase the effectiveness of sire selection. These evaluations measure differences in sires based on progeny information, with the results generally expressed in the form of EPDs.

EPDs can and do change for each individual as more information is gathered and analyzed. Many breed associations currently publish two Sire Summaries per year. Use EPDs to compare sires of the same breed, not to predict actual weights. EPDs are breed specific and cannot currently be used to compare sires across breeds. EPDs from the most recent summaries appear throughout the directory. EPDs are generated by the breed associations.

EPD (Expected Progeny Difference) - A measure of the expected difference in performance of a sire's progeny when compared to the average progeny performance of all sires evaluated in the same breed. This prediction is based on actual progeny performance, performance information, and pedigree information of the individual and relatives.

ACC (Accuracy) - The reliability that can be placed on an EPD. The amount of change expected will be decreased the closer ACC figures are to 1.0.

I (Interim EPD) - Indicated by "I" preceding the EPD is a value calculated by the American Angus Association for animals on which data is processed between national cattle evaluations.

PE (Pedigree Estimate) - Indicates that this EPD is a pedigree estimate and is based on performance information of a bull's sire and dam. (Generally coincides with an accuracy value of up to .20).

PE+ (Pedigree Estimate Plus) - Indicates that this EPD is a pedigree estimate plus and is based on performance information of a bull's relatives, along with the bull's individual performance record for that trait. (Generally coincides with an accuracy value of .20 to .30). Accuracy values greater than .30 generally include at least some information from a bull's progeny. As more progeny information is included and accuracy values increase, less weight is placed on the bull's individual performance and pedigree information.

B or BKS (Back Solution) - denotation of a young sire's accuracies evaluated through the sire evaluation (prior to progeny being included).

I (Interim) Accuracy - denotation of a young sire's accuracy's prior to progeny being evaluated.

Percentile Ranking - Relative ranking of the animal's respective EPD compared to the breed.

GEST or GL (Gestation Length) - The number of days from breeding to calving for a bull's progeny. The EPD is expressed in number of days above or below breed average.

CED (Calving Ease Direct) - The ease with which a bull's calves are born to first-calf heifers. These EPDs are expressed in percent unassisted births, with positive EPDs indicating greater calving ease.

BW (Birth Weight) - The birth weights of a bull's progeny. The EPD is expressed in pounds.

WW (Weaning Weight) - The adjusted weaning weights of a bull's progeny. The EPD is expressed in pounds.

YW (Yearling Weight) - The adjusted yearling weights of a bull's progeny. The EPD is expressed in pounds.

SC (Scrotal Circumference) - The adjusted yearling scrotal circumferences of a bull's progeny. The EPD is expressed in centimeters.

DOC (Docility) - to rank animals according to differences in expected docility scores of their offspring. Higher EPDs indicate more desirable dispositions.

Milk - A measure of the amount of pre-weaning performance gained by calves that can be attributed to the milking ability of a bull's daughters. The EPD is expressed in pounds of calf.

MWW (Maternal Weaning Weight) - A measure of a sire's ability to transmit milk production and growth rate through his daughters. It predicts or measures the weaning weight of a sire's daughters' calves and is equal to his EPD for Milk plus one-half of his EPD for Weaning Weight. The EPD is expressed in pounds. Maternal Weaning Weight may be expressed different in several breeds. Other expressions are (CV) Combined Value, (TM) Total Maternal, and (M+G) Milk + Growth. Calculations to derive these values are all the same.

Stay (Stayability) - The expected difference in probability of daughter staying in the herd to at least the age of six years. Since cows are usually only culled for being open before the age of six, the EPD is primarily a measure of sustained fertility in female offspring.

Heifer Pregnancy (HPG) - Heifer pregnancy EPDs estimate differences in daughters' ability to conceive to calve as a two year old. Just like the stayability EPD, heifer pregnancy EPDs are expressed in terms of a percentage difference.

Mature Cow Maintenance Energy Requirement (ME) EPD - can be used to select parents that will produce low consuming replacement females with lower energy requirements. Lower ME EPD values predict lower energy requirements which translates into lower amounts of feed required to maintain mature body weight.

CEM (Calving Ease Maternal) - The ease with which a sire's daughters calve as first-calf heifers. This EPD is expressed as a ratio, with those above 100 indicating easier births. These EPDs are expressed in percent unassisted births, with positive EPDs indicating greater calving ease.

CW (Carcass Weight) - The adjusted carcass weights of a bull's progeny. The EPD is expressed in pounds.*

Marb. (Marbling) - The adjusted marbling scores of a bull's progeny. The EPD is expressed in numerical marbling score.*

Fat - The adjusted 12th rib fat thickness of a bull's progeny. The EPD is expressed in inches.*

REA (Rib Eye Area) - The adjusted Rib Eye Area of a bull's progeny. The EPD is expressed in square inches.*

PRC (Percent Retail Cuts) - An estimate of the yield of closely trimmed, boneless retail cuts from the round, loin, rib and chuck. Expected progeny performance is reported in percent.

WBSF EPD - The tenderness of end product of a bull's progeny determined by Warner-Bratzler shear force measurements. Expressed in pounds with lower shear force EPDs being more desirable and indicating more tender meat.

IMF - Percent Intramuscular Fat EPD reflects differences in transmitting ability between animals for intramuscular fat.

uRE - Rib Eye Area EPD reflects differences in transmitting ability between animals for ribeye area, measured in square inches.

uFat - Fat Thickness EPD reflects differences in transmitting ability between animals for external fat at the juncture of the 12th and 13th ribs and rump, measured in inches

u%RP - Percent Retail Product EPD reflects differences in transmitting ability between animals for the percentage of the carcass in closely trimmed retail products from the round, loin, chuck and rib.

GRP/PRG - In addition to Accuracy (ACC) values, the actual number of progeny and herds in which they have been evaluated in are reported for some traits.

DTS – daughters included in sire summary calculation for milk EPD

Grid Merit (GM) – estimate of progeny performance differences when progeny are marketed on a value-based grid. Dollar figure is derived using economic selection index theory to predict the relative economic value of progeny based on the four carcass traits.

Feedlot merit (FM) – measures the dollar value associated with the expected gain and feedlot efficiency of progeny when fed in a typical feedlot arrangement.

American Angus Association \$Values

Feedlot Value (\$F) calculates a \$/head average difference in expected progeny performance for postweaning merit compared to progeny of other sires.

Grid Value (\$G) combines quality grade and yield grade attributes, and is calculated for animals with carcass EPDs, ultrasound EPDs, or both types of EPDs.

Beef Value (\$B) represents the expected average dollar per head difference in the progeny postweaning performance and carcass value compared to progeny of other sires. The \$B value is comprised of two pieces: Feedlot Value (\$F) and Grid Value (\$G).

USING GTS IN SIRE SELECTION

GTS ALLOWS BREEDERS TO MAKE THE MOST INFORMED BREEDING DECISIONS IN THE INDUSTRY.

The ABS GTS (Genetic Type Summary) program accurately and objectively describes physical trait differences for individual sires' progeny. By using the STAs (Standardized Transmitting Abilities) beef breeders can anticipate the type, or physical characteristics, that a bull will transmit to his offspring. STAs for each trait are calculated using herdmate comparisons on large numbers of a sire's progeny using a linear evaluation system.

These linear proofs are computed using statistical procedures similar to those used to calculate EPDs. STAs indicate how bulls compare for each trait included in the evaluation.

STAs also allow breeders to determine where a bull ranks within a given population for each trait. A bull with an STA of 0.0 is average for that trait, compared to all other bulls evaluated. For any given trait, the majority of the STAs on all bulls evaluated will be near 0.0. In fact, approximately 68 percent of the sires' STAs should fall between -1.0 and +1.0 with over 99 percent between -3.0 and +3.0. Keep in mind that the population dealt with in these GTS analyses is not the entire breed, but a relatively select group of animals that are predominantly A.I. sired.

The number of progeny evaluated is provided in the GTS charts to give breeders an estimate of the reliability of the STAs. The higher the number of progeny evaluated, the greater the reliability of the STAs. For some sires, a Pedigree Estimate (PE) will be given. This indicates that the bull's STAs are based on the STAs of his sire and maternal grandsire, not his progeny.

Please visit our website at www.absglobal.com for a complete listing of terms and for additional up-to-date information on sires available from ABS.