

Glossary of Terms and Abbreviations

PERFORMANCE and GENERAL TERMS

Calving Ease (CE): The opposite of difficult or abnormal calving. An easy calving is one that does not require assistance and does not impose undue strain on the calf or dam.

Calving Score (CS): A measure of calving where: 1=unassisted birth; 2=hand assistance; 3=mechanical assistance.

Actual Birth Weight (ACT BW): A weight taken within 24 hours of birth.

Birth Weight Ratio (BW Ratio): An expression of the animal's adjusted weight at birth relative to the contemporary group average.

Note: There is a difference in expression of BW Ratio between the Simmental and Angus Breed Associations. A Simmental with a below average birth weight will have a ratio greater than 100 (ratios above 100 are more desirable). An Angus with a below average birth weight will have a ratio less than 100 (ratios below 100 are more desirable).

Adjusted Weaning Weight (ADJ WW): An off-the-cow calf weight adjusted to 205 days of age and to a mature dam age equivalence.

Adjusted Weaning Weight Ratio (WW Ratio): An expression of the animal's performance for adjusted weaning weight relative to the contemporary group average. Ratios >100 are above average, Ratios <100 are below average.

Adjusted Yearling Weight (ADJ YW): A weight adjusted to 365-days of age.

Adjusted Yearling Weight Ratio (YW Ratio): An expression of the animal's performance for adjusted yearling weight relative to the contemporary group average. Ratios >100 are above average, Ratios <100 are below average.

N/C: No contemporaries.

Test Gain: The average daily gain of an animal for a fixed period of time.

Note: The sale bulls were gain tested for 84 days.

Test Gain Ratio: The individual bull's gain performance relative to the contemporary group. A gain ratio above 100 reflects above group average gain and below 100 reflects below group average gain.

Note: For the purpose of the Test Gain Ratio, all sale bulls were considered to be in one contemporary group.

Adjusted Frame Score (ADJ Frame): Based upon hip height measured in inches and adjusted to a 365-day basis, using BIF standards.

Adjusted Scrotal Circumference (Adjusted Scrotal): A measurement of the distance in centimeters around the testicles in the scrotum with a circular tape. Related to semen producing capacity and age at puberty of female sibs and progeny. Converted to a 365-day basis, using BIF standards.

Homozygous Polled: An animal that will always pass on a polled gene to its progeny. Denoted in "POLLED" box as "PP".

Heterozygous Polled: Although the animal is polled (Polled is Dominant to Horns), it may pass on a horn gene to its progeny. Denoted in "POLLED" box as "Pp".

Note: Sale bulls that were not known to be homozygous black or homozygous polled by pedigree were DNA tested through the American Simmental Association by Geneseek.

Homozygous Black: An animal that will always pass on a black gene to its progeny. Denoted in "COLOR" box as "BB".

Heterozygous Black: Although the animal is black-hided (Black is Dominant to Red), it may pass on a red gene to its progeny. Denoted in "COLOR" box as "Bb".

Docility: A scoring system from 1 to 6 with lower scores indicating calmer, more gentle cattle: 1 – Docile; 2 – Restless; 3 – Nervous; 4 – Flightly; 5 – Aggressive; 6 – Very Aggressive;

DNA 50k: A genotyping tool that examines 50,000 locations on the animal's DNA. The results of the ASA DNA 50K genomic data are then incorporated into an animal's EPDs.

Ultrasound % IMF Ratio: An ultrasound measurement of the percent intramuscular fat in the ribeye muscle, relative to animals within the same contemporary group.

Ultrasound RE Ratio: An ultrasound measurement of the area in square inches of the longissimus muscle between the 12th and 13th rib, relative to animals within the same contemporary group.

Ultrasound BF Ratio: An ultrasound measurement of the fat thickness at the 12th and 13th rib, relative to animals within the same contemporary group.

Note: Calves born as a result of embryo transfer are evaluated in a separate contemporary group for ultrasound traits.

ASA: American Simmental Association

AAA: American Angus Association

BIF: Beef Improvement Federation

IRVINE RANCH RETAINED SEMEN INTEREST

Irvine Ranch is retaining a ½ semen interest in all bulls selling in this offering. The purchaser of the bull will have possession of the bull and all salvage value rights. In the event of any semen sales from the bull, then Irvine Ranch is retaining ½ interest in the gross revenue from all semen sales. Irvine Ranch retains the semen interest if the bull is sold to subsequent purchasers. Irvine Ranch also reserves the right to collect semen from the bull at the buyer's convenience and our expense. This retained semen interest extends to any clone of the bull.

If you have any questions about the retained semen interest, please contact us prior to the sale.

EXPECTED PROGENY DIFFERENCES (EPD'S)

The difference in expected performance of future progeny of an individual, compared with expected performance of future progeny of an individual of average genetic merit. Reported in units of measurement for the trait (e.g. lb., cm, etc.). All published EPD's in this catalog were generated through the American Simmental Association and are subject to change.

Production EPD's:

Calving Ease Direct (CE): Predict the average difference in ease with which a sire's calves will be born when bred to first-calf heifers. Expressed as percentage of unassisted births with a higher value indicating greater calving ease.

Birth Weight EPD (BW): BW EPDs are expressed in pounds and predict the average difference that can be expected in an animal's offspring when compared with another animal in the same genetic evaluation. Birth weight EPDs are primarily used as an indicator of calving ease, with the age and size of the females to be bred usually dictating how much birth weight can be tolerated.

Weaning Weight EPD (WW): WW EPDs are expressed in pounds and predict the average differences in weight that can be expected between the progeny of animals in the same genetic evaluation at 205 days of age. Weaning Weight EPDs do not account for differences in weaning weight that are due to milk.

Yearling Weight EPD (YW): YW EPDs are expressed in pounds and predict the average differences that can be expected between the progeny of animals at one year of age.

Docility EPD (DOC): Docility EPD's predict the percentage of an animal's offspring that are expected to score favorably (1 or 2) on a five-point scoring system when compared to the offspring of another animal. Expressed in EPD's as a percentage with higher values being favorable.

Maternal EPD's:

Maternal Calving Ease EPD (MCE): Predict the average ease with which a sire's daughters will calve as first-calf heifers when compared to the daughters of another sire in the same evaluation. Expressed as percentage of unassisted births.

Maternal Milk EPD (MM): Milk EPDs are expressed as pounds of calf weaned by a bull's daughters. They reflect the average differences in weaning weight that can be expected in grand progeny due to the milking ability of a bull's daughters. Available feed resources will dictate the extent to which milking ability should be selected.

Maternal Weaning Weight EPD (MWW): Total Maternal EPDs are expressed as pounds of calf weaned by an animal's daughters. They account for average differences that can be expected from both weaning weight direct as well as from milk, and measure a sire's ability to transmit milk production and growth rate through his daughters.

Stayability EPD (STAY): Stayability is defined as the probability that a sire's daughters entering the herd will stay in production through 6 years of age. The Stayability EPD provides an estimate of how long a sire's daughters will stay in the herd compared to another sire in the same evaluation. Higher values indicate greater stayability.

Carcass EPD's:

Carcass Weight EPD (CW): CW EPD's estimate average differences in carcass weight, expressed in pounds at a given age endpoint.

Yield Grade EPD (YG): Predict the average differences in cutability that can be expected between the progeny of animals at a given age endpoint. As with all EPDs, YG is expressed as a deviation. Negative values are desirable. To use it, one must keep in mind that it is in yield grade units. Therefore, lower is better. For example, a bull with a -.33 YG EPD would be expected to sire offspring that are 1/3 of yield grade better (lower) than a zero bull. If zero bulls sired an average yield of 3.0 in a particular environment and management system, offspring of a -.33 bull would be expected to have an average yield grade of 2.67 (1/3 of a yield grade better/lower). (Simmental)

Marbling EPD (MAR OR IMF): Predict the average difference in USDA Quality Grade in an animal's progeny when compared to the progeny of another animal at a given age endpoint. Expressed in numerical marbling score where one point equals one USDA marbling score.

Backfat EPD (BF or FAT): Estimate the average differences that are expected in external fat thickness at the 12th and 13th rib between progeny of different animals. Expressed in inches at a given age endpoint.

Ribeye Area EPD (RE): Predict the average difference in ribeye area in an animal's progeny when compared to the progeny of another animal at a given age endpoint. Expressed in square inches.

Shear Force EPD (SHR): Pounds of force required to shear a steak.

SIMMENTAL – API \$ and TI \$ EPD INDEXES:

Though EPDs allow for the comparison of genetic levels for many economically important traits, they only provide a piece of the economic puzzle. That's where \$ indexes come in. Through well conceived, rigorous mathematical computation, \$ indexes blend EPDs and economics to estimate an animal's overall impact on your bottom line. The same technology that led to the dramatic progress in swine, poultry and dairy genetics over the last several decades was used to develop the following \$ indexes:

All-Purpose Index (API): Evaluates sires for use on the entire cow herd (bred to both Angus first-calf heifers and mature cows) with the portion of their daughters required to maintain herd size retained and the remaining heifers and steers put on feed and sold grade and yield.

Terminal Index (TI): Evaluates sire for use on mature Angus cows with all offspring put on feed and sold grade and yield. Consequently, maternal traits such as milk, stayability, and maternal calving ease are not considered in this index.

Using API and TI: First, determine which index to use; if you're keeping replacements use API, if not, TI.

Then, just as with EPDs, zero in on the unit difference between bulls. (As described above, index units are in dollars per cow exposed.) The difference can be used to determine how much a bull is worth compared to another. Or, put another way, how much you can pay for one bull compared to another. For example, when buying an all-purpose-type sire, you can quickly figure a bull scoring +100 for API is worth an extra

\$6,000 over a +50 bull if both are exposed to 30 cows over 4 years (\$50 diff. x 30 hd. x 4 yr. = \$6,000). A percentile-ranking chart is required to determine where a bull's index value ranks him relative to other bulls

in the breed. See percentile ranking charts within this catalog, or visit www.simmental.org.