

# EPD Explanation

## **Birth Traits:**

**CED** (Calving Ease Direct)...a higher number , more calving ease

**BW** (Birth Weight)...a lower number a smaller calf

**Act BW**...actual BW of the calf and is incorporated into the EPD

**Industry Trend**...more Angus sires are showing higher CED and low BW EPD values, primarily due to highly heritable, shorter gestation periods (pre-mature births). We *don't* see this as a positive for the industry when calves become too small at birth and more vulnerable to disease and slower development. Studies by the University of Illinois verify what we have known for a long time: these smaller calves cost you pounds at weaning and yearling weight (50-100#) and cost you money, those last 50-100# represent bottom line dollar profits!

Recommendations: \*\*\* Heifers

    \*\* Larger heifers and Cows

    \* Cows (added performance and the most profit to cow production and feedlot value)

**Successful bull usage on heifers is generally CED of +6 or greater and BW +2 or less.**

We also look at the bull's mother and cow family and may adjust our recommendation accordingly. We cannot recall the last time these criteria have led to customer complaints with calving difficulty. Angus in general have lighter birth weight calves, than other breeds.

## **Performance Traits:**

**205 WT**...weaning weight adjusted to same 205 day age for all calves and then ratioed in contemporary group and incorporated in WW EPD

**365 WT**...yearling weight adjust to same 365 day age for all calves and then ratioed in contemporary group and incorporated into the YW EPD

**Industry Trend**...similar to birth weight, the industry is pre-occupied with chasing extremes. For WW EPD and YW EPD there is a rush to the top percentiles of The Breed, and selection pressure continues to move the numbers higher. End result, selection of larger cow size and increased cow maintenance, i.e., higher herd health and feed costs. WTR averages for WW EPD and YW EPD are in the top 25% of the breed and more than adequate to produce feeder calves that perform well on feed and are in demand by discriminating feed lots.

- *Our average WW EPD is 57 (top 20%) and YW EPD is 101 (top 20%) for our cow herd, as of 1/30/19*

## **Feed Efficiency:**

**RADG**...expressed in pounds per day; a predictor of a sire's genetic ability for producing more post-weaning gain from the same amount of feed, compared to other sires. Combination of pedigree and performance run through a theoretical mathematical algorithm. A higher EPD is more favorable.

**DMI**...expressed in pounds per day; a predictor of difference in transmitting ability for feed intake during. The post-weaning phase, compared to other sires. A lower number is favorable

The above two items are EPD's and do not necessarily reflect actual data on the subject animal. The following are definitions from actual feed efficiency tests on some of our animals. We have attempted to make this simpler and easier to understand in practical settings.

**“Feed to Gain, Adj”** for the weight of the animal (how many pounds of feed to get a one pound gain in meat). Iowa State says this number averages some 6.5 lbs. of feed to get one (1) pound of gain in meat

- **“Cost of Gain”**... measured in dollars/cents per pound of gain by the animal

**Industry Trend**...it is our opinion that understanding of and measurements of feed efficiency is still in its infancy. What measurements lead to positive outcome for feed efficiency? Do some measurement criteria lead to harder doing cattle and harder fleshing cattle in the herd? Different experts and university animal science departments have differing opinions. For these reasons, WTR has focused on these two straight forward measurements to more accurately portray benefits that are real to feed lot operations and on the ranch or farm. Not to make it more complicated, but it is a fact that when looking at feed efficiency in the maternal side of our cattle it is important to consider more than just the F:G conversion efficiency. We must consider fat and fleshing ability, among other characteristics, in the momma cow.

### **Maternal Efficiency Traits:**

**CEM**...percentage of unassisted births in a bull's daughters as *first calf heifers*. High number more favorable.

**HP**...selection for probability of a bull's daughters becoming pregnant, as *first calf heifers*, during a normal breeding season.

**MILK**...sire's genetic merit for milk in his daughters; part of the calf's WW attributed to milk and its dam's mothering ability

**DOC**...temperament and behavior of the sire's progeny

### **Industry Value:**

WTR believes the four traits (CEM, HP, Milk, DOC) have a lot to do with maintaining a cow herd that has both reproductive efficiency and stayability...both of which lead to greater longevity. Cows that stay in the herd longer are more profitable. In addition, we believe that limiting Milk extremes is important to the herd...we want enough Milk to produce a big strapping calf and not so much milk that it becomes a liability to reproduction and cow maintenance. We believe a milk EPD between +18 and +30 will allow the cow to perform and adapt quite well to a vast majority of the environment and resource of our customers' programs.

### **Carcass Traits:**

**Ultrasound**...phenotypic data taken on the animal and incorporated along with genomic markers for carcass merit into the carcass EPD's. It is an actual group of performance traits physically measured on the individual animal (% IMF/marbling; RE/ribeye area; FT/fat by ultrasound)

Carcass EPD's represent the combination of the animals impact from the pedigree along with the animal's actual data/ultrasound and past animals actual data/ultrasound/carcass processing where done.

**\$ Values**...multi-trait selection indexes, expressed in dollars per head. \$ Values are used to assist beef producers by adding simplicity to the genetic selection decisions. The \$ Value is an estimate of how future progeny of each sire are expected to perform, on average, compared to progeny of other sires in the database.

**\$W**...Weaned Calf Value; expected average difference in future Progeny Performance for pre-weaning merit. \$W includes both revenue and cost adjustments associated with differences in birth weight, weaning direct growth, maternal milk and mature cow size.

**\$F**...Feedlot Value; expected average difference in future progeny performance for post-weaning merit, compared to progeny of other sires.

**\$G**...Grid Value; expected average difference in future progeny performance for carcass grid merit compared to progeny of other sires.

**\$B**...Beef Value; expected average difference in future-progeny performance for post-weaning and carcass value compared to progeny of other sires.

WTR believe these are the most economically relevant traits for you as cattlemen and for your selection process. Our programs are data intensive to give you a higher degree of confidence in your selection and the dollars invested for better genetic impacts on your herd. We submit full data on birth, weaning, and yearling weights. We also submit yearling height and scrotal size. On top of that we submit DNA information and ultrasound data for carcass evaluation to Angus. To this we have now begun basic Feed Efficiency Tests on a portion of the bulls to get a feel for where we are on that critical element going forward, this data today is to begin the process of learning where our cow family is on this critical criteria. We encourage you to check out our website where there is more information about each bull. Our website is: [www.wtrangus.com](http://www.wtrangus.com). Please feel free to call Ted Willer @ 765-721-0420 for further information. Our goal is to make the cattle buying decision a pleasant and profitable experience for you.