

# SORTING GATE

## Unlocking the genetic game plan: Level 1

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In September's "Sorting Gate" column, I introduced five levels of a genetic game plan:

1. Purchasing a registered Angus bull;
2. Unlocking the value of the herd sire;
3. Selecting replacement females;
4. Benchmarking your herd; and
5. Getting paid for your investment.

These five steps play a critical role in creating a profitable genetic game plan. Over the next several issues, let's dive a bit deeper.

### Level 1: Purchasing a registered Angus bull

If you are reading this article, you are probably already working toward Level 1. A registered Angus bull purchase is one of the largest investments (and should be) made for your genetic game plan. After all, every bull will have a long-lasting influence on the herd.

The good news is buyers of registered Angus bulls have a large variety of selection tools available to help make informed decisions. Buyers can utilize expected progeny differences (EPDs), dollar value indexes (\$Values), adjusted weights and ultrasound measures, pedigrees, and more to make their decision.

However, all these data points need to be turned into knowledge to be useful.

Defining a breeding objective, or breeding goal, is one of the most important components to turning the data into knowledge. Once you have a clear understanding of what you need, it is much easier to use the tools.

Making a plan, being consistent in following that plan, and tracking the results may be the most important

things an operator can do to make genetic change.

Then, what is the plan? Are you going to sell feeder calves through the sale barn, or are you planning to retain ownership?

What about the females? Will you keep them as replacements?

Many tools are available to target different traits. Table 1 shows available EPDs to date. Yet, it is more than knowing what each trait acronym stands for. These tools must be applied correctly.

Remember the "E" in EPD stands for "expected." An EPD is the expected difference in future progeny performance compared to the performance of the progeny of other sires. It gives an indication of how an individual will perform at siring the next generation.

To get the full value of these tools, you must compare two bulls against one another, or compare an individual bull to breed average.

### Using the numbers

How do you breed for a 65-pound (lb.) calf at birth? Well, that's not exactly how EPDs work, but EPDs can be used to move in that direction.

First, figure out where the operation is. What is the average actual birth weight in the herd, and what is the average birth weight (BW) EPD of the bulls being used? For example, a herd in Missouri may have a 71-lb. average birth weight using bulls averaging +2.0 for BW EPD. If that producer switches to a bull with a BW EPD of -1.0, on average that producer will move their calf crop from averaging a 71-lb. average birth weight to a 68-lb. average birth weight — a 3-lb. difference, on average.

No EPD is going to directly correlate to a 65-lb. calf; this is the case with any EPD. Using comparisons within the herd and

knowledge of the current bull battery can help individuals make directional change in the given trait of interest.

In short, when unlocking the first level of the genetic game plan through purchasing a registered Angus bull, do the homework. First, create a breeding goal that matches how the operation generates or will generate profit. Second, benchmark the herd and understand the current bull

battery. Then, track the results. To learn more about EPDs or \$Values offered by the American Angus Association, visit <https://www.angus.org/Nce/Definitions>. |

Editor's note: "Sorting Gate" is a regular *Angus Beef Bulletin* column featuring herd improvement topics for commercial producers using Angus genetics. Author Kelli Retallick-Riley is president of Angus Genetics Inc. (AGI). For additional information on performance programs available through the American Angus Association and AGI, visit [www.angus.org](http://www.angus.org) and select topics under the "Management" tab.

Table 1: Trait definitions

EPD	Trait	Unit	Observation
CED	Calving ease direct	%	Higher CED = more unassisted births
BW	Birth weight	lb.	Higher BW = more pounds at birth
WW	Weaning weight	lb.	Higher WW = more pounds at weaning
YW	Yearling weight	lb.	Higher YW = more pounds at a year of age
RADG	Residual average daily gain	lb.	Higher RADG = more pounds gained per day given the same amount of feed
DMI	Dry-matter intake	lb.	Higher DMI = more pounds of DMI consumed per day
YH	Yearling height	in.	Higher YH = more inches (taller) at a year of age
SC	Scrotal circumference	cm	Higher SC = larger scrotal size at yearling age
HP	Heifer pregnancy	%	Higher HP = more daughters settled in first breeding cycle
CEM	Calving ease maternal	%	Higher CEM = more unassisted births
Milk	Maternal milk	lb.	Higher Milk = more pounds of calf weaning weight due to mothering ability
MW	Mature weight	lb.	Higher MW = more pounds of weight at maturity (6 years)
MH	Mature height	in.	Higher MH = more inches of height at maturity (6 years)
DOC	Docility	%	Higher DOC = more docile progeny at yearling age
Claw	Claw set	foot score unit	Higher Claw = greater curl to the toe
Angle	Foot angle	foot score unit	Higher Angle = more angle to the pastern and longer toes
CW	Carcass weight	lb.	Higher CW = more carcass weight at harvest
Marb	Marbling	marbling score	Higher Marb = higher USDA marbling score
RE	Ribeye area	in <sup>2</sup>	Higher RE = increased ribeye area
Fat	Fat thickness	in.	Higher Fat = more inches of fat at 12th rib