

Heifer Pregnancy (HP) EPD

Since HP EPD was available, we have provided this EPD in our sale catalog, as we like our customers to be informed about the genetic selections they are making for their cow herds. Fertility is certainly an economically relevant trait.

Fast forward to 2025 when the American Angus Association provided updates to their suite of maternal selection tools. With that came a decrease in the heritability estimate for the trait of HP from .15 to .07. In other words, the genetic contribution to this fertility trait (HP) is estimated at only 7%, and the other 93% of the variation we see in the trait of heifer pregnancy is based upon non-genetic factors, such as feed, weather, semen quality, etc. Wow. Can we make forward genetic progress with a trait that is only 7% heritable?

Now let's examine another factor – accuracy. It's one thing to look at the HP EPD of a highly proven sire that has been used all over the country, has thousands of phenotypes (in the case of HP, heifer breeding records) and been used on a wide variety of cows. But it's another thing to look at an unproven or lowly proven animal for this trait and make selection decisions.

For the trait of HP, the animals in this sale have accuracy ranges from .17 to .27 (and this is coming from a herd that submits genomics and has submitted heifer breeding records to the AAA database for 20 years). The “expected” amount of change in the HP EPD with these levels of accuracy could take the animal from the top 1% of the breed to the 50th percentile or from breed average to the bottom 1-5% of the breed (Source: Accuracy and Associated Possible Change Table). Furthermore, these “expected” levels of maximum change in an EPD are predicted 2/3 of the time, meaning that 1/3 of the time, the change will be *greater* than what is predicted by the Accuracy and Associated Possible Change Table. Therefore, 1/3 of the time, an animal that ranks in the top 1% of the breed could actually be far below breed average for the trait. On the other hand, an animal ranking at the bottom of the breed could be well above average.

With the above information, is it wise to consider the HP EPD on non-parent animals? That is certainly a debatable topic, but my present recommendation is to ***use HP EPD as a guide only on highly proven animals***. If you wish to look up any bull's HP EPD (or any other EPD or index not printed in our sale catalog), visit

<https://www.angus.org/find-an-animal> and type in the animal's registration number or exact name to pull current EPDs.