

## **Feed efficiency selection tool**

The steps to generate the components needed to calculate residual average daily gain (RADG) include a comprehensive genetic evaluation of multiple phenotypic traits. Traits include calf weaning weight (accounts for selection bias), postweaning gain, ultrasound subcutaneous fat thickness, and individual calf dry-matter intake. The weaning weight, gain, and fat function as indicator traits to predict genetic feed intake values.

The resulting feed intake EPD from the genetic analysis is used to calculate residual gain. In this step, the genetic feed intake EPD and the genetic ultrasound fat EPD (a small composition adjustment) are used to adjust the postweaning gain EPD — thus, residual gain (RADG) is created. Weighting factors or regression coefficients, representing genetic trait relationships are used to adjust the intake and fat EPDs in the math.

RADG is presented in pounds (lb.) per day, with a higher value being more favorable. It is not a cow efficiency tool. In addition, genomic results and DNA technology allow calves without feed intake records to be included in the evaluation and ultimately have an RADG EPD prediction.