


### GE-EPDs and Genetic Selection



**AGI** Dan Moser and Tonya Amen  
Angus Genetics Inc.

### Road Map


- What's new this year
  - Calibration 4 GE-EPDs
- Coming Soon
  - MaternalPlus™
  - Feed Intake and \$F
  - Foot Scoring
- DNA Samples
- GMX Advantage



**AGI**

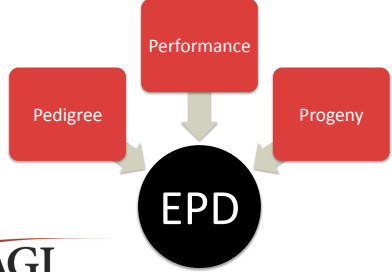
Calibration 4: Released September 2014

### GENOMIC RECALIBRATION



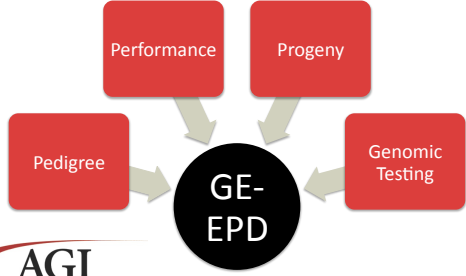
**AGI**

### Traditional EPDs



**AGI**

### GE-EPDs



**AGI**


### Developing GE-EPDs

- Two-step process
  - Development of molecular breeding values (MBV) from archived test results and AAA data
  - Incorporation of MBV into EPD calculation

**AGI**


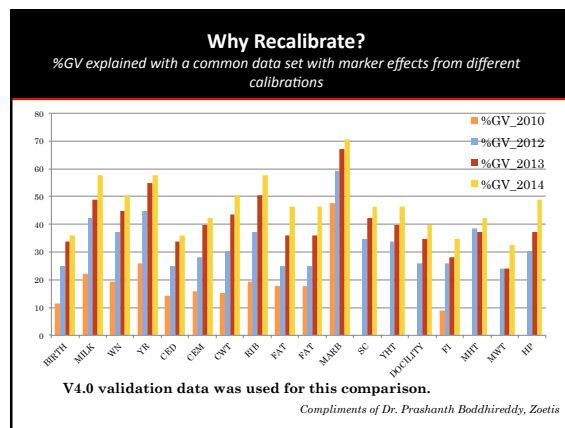
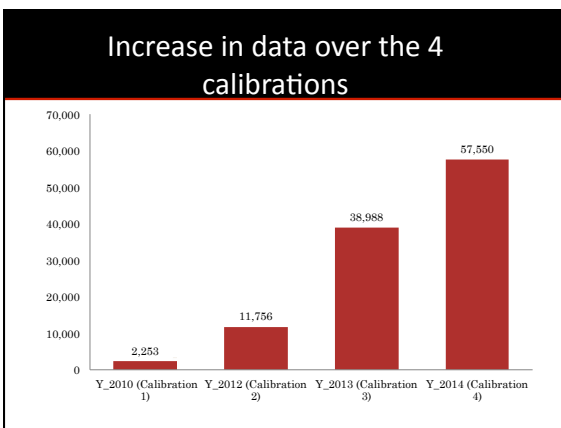
### How are MBV Developed?

- For each trait, single nucleotide polymorphisms (SNP) were selected that were associated with variation in those traits
- The effect of each SNP on the trait of interest was calculated
- An animal's MBV for a trait is the sum of the SNP effects for that trait




### How are MBV incorporated into Angus GE-EPDs?

- MBVs are incorporated into Angus GE-EPD as a correlated trait
  - Like weaning weight is correlated to yearling weight
- As the correlation between the MBV and the trait increases, the impact of genomic test results on EPDs for that trait increases

### Selection using GE-EPD

- Just like traditional EPDs, but with more accuracy, less risk for young animals
- Focus on the GE-EPD, not the genomic percentile rank



# ANGUS

## THE BUSINESS BREED

