

## **FAQ – Ultrasound vs Genomic Data vs Actual Carcass data**

### **What is used to train the genomic predictions for carcass traits?**

The population will train to carcass EPD phenotypes which possess a significant level of accuracy. Basically meaning if an animal has reported actual phenotypes, either ultrasound or actual carcass data, then they will be used to train the genomic predictions for carcass traits.

### **How are un-scanned animals treated in the training population?**

Animals with no scan data are not included into the training population. In order to be included in the training population, animals must have a phenotype reported for the particular trait, as well as, a genotype on file at the American Angus Association.

### **Do scanned heifers get included in the training population?**

Scanned heifers are included into the training population in the same way as male counterparts.

### **Bulls and heifers will never have carcass data, by the time they die they are a cull. What is the value, if any, for these animals in the training population?**

In order to have value in the training population for Carcass EPDs animals must have reported actual carcass or ultrasound data on those animals. Animals with no data reported will never be included in the training population. Ultrasound measures on breeding animals have a 0.76 correlation with actual carcass data. Although not perfect, ultrasound measures give us a good indication of the carcass value and is a great source of information on breeding animals.

### **How is ultrasound data utilized in the Angus national cattle evaluation?**

Ultrasound phenotypes are put in the model as correlated traits much like the genomic values are currently fit into the model. Any additional data point helps us to explain a greater percentage of genetic variation thus increasing the Association's ability to predict Carcass EPDs.

### **What are other reasons to continue to ultrasound animals?**

While using genomic testing increases the direct accuracy on a particular animal, it does not have a significant impact on the accuracy of its parents. Collecting ultrasound phenotypes of progeny will increase EPD accuracy of carcass traits just as additional progeny weaning weights or yearling weights will help to increase EPD accuracy of a sire or dam's growth traits.

**FIGURE 1. Taking on-farm ultrasound collection to genetic predictions**

