

## **Angus Foundation Research Project**

**Name of project:** Genomic sequencing of Angus sires, University of Missouri (MU)

**Status:** In-progress

**Timeline:** 2012 to 2013

**Angus Foundation funding:** \$50,500

**Objective:** Angus Foundation dollars will be used in tandem with funding provided by the United States Department of Agriculture's National Institute of Food and Agriculture (USDA NIFA), to deep sequence the genomes of high-impact Angus bulls to identify variation in growth, carcass quality, feed intake, disease resistance and early embryonic loss. The funding will also support MU's development of an assay to generate genomic-enhanced expected progeny differences (EPDs) and will include up to 6,000 of the variants detected in the sequencing project to test their effects on fertility in 10,000 genotyped heifers.

**Results, if any:** The results will lead to improved EPDs for fertility and production traits in Angus cattle.

**Application:** The American Angus Association® will benefit from this research, as it will receive DNA sequence data on the bulls, and then obtain additional knowledge tied to a large reservoir of sequenced bulls internationally. Sequence data can be used to expand existing high-density 50K (HD 50K) DNA data at MU into whole genome results, which in turn creates potential for advanced Angus selection tools at the Association.