

# Advanced Tools for Making Selection Decisions: Indexes and Marker Assisted Selection

## **Introduction**

This course will expose participants to some of the more advanced tools for making selection decisions. Since participants will have graduated from Master Cattleman they should have a working knowledge of EPDs and crossbreeding. This course will explore practices that are increasingly becoming more mainstream such as selection indexes and marker assisted selection (DNA technology).

## **Course Outline**

After a brief review of EPDs we will educate producers on the use of selection indexes. This will involve learning how indexes are developed and their proper usage. We will also demonstrate software that is available to assist in sire selection based on a producer's customized resources. This technology is similar to selection indexes; however, it fine tunes the selection decisions to maximize a producer's future profits. Marker assisted selection is entering into more and more producers selection decisions. DNA information on coat color, horned/polled, marbling and other traits is becoming increasingly available. We will discuss how this technology works and how it should best be implemented into the selection decision process.

## **Requirements**

This will be a classroom based course that will take 2-3 hours. Prior to the class the agents will identify and assist in collecting hair samples from a few bulls and send them in for DNA analysis (costs will be covered). The bulls will also be photographed for use in a slide presentation. The producer(s) of the bulls must agree to share information with attendees.