

September 15, 2008

**AGRO / MSYM / AGEN 431**  
**Site-Specific Crop Management**  
*Fall 2008*

**Assignment 2 (30 pts)**

Due: September 23, 2008

Take a Garmin eTrex Rino handheld GPS receiver and mark the position of a paper tag placed on the ground. Exchange receiver with your partner and use navigation option to locate the tag. Measure how many steps away from the tag you end up.

Use the receiver to log the geographic coordinates (track) of a walk around the boundary of the Tractor Test track and mark waypoints corresponding to the flags. Download the track and waypoints using Manifold software (in computer lab). Create a map of field boundary consisting of the track, waypoints and a DAQ image used as a backdrop. Determine the length and the area of the track.

In addition to marking the waypoints, write down geographic coordinates for two designated flags located 100 ft away. Use these geographic coordinates to calculate the distance between the two flags and compare with the measured distance.

**Bonus** (+10 pts) plot the track and calculate the perimeter and the area of the track using EXCEL spreadsheet (use Assignment\_2.xls file as a template).

Hand in:

1. Map of the area (image + track + waypoints).
2. Estimated area of the track in acres.
3. Calculations of the distance between two flags.
4. EXCEL map and calculation results (if completed)