

Corn Promotion Board 2013 Report

Title: The Arkansas Discovery Farm Program

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Progress Summary

We continue to expand the row crop portion of our Discovery Farm program with the possibility of having 15 fields instrumented for monitoring the quantity and quality of both inflow and outflow (Runoff) (Figure 1). Monitoring began in 2011 in Cross County and Arkansas County with one corn field being monitored during the growing season in 2011. Due to crop rotations, corn was not monitored in 2012. In 2013, we added two additional farms with seven fields. While a corn field in Desha County was instrumented with a trapezoidal flume in 2013, we experienced equipment malfunctions that prevented us from collecting runoff data for corn in 2013. We have sent the equipment back to the manufacturer for repair. We will re-initiate monitoring in the fall of 2013. We hope to have at least one corn field to monitor for 2014 but again it depends on decisions made by our Discovery Farm cooperators as to what crops they plant in instrumented fields.

Most scientists involved in hydrological studies involving edge-of-field monitoring require a minimum of five years of data to adequately account for annual variability in weather and hydrology. We have collected data now for three years at some sites. Without discussing individual data pending this time frame and data-sharing with the cooperating Discovery Farmers before release of the data, we can say that preliminary results indicate relatively small losses of both nitrogen and phosphorus in terms of lbs./A. Sediment loss appears to be more variable from field to field and crop to crop, but again the losses are relatively small.

Discovery Farms continue to generate tremendous interest which has provided great opportunity for education and outreach efforts including: 1) presentations made to more than 3,000 people at various events in Arkansas, 2) Conducted 15 field tours during the last three years for the Joint House/Senate Agriculture Committee, Arkansas Congressional staffers, Wal-Mart Sustainability Coordinators from eleven nations, Arkansas Farm Bureau, Natural Resources Conservation Service (NRCS), United Soybean Board Sustainability Workgroup, and a Multi-State (Seven States) Discovery Farm Tour. You can find out more information about Discovery Farms at <http://discoveryfarms.uark.edu/>.

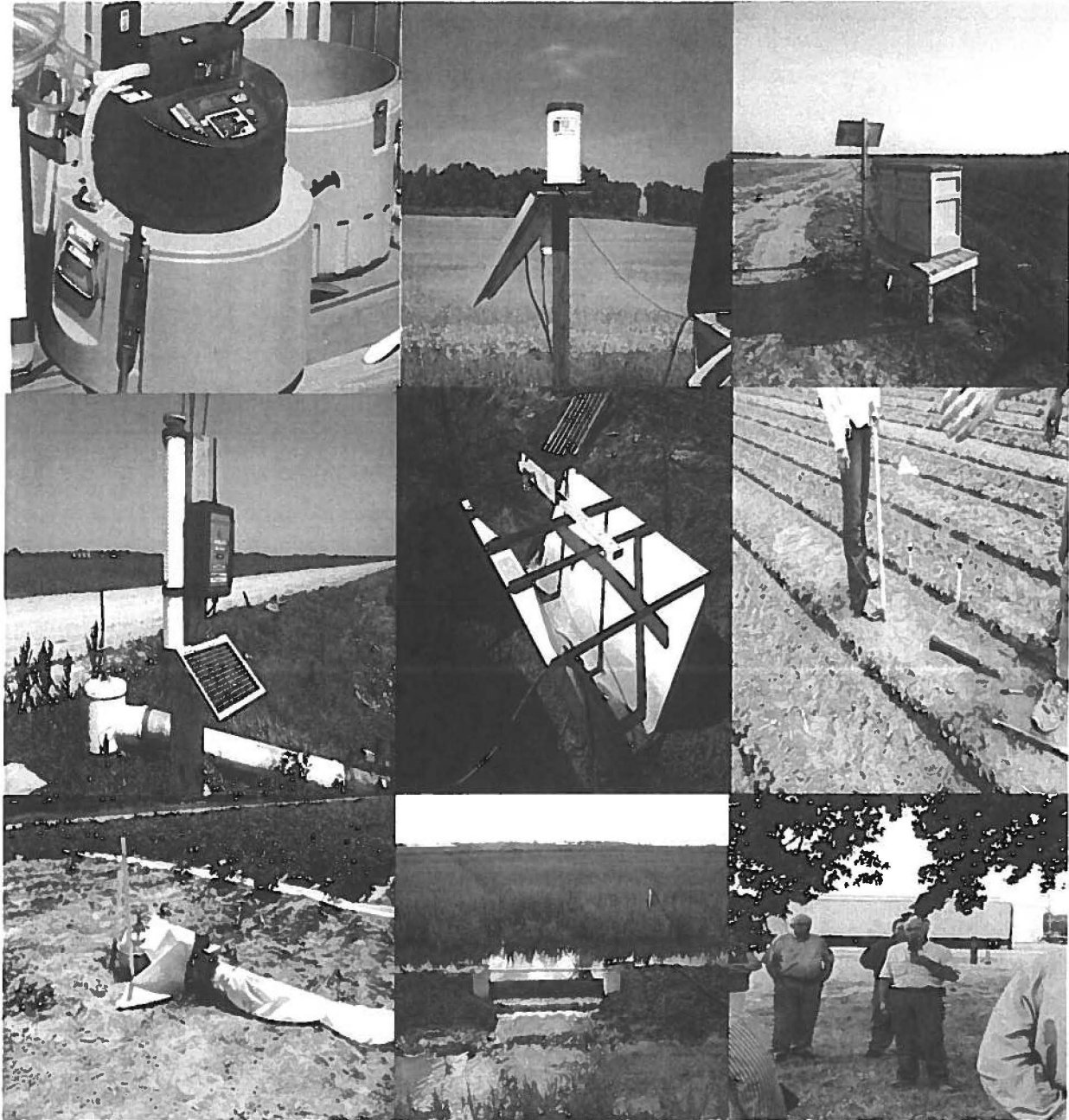


Figure 1. Various automated equipment utilized to measure both the quantity and quality of inflow and outflow. Several tours have been held on Discovery Farms in Arkansas (lower right).