Farmer perspectives on ecosystems service management, land use targeting and the future of Cornbelt agriculture

Abstract: The development and use of targeted conservation practices was the subject of modeling, interviews and support tools researched by the project investigators.

What was done and why?

Project objectives were:

1. **Farm-scale modeling:** Identify key sub-basin locations based on GIS assessment of Hydrologically Sensitive Areas and topographic variation. Guided by this information, selected farmers were contacted to gather site-specific farm management data to serve as input data for the development of farm-level conservation plans. Using initial information from farmer participants, site-specific alternative management scenarios were developed that incorporate (where appropriate) perennial Best Management Practices (BMPs) for the selected field sites designed to variously minimize erosion, overland flow, nutrient transport and or enhanced habitat.

2. **Farmer interviews:** Conduct semi-structured in-depth interviews with the targeted farmers regarding their baseline current farm operation in comparison to site-specific alternative management scenarios.

3. **Decision Support Tool analysis:** Conduct a parallel study to examine various “ecosystem-service” management tools that are available to aid farmers and technical service providers. Various PC-based decision support tools have been developed to aid in the field/farm level and (to some degree) landscape-level capacity to plan and design targeted conservation plans and analyze expected outcomes.

4. **Workshop with field agents and policy makers:** A centrally located “working meeting” was held for a select group of regional field agents and administrators in order to share findings from the Science-based Trials of Rowcrops Integrated with Prairie (STRIPS) project and farmer data from this project.

What did we learn?

The targeting methodology developed by this project will be promoted as a relatively low-cost method for conservation agencies (e.g., NRCS) to target water quality priority areas. Beyond the targeting tool, the farmer interview information will be integral to what will be called a “Unified Argument for Target Conservation” in Iowa.