David M. Barton Agriculture Research Center

VIB. Research

**Water Quality and Controlled Drainage and Irrigation**

**Introduction to Problem Statement**

In order to better utilize fields that consistently are too wet to work and plant in the springtime, in Southeast Missouri, more and more farmers are opting to install subsurface irrigation, - controlled drainage (SI-CD) irrigation systems. With such systems, however, surface water quality may be negatively impacted by nitrogen (N) and phosphorus (P) additions from tile-drains, resulting in excessive aquatic plant growth, oxygen deprivation, and fish kill. This investigation will evaluate a SI-CD in Cape Girardeau County to: (1) determine the amounts of N, P and other nutrients entering Williams Creek because of tile-drain effluent on fields cultivated to corn and soybeans, and (2) establish a best-management-practice protocol for the SI-CD system.