

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.