Agricultural and Biological Engineering Seminar

Production Agriculture and Environmental Targets: Can They Coexist?

Dr. Kevin King, USDA Agricultural Research Service
Drainage Research Unit, Columbus OH

Thursday, July 7 at 3 pm, ABE 301

In the Eastern Corn Belt, agricultural crop production is the focus of eutrophication concerns in both the Great Lakes and the Gulf of Mexico. Excess nutrients (i.e., nitrogen and phosphorus) have been identified and linked to harmful and nuisance algal blooms (HNABs) and hypoxic conditions in these waterbodies. For example, in 2014, the city of Toledo issued a "Do Not Use" drinking water warning due to toxins related to HNABs. More recently, water quality targets have been established for tributaries feeding Lake Erie. The nutrient losses responsible for these blooms and associated environmental impacts result from a combination of agronomic management practices and drainage.

This seminar will highlight ongoing edge-of-field research aimed at **quantifying the impacts of agricultural production practices**, and discuss potential management practices that might be used to **reduce offsite nutrient transport and meet the established water quality targets.**

Dr. Kevin King is a Research Agricultural Engineer and Research Leader with the USDA-Agricultural Research Service, Soil Drainage Research Unit. He is an internationally recognized authority on edge-of-field and watershed-scale water quality data collection techniques and determining hydrologic and water quality responses of conservation implementation in tile drained landscapes. In 2016 he was named an Outstanding Alumnus of the Purdue Agricultural and Biological Engineering Department.