Two-stage ditch a win-win for farmers, environment

Research literally holds water

Drainage ditches are often a must to grow crops in Ohio. But conventional ditches can have drawbacks. They cost farmers money to maintain. Sediment deposits can restrict their flow, and sometimes their banks erode or collapse. And they carry farm nutrients and eroded soil downstream into rivers and lakes.

But today there’s a better way to dig a ditch, thanks to Ohio Agricultural Research and Development Center scientists. Research by Andy Ward and colleagues has led to the innovative “two-stage” ditch design, which benefits not just farms but water quality.

The two-stage ditch, when compared to conventional ditches, drains water better, reduces flooding, reduces erosion, helps take nitrogen and phosphorus out of the water, and needs little maintenance.

According to Kent Wamsley, project manager of The Nature Conservancy’s Wabash River Initiative, which urges farmers to use the design, “These benefits translate to cost savings and increased yields for the farmer and to cleaner water for all of us.”

More: go.osu.edu/twoostageditch
Ohio Agricultural Research and Development Center

As the research arm of The Ohio State University’s College of Food, Agricultural, and Environmental Sciences (CFAES), the Ohio Agricultural Research and Development Center (OARDC) employs nearly 650 scientists and staff members throughout the state.

Its Wooster campus is the largest agbioscience research facility in the United States, and OARDC scientists work closely with researchers in Ohio State’s Colleges of Education and Human Ecology, Medicine, Public Health, Veterinary Medicine, Biological Sciences and Engineering.

At any given time, OARDC researchers are engaged in more than 400 research projects. Primary focus is in three signature areas:

• Advanced Bioenergy and Biobased Products
• Environmental Quality and Sustainability
• Food Security, Production and Human Health

The Ohio General Assembly established OARDC as the Ohio Agricultural Experiment Station in 1882. It is supported by a line-item appropriation from the Ohio General Assembly, competitive grants, gifts, contracts, federal grants and other sources. OARDC uses these funds to provide direct research support and economic development for Ohio’s annual $100+ billion agbioscience industry. OARDC is not funded by student tuition or any other general funds of The Ohio State University.