

# Popular Drainage Workshop To Be Held Feb. 21-23

**MACON, MO.**

**S**ubsurface drainage might be the right investment for farmers who want to raise yields while protecting water quality in nearby streams and lakes.

A University of Missouri Extension workshop, Feb. 21-23 in Macon, will provide a crash course for farmers and contractors on designing and installing subsurface agricultural drainage systems.

Properly installed subirrigation and/or drainage systems can boost yields by 20 to 40 percent, making the \$500-\$1,200 per acre cost pay off, according to Kelly Nelson, research associate professor in the MU Division of Plant Sciences.

"Yield monitors on the combines have shown us how much of an impact poor drainage has on our crop performance," he said. "I've been inundated with calls about subsurface drainage, and we've seen contractors as busy as can be."

A new system can mean planting and harvesting earlier. The systems also decrease soil compaction and increase fertilizer efficiency, especially in wet years.

"With integrated water-management systems you have built-in slides that work to reduce nitrate loss in the winter and then lower the water level as we move into spring to plant, and once the crop is established it can conserve water," Nelson said. "When it comes to crop production, environmental stewardship and water conservation, a lot of our farmers are looking at these systems. We just want to make sure they are designed right when they are making that investment."

MU researchers have been collecting subirrigation data on one research plot since 2001, looking at tile spacing, yields and soil porosity. With the help of the Environmental Protection Agency and the Missouri Department of Natural Resources, water-monitoring equipment was installed at the MU Drainage and Subirrigation (MUDS) site at the Greenley Research Center in Novelty, Mo. "Water quality can really improve," Nelson said. "Other states show up to 75 per-

cent reductions of nitrate loading of surface water streams through managed drainage."

This will be the fifth year since 2006 that this workshop has been offered. Speakers include farmers, contractors, and scientists and engineers from MU, Iowa State University and the USDA Natural Resources Conservation Service.

Hands-on opportunities will explain the surveying process and how to evaluate a farm's soil types to estimate optimal drain tile spacing and sizing of pipes. By the end of the workshop, contractors and farmers will be able to return home and put their knowledge to use.

"There are a lot of right ways to design a correct system but there are also wrong ways," Nelson said. "Often it is just about finding the most cost-effective way for each farmer."

The Greenley Research Center is part of the Missouri Agricultural Experiment Station. Greenley Center develops projects to evaluate efficient, profitable crop production techniques in northern Missouri while emphasizing soil conservation, water quality and energy efficiency.

This workshop is co-sponsored by MU Extension, the USDA Natural Resources Conservation Service, the Missouri Department of Natural Resources through funding from Section 319 of the Clean Water Act, and the Missouri chapter of the Land Improvement Contractors of America.

The workshop will be held at the Macon Comfort Inn Feb. 21-23. Those interested can enroll in the workshop for \$30 before the Feb. 14 deadline. There is no on-site registration and capacity is limited to the first 50 people. Last year saw registration fill within the first 48 hours, resulting in a waiting list of almost 50 people.

For more information on MU subirrigation research, go to [www.aes.missouri.edu/greenley/research/muds.stm](http://www.aes.missouri.edu/greenley/research/muds.stm)

Call Debbie Dickens at 573-634-3001 to sign up and find more about registration at [www.mlica.org](http://www.mlica.org). Δ

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