

UK Researcher On Ground Floor Of Biofuels Study

LEXINGTON, KY.

A turfgrass scientist in the University of Kentucky College of Agriculture is part of a regional team of university researchers studying the feasibility of growing miscanthus for biomass and biofuels.

Miscanthus x giganteus is a warm-season hybrid grass native to China that can produce large yields. Unlike Miscanthus sinensis that is found in landscapes and is invasive, Miscanthus x giganteus does not spread by seed so it is not invasive.

David Williams, associate professor in the UK Department of Plant and Soil Sciences, is one of the researchers studying the effects of nitrogen to miscanthus yields and quality. University of Illinois researchers are leading the project that is a part of the U.S. departments of energy and transportation's Sun Grant Initiative, which is administered by South Dakota State University. In addition to Kentucky and Illinois, researchers from Rutgers University, Virginia Tech and the University of Nebraska are also participating in the five-year study. In 2009, they completed the project's second year.

Researchers apply three nitrogen treatments to their research plots. Each month, they measure plant height, stems per plant and leaves per stem as well as collect yield data at harvest. Then, they send plant samples and all data to South Dakota State University researchers for analyzing.

So far, a common finding is nitrogen fertilizer has no effect on miscanthus yields and quality.

"This finding has lead to several questions for researchers including: 'are we applying at the most opportune time or using the right amounts,'" Williams said.

This miscanthus study is only the beginning and is laying the groundwork for further research. Researchers are in the process of working through some obstacles with the plant that they need to find solutions to before it can become an economically viable crop for farmers. A major concern is planting. Since the plant is sterile, it does not produce seeds. Additional



plants are only produced by vegetative propagation. With no equipment currently available to handle the planting of this plant material, growers must plant it by hand.

Although UK plots had virtually no winter kill, plots at other universities did. UK's trial was unique in that it contracted a fungus that caused leaf damage. Little is known at this point about that fungus or any additional fungal or insect problems. Δ

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