

USDA, NRCS  
PLANT MATERIALS  
PROGRAM

POINTS  
OF  
INTEREST

**New Study for  
Booneville in 2008**

**Possible Bio-Fuel  
Materials**

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# BOONEVILLE PLANT PRESS

February 2008

## NEW STUDY FOR BOONEVILLE IN 2008

The Booneville, Ark.; Elsberry, Mo.; Manhattan, Kan.; and Coffeerville, Miss., Plant Materials Centers (PMC) will be involved in an inter-center species trial of big bluestem (*andropogon gerardii*, Vitman) beginning in 2008. There have been several releases made in recent years by the Booneville PMC and the Elsberry PMC. This study will compare these germplasm releases and a selection from the Manhattan PMC to further document plant performance and adaptation in other geographical areas. Information gained from these plantings may be used to provide data to elevate the germplasms for cultivar status. In addition to these releases, standard big bluestem cultivars commonly used in NRCS conservation plantings and programs will be included in the trial along with other cultivars developed by the USDA-Agricultural Research Service in Lincoln, Neb.

Conservation practices potentially affected by this trial include, but are not limited to, Conservation Cover; Pasture and Hay Plantings; and Upland Wildlife Habitat. Resource concerns include, plants, animals, soil, and water.

Data collected will include, but are not limited to, seedling vigor, disease and insect resistance, drought tolerance, forage quality, and dry matter production.

Products from this study will include big bluestem performance, practice standard verifications or updates, technical notes, technical reports, and poster presentations.

For information about establishment and management of big bluestem and other native plants, contact the Booneville Plant Materials Center at 479-675-5182.



# Possible New Bio-fuel Material?

Booneville will initiate a new study in 2008 designed to evaluate the potential of *saccharum giganteum* (Walter) Pers. as a possible biofuel material feedstock. The common name for this giant is Sugarcane Plumegrass. It is a perennial warm season native bunch grass that is rapid growing and reaches heights of nearly 10 feet. The species can be found from New York to Florida, to west Texas, and into Illinois. It is a lowland plant, thriving in marshes and wet soils.

Booneville PMC staff discovered the plant growing on idle land at the Center a few years ago. Dr. David Burner, USDA-ARS identified the plant and suggested a cooperative study with the PMC to look at the potential of the plant as a biofuel material, based on its size and cellulose content of its stems. Seed of the plant matures in November in western Arkansas and is difficult to clean due to the hair like appendages on the seed head. Plant Materials Center technicians used a brush debearder to clean the seed for planting from a grain drill.



Eddie Pratt, Biological Science Technician standing in a field of *saccharum giganteum*, better known as Sugarcane Plumegrass.

The initial germination test failed, possibly due to a seed dormancy problem. Stratification methods are currently being tested to identify and overcome the problem.

Live plants will be dug up from the field and propagated in the greenhouse during the winter then transplanted to research plots in April where evaluations such as vigor, insect/disease problems, drought tolerance, plant height, and biomass production will be recorded.

For more information on native plants establishment and management, contact the Booneville Plant Materials Center.

## Mission Statement of NRCS

*The mission of the Natural Resources Conservation (NRCS) Plant Materials Program (PM) is to develop, test, and transfer effective state-of-the-art plant science technology to meet customer and resource needs. NRCS PM activities are consistent with the objectives of the current United States Department of Agriculture (USDA) and NRCS Strategic Plans (Exhibit 539-1), namely to provide timely and effective vegetative solutions for identified resource needs.*



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