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Plants for Conservation

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Elsberry PMC Plans Fall Training/Tour

The USDA NRCS Elsberry Plant Materials Center invites you to attend our Fall Field Day on Wednesday, September 20, 2006 from 10:00 am. to 2:30 pm.

The open house begins at 10:00 with a welcome and introduction to the Elsberry Center.

A wagon tour will provide an overview of the facilities, specialized equipment, foundation seed processing, harvesting, cleaning, and storage requirements for native seed. The tour will also view the Center's production fields that can be observed at the peak of the harvest season.

The Center has 24 active studies that directly relate to finding plant solutions to help respond to our natural resources challenges in the three states of Iowa, Illinois and Missouri that the Center serves.

So schedule September 20 to come and spend a beautiful autumn day at the Elsberry Plant Materials Center.

Please bring a sack lunch for our 1/2 hour break for lunch. Call the Center at 573-898-2012 or contact steve.bruckerhoff@mo.usda.gov, Plant Materials Center Manager, or jerry.kaiser@mo.usda.gov, Plant Materials Specialist, to confirm your attendance.

Attendance prizes will be awarded to the lucky winners that attend the field day.



Training Session: Area 4 in Missouri Plant ID and Drill Calibration

Jerry Kaiser,
Plant Materials Specialist

The PMC staff and Plant Materials Specialist will be conducting another hands-on training exercise for field office personnel. The training targets native plant identification and the planting of native grasses, legumes and forbs. Field office employees will be given an opportunity to calibrate drills and other seeders. They also will learn from the IPM Specialist how to calibrate a chemical sprayer and determine the amount of chemical needed to do a particular job.

Contact Pat Adams, Area Resource Conservationist, in Ozark, Missouri for signing up for the training and the locations in Area 4. Dates are July 12 and 13.



2005 Training Session was at Elsberry PMC



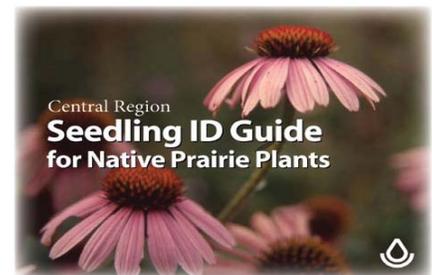
Central Region Seedling ID Guide

Jerry Kaiser, Plant Materials Specialist

The "Central Region Seedling ID Guide for Native Prairie Plants" can be viewed on the following websites: <http://plant-materials.nrcs.usda.gov>

Go to "Plant ID Tools and Guides" on the right side of this homepage. The MDC Grow Native website is <http://mdc.mo.gov/grownative/plantID>.

Additional hard copies can now be purchased for \$6.00 each by calling 877-521-8632 or faxing 573-522-2020 or on the web at www.mdcnatureshop.com. Ask for Seedling ID Guide for Native Prairie Plants; the ID number is 01-0290. Orders in bulk receive a 30% discount.



The supply of hard copies was sent to the field offices this past winter.



Testing the Herbicide Outrider for Injury of Woody Species

Steve Bruckerhoff, Plant Materials Center Manager

Trees and shrubs are used in many practices for conservation programs. Weed control is always an issue during establishment time for the woody species. What can be done if planned weed control is not adequate? What post planting treatments can be used without injury to the woody species?

Johnsongrass and canarygrass are two herbaceous plants that are hard to control, especially on wet soils. The Monsanto herbicide Outrider is labeled for the control of

Johnsongrass but not labeled for use on woody plants. The PMC worked with a Monsanto chemical representative to test the effects of over the top chemical application to selected woody species.



The test included 17 species of trees and shrubs, both upland and bottomland species. There was little to no damage on any of the trees. Outrider has a noncrop label and look for a label update in the near future.

Outrider was also evaluated for the control of reed canarygrass and was not effective in control, only suppression. Further testing with a tank mix with other chemicals is planned.

Additional information on this product can be obtained from James C. Graham, Monsanto Company, 800 N Lindbergh Blvd., St. Louis MO 63167. james.c.graham@monsanto.com or 314-694-2209 office, 314-805-7867 mobile



In Ottumwa, Iowa the Chariton Valley Biomass Project started their 90 day burn (2,000 hours) on February 17. A mixture of 5% switchgrass with 95% is coal being supplied directly to the boiler at Alliant Energy for electric energy production.

This 5% mix with the coal is really a lot of switchgrass; 11 tons per hour average, 580 large bales (900# average-3'X4'X8') in a 24 hour shift.

Since February they have burnt 11,381 tons (22,700 bales). The switchgrass comes from CRP switchgrass fields located in four counties of the Rathburn Lake Watershed. This was a special project where the landowners did not have any reduction in their CRP payments. The cost to the door of the processing plant is \$23.00/ton. The Alliant Energy Power Plant pays \$58.00/ton.

The switchgrass is off loaded from semi-trailers with a highlift that can grab four of these 900# bales and stack the bales in the holding building ready to be placed on the conveyor for processing. As the bales move down the conveyor, sensors test the moisture content of each bale. The bales need to be at a low moisture level (10-12% is the average). A pure stand of fall harvested dry switchgrass provides this ideal material. If foxtail and/or other broadleaf weeds are in the bale, this causes moisture levels to increase causing the bale to be rejected if 20% levels are detected. This higher level makes the shredding equipment work harder, pulling too many amps. The bale moves through the destringer to remove the bale string. Then it is transported by conveyor to the "Eliminator" which grinds the switchgrass. The ground switchgrass moves through the bag house to remove the dust particles back into the building through the surge bin into the blower room where it is sent pneumatically to ignite with coal. These two lines are each 10 inches in diameter. The speed of the switchgrass moving through these pipes was calculated at 120 mph and it has three seconds time to burn when it reaches the boiler. It is a huge boiler.

The environmental benefits come from the emission reductions. By burning a 5% mix they have substantially reduced sulfur dioxide released at the power plant.

After May 12 the power plant goes off line to test for slagging of equipment and wear with the use of switchgrass. The ash of the burning of coal and switchgrass is approved for mixing with concrete for roadways.

The potential market for switchgrass is great. If all goes well, this could create a need for 200,000 tons per year of switchgrass within a 70 mile radius of the plant. That amounts to 45,000 acres at a rate of 4.5 tons/acre if 'Cave-In-Rock' switchgrass is used. Other varieties from the plant materials program are also adapted to this area.

This will affect counties in SE Iowa and NE Missouri.



Loading four 900# Bales on conveyor



Bales on conveyor; removing strings toward the grinder.



Two 10" lines delivering under pressure the "chopped" switchgrass to the boiler for burning.

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