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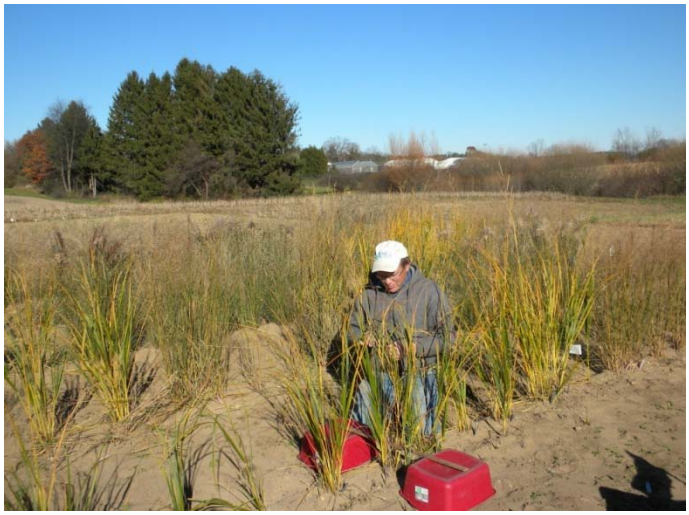
Rose Lake Plant Materials Center

Winter Newsletter 2011

Rose Lake PMC Conducts Plant Growth Experiment for Vegetative Barriers



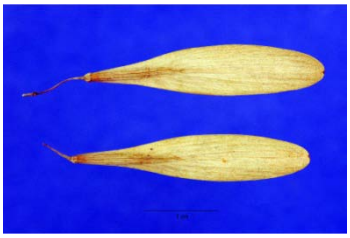
John Durling, PMC Agronomist, inspecting plant characteristics of switchgrass and prairie cordgrass

The Rose Lake Plant Materials Center initiated a research trial in 2010 to measure plant growth characteristics of three grass species that have potential use in vegetative barriers. 'Northwind' and 'Heavy Metal' switchgrass varieties and an accession of prairie cordgrass were planted at 12" or 3" spacing within rows. Stem number, stem diameter, crown width, and plant height were measured at the end of the growing season. These measurements will be taken for the next three years.

A second experiment will evaluate the effect of soil deposition on the growth of these grass species. The switchgrass and prairie cordgrass entries were planted in 2010, and end of season growth measurements were taken. A portion of the plants will have three inches of soil deposited around them each year for the next three years. This treatment is intended to simulate soil deposition on plants in a vegetative barrier planting. Growth measurements similar to the measurements taken in the first experiment will be taken at the end of each season. The goal of this experiment is to determine if soil deposition has a detrimental effect on the survival and growth of the plant varieties evaluated.

Growth data from these experiments will be used to develop Vegetative Stiffness Index values for the entries tested. The Vegetative Barriers Conservation Practice Standard (601) provides guidelines for planting density based on stem thickness. Vegetative Stiffness Index values will help planners considering the Vegetative Barriers conservation practice to make recommendations on species selection and planting density. Additionally, this information may be used for modeling and planning other conservation practices such as herbaceous wind barriers and snow barriers.

NRCS Works with U.S. Forest Service to Make Ash Seed Available to Researchers



The Rose Lake Plant Materials Center has coordinated the collection and storage of ash tree seeds through the National Ash Seed Collection Initiative since 2005. Seeds of green ash, white ash, black ash, blue ash, and pumpkin ash have been received, cleaned, and evaluated for soundness. Over 200 ash seed samples have been processed and stored in the National Center for Genetic Resource Preservation in Ft. Collins, CO. The storage facility in Ft. Collins can store ash seeds and maintain their viability for 30 years or more.

In 2009 the Rose Lake Plant Materials Program revised the seed collection instructions to include a larger volume (1 quart or larger) of seeds and a twig from the tree from which the seeds were collected. Those samples were provided to the U.S. Forest Service to include in the Germplasm Resources Information Network (GRIN) so that researchers can access samples of those ash seeds. Dr. Robert Karrfalt of the U.S. Forest Service in West Lafayette, IN has taken those samples and will make them available through GRIN in 2011.

Dr. Karrfalt has agreed to receive ash seed samples from collectors that participate in the National Ash Seed Collection Initiative in 2011 and beyond. Collection and shipping instructions are available on the Forest Service website: http://www.nsl.fs.fed.us/geneticconservation_ash.html. The website www.ashseed.org will be updated with a link to that website, and ashseed.org will be maintained for at least one more year.

The Rose Lake Plant Materials Program wishes to thank all those that have submitted ash seed samples to the National Ash Seed Collection Initiative over the last five years. Please continue your efforts to collect ash seeds and preserve this important natural resource.