Rose Lake Plant Materials Center
Report of Activities for 2010

Rose Lake PMC Releases Vintage Germplasm Common Elderberry

The Rose Lake Plant Materials Center released Vintage Germplasm common elderberry in August of 2010. A selected class release, this plant was evaluated for growth characteristics, fruit production, and regrowth after cutting. It was selected from 31 populations of common elderberry collected in the Rose Lake PMC service area.

The original vegetative material of this release was collected from Tipton County, Indiana. The collection site was in Major Land Resource Area 111a, Plant Hardiness Zone 5B.

Vintage Germplasm common elderberry is intended for use in streambank and shoreline stabilization. It can be used for enhancement of riparian corridors and provide food and shelter for wildlife. The anticipated area of use of Vintage Germplasm is within the Great Lakes region and upper mid-west United States, which is well within the species' range. Vintage Germplasm inhabits well drained soils near streams and adjacent bottomlands as well as in forests and muck soils.

Vegetative material of this release will be maintained by the USDA-NRCS Rose Lake Plant Materials Center, East Lansing, Michigan, and is available in limited quantities to interested parties for increase purposes.

Pollinator Workshop Held at Rose Lake PMC

Jennifer Hopwood from the Xerces Society was the main presenter at the workshop.

On June 24 the Rose Lake Plant Materials Center, in cooperation with the Xerces Society for Invertebrate Conservation and Michigan State University, conducted a short course on the establishment and importance of habitat for pollinator insects. Ms. Jennifer Hopwood, Midwest Pollinator Outreach Coordinator for the Xerces Society, instructed modules on the importance of native pollinators, basic native bee biology and identification, pollinator-friendly farming practices, and developing new pollinator habitat. Dr. Rufus Isaacs, Michigan State University entomologist, discussed sustaining bees in farmland to support fruit production. Dr. Julianna Tuell, Michigan State University entomologist discussed the importance of pollinators in biofuel production. In addition to the technical presentations, Mr. Dale Allen, with the USDA-FSA, and Mr. Chris Reidy, NRCS-MI State Biologist, presented information on various cost share programs that include provisions for pollinator habitat.

The Rose Lake Plant Materials Center established a field border planting of about 20

shrubs and herbaceous species that attract native bees and other beneficial insects. A tour of the Plant Materials Center highlighted that planting and provided opportunity for discussions on establishing wildflowers and other plants that benefit pollinators.

About 50 people attended the workshop including Michigan and Indiana NRCS employees, Conservation District personnel, State of Michigan personnel and representatives from conservation partners from around Michigan, Ohio, and Indiana. John Englert, National Program Leader for the Plant Materials Program, and regional Plant Materials Specialists Joel Douglas and Ramona Garner were also on hand for the workshop.

One of the groups of workshop attendees viewing the pollinator plots.

Plant Materials Program Review at Rose Lake PMC

The Rose Lake Plant Materials Center went through a Program review in June, 2010. Led by John Englert, National Program Leader for Plant Materials, the team reviewed the facilities, records, and activities of the PMC. Other members of the review team included Joel Douglas, Regional Plant Materials Specialist from the Central Region and Ramona Garner, Regional Plant Materials Specialist from the Eastern Region.

The review team also interviewed State Resource Conservationists from Michigan, Indiana, Wisconsin, and Ohio to determine the level of service and support provided by the Rose Lake Plant Materials Center to the states in the service area. They also interviewed other internal and external customers for their insights on the Rose Lake Plant Materials Program.

The review was conducted at the time when long time Rose Lake PMC employee Gail Bischoff retired. John Englert presented a Certificate of Appreciation to Gail for her years of faithful service to NRCS and the Plant Materials program.

John Englert presenting a plaque to Gail Bischoff for her years of service at the PMC.

Rose Lake PMC Partners with Michigan State University For New Plant Release

Dr. Richard Leep, Michigan State University forage specialist, approached NRCS in 2009 to produce seed and co-release an improved variety of yellow-flowered alfalfa (*Medicago sativa* spp. *falcata*). Yellow alfalfa is a perennial legume growing up to 30 inches high with multiple erect stems. It has alternate sets of three oval-shaped, hairy leaflets with yellow flowers. Yellow alfalfa has growth requirements (pH, nutrients and moisture) similar to purple flowered alfalfa. It blooms for a longer duration in the growing season than does purple flowered alfalfa and has been shown in Michigan to produce as much forage in a two cut system as purple flowered alfalfa produces in a three cut system.

Researchers at South Dakota State University (SDSU) evaluated several populations of yellow alfalfa for forage production, resistance to potato leaf hopper damage, resistance to alfalfa weevil damage and resistance to phytophthora root rot. From those trials a population was selected for further evaluation as a forage crop. Research at SDSU and Michigan State University demonstrated that this selection of yellow alfalfa produces as well as, or better than purple flowered alfalfa or birdsfoot trefoil. Yellow alfalfa is a perennial legume that fixes atmospheric nitrogen. In addition to livestock forage yellow alfalfa is consumed by game animals and birds. Small mammals also graze on alfalfa. Yellow alfalfa can be a source of nectar and pollen for insects and is particularly attractive to solitary bees such as leaf cutter bees. The Rose Lake PMC received seed from the yellow alfalfa selection and propagated seedlings in the greenhouse during April, 2010. Those seedlings were transplanted into a seed production field in June 2010.

Dr. Richard Leep, Michigan State University

Transplanting yellow alfalfa in a seed production field

Yellow alfalfa seedlings growing in the PMC greenhouse

Brassicaceous Cover Crops Evaluated at Rose Lake PMC

The Rose Lake PMC, in cooperation with Michigan State University and the University of Minnesota, is conducting a study to measure the growth parameters of mustard, rape, turnip, and oil seed radish.

Brassicaceous species [e.g. *Brassica spp.* (mustard, rape, and turnip) and *Raphanus sativus* (oilseed radish)] are being evaluated for use as cover crops planted after small grain harvest to provide protection from soil erosion. Other benefits of cover crops include reduced fertilizer and pesticide applications, improved yields by enhancing soil health, soil erosion prevention, water quality protection, and soil moisture conservation. Cover crops may be grown during or between primary cropping seasons. They are not grown primarily for harvest; rather, to benefit the environment or other crops. In addition, several species have been shown to reduce soil compaction and nematode populations.

Little plant growth data for *Brassica* and *Raphanus spp.* is currently available. Data from this study will be included in the database for conservation planning tools, such as RUSLE 2 and WEPS, which require plant growth measurements to accurately predict the conservation effects of plants.

John Durling, PMC Agronomist and Victoria Ackroyd, MSU Extension Educator evaluating plants in the project.

Bill Kuenstler, NRCS Conservation Agronomist from Ft. Worth, TX and Jerry Grigar, NRCS State Agronomist collecting data.

Raphanus sativus **black oilseed radish**

Brassicaceous cover crop growing well at Rose Lake PMC

Constructed Wetland Planting in Logan County, Ohio

Plant Materials Specialist Dave Burgdorf worked with the Logan County, OH District Conservationist and the Logan County Environmental Health Department to establish vegetation on a constructed wetland for septic tank treatment. The planting is an evaluation of different species for possible use in the wetland treatment system. Plants were grown in the Rose Lake PMC greenhouse and transplanted in the wetland in May, 2008. Prairie cordgrass and Canada bluejoint are established and growing well in the wetland system after three years. Sweetgrass, woolgrass, and prairie sandreed are not growing well under those conditions.

Bob Stoll, District Conservationist is working with Craig Kauffman, Logan County, Environmental Health Director on the planting evaluation and sampling of the treatment system.

Michigan NRCS Field Offices Highlight PM Program Releases In Demonstration Plantings

In 2006 the Kingsford, MI NRCS Field Office planted Southlow Michigan Germplasm big bluestem, indiangrass, and switchgrass as a demonstration near the Service Center sign post. Four years later the warm season grasses are growing well and demonstrating what those releases look like in that area of the Upper Peninsula. The site has sand and gravel soils with about one inch of topsoil. All three species were five to eight feet tall in that location.

NRCS Field Offices in Michigan, Wisconsin, Indiana, or Ohio have installed demonstration plantings of released materials from the Plant Materials Program. Demonstration plantings give NRCS customers an idea of what the release might look like in their geographic area and provide additional information to customers as they make decisions for conservation plantings. Any field offices wanting to obtain seeds or vegetative material of Plant Materials Program releases please contact Dave Burgdorf, Plant Materials Specialist, at 517-641-7831.

We knew our tree was special…….

Recently the PMC was visited by Ted Reuschel. from the Michigan Big Tree Project. He was told to come see our beautiful tree and to see where it stood on the biggest tree registry in Michigan. It turns out our beautiful Oak tree is over 150 years old and registers as the fifth largest oak tree in the state of Michigan.

Guanica Bay, Puerto Rico Coral Reef Protection

In January 2010, NRCS Plant Materials Specialist, Dave Burgdorf and NRCS Engineer, Frank Cousin participated as part of a technical team that met in Puerto Rico to assist with problems in Guanica Bay. The team evaluated stressors such as sediment and nutrients in the Guanica Bay watershed that adversely affect the Bay and its coral reef. The team provided recommendations for consideration in the use of special EQIP funds to address the identified resource concerns. Dave and Frank's focus was primarily on the Rio Loco bank erosion concerns and sedimentation delivery to Guanica Bay.

Rio Loco- Main tributary to Guanica Bay

Frank Cousin negotiating Rio Loco banks

Rio Loco, cross section survey for planning purposes

Rio Loco bank erosion due to old abandoned irrigation structures

Natural Rio Loco bank erosion in deposition flood plain

NRCS Team of Amigos and Amiga in Puerto Rico

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