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Progress Report of Activities

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Manhattan, Kansas, Plant Materials Center

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Seeking Vegetative Solutions to Conservation Problems

Who We Are

The Manhattan Plant Materials Center (PMC) is one of 27 centers nationwide that uses plants to solve natural resource problems. The Manhattan PMC is owned and operated by Natural Resources Conservation Service (NRCS). The PMC offers services to a diverse region of the heartland including Kansas, Nebraska, northern Oklahoma, and northeastern Colorado. It is located on 169 acres of sandy loam soil in the Kansas River Valley, south of Manhattan, Kansas.



What We Do

The mission of the Plant Materials Program (PMP) is to develop and transfer plant science technology to meet the Nation's natural resources conservation needs. The vision is to be recognized as the Nation's leading technical source of plant solutions and plant technology to meet natural resource conservation needs. This includes the production of improved varieties of plants for commercial use and the development of plant science technology for incorporation into the electronic Field Office Technical Guide (eFOTG). Plant and technology development objectives of the Manhattan PMC include:

- Water quality improvement
- Erosion control
- Range and pasture improvement
- Native American outreach
- Plant variety selection and production

Program Highlights for 2007

Foundation Seed Production

The Manhattan PMC maintains a variety of native grass and forb fields for foundation seed production. Native grass varieties include:

- Kaw big bluestem
- Pete eastern gamagrass
- Osage Indiangrass
- Cheyenne Indiangrass
- Aldous little bluestem
- Cimarron little bluestem
- Garden sand bluestem
- Bend sand lovegrass
- El Reno sideoats grama
- Blackwell switchgrass
- Kanlow switchgrass
- Barton western wheatgrass
- Pronghorn prairie sandreed



El Reno sideoats grama



Sunglow grayhead prairie coneflower

Native forb varieties include:

- Midas false sunflower
- Sunglow grayhead prairie coneflower
- Prairie Gold maximilian sunflower
- Nekan pitcher sage
- Kaneb purple prairie clover
- Kanoka round-head lespedeza
- Eureka thickspike gayfeather
- Reno Germplasm Illinois bundleflower
- Riley showy partridge pea

Manhattan Plant Materials Center Long-Range Plan Updated

The PMC Long-Range Plan (LRP), has been updated and was approved at the 2007 State Conservationists' Advisory Committee Meeting. The PMC LRP is based on the priorities identified in the Kansas, Nebraska, Oklahoma, and Colorado LRPs that were updated in previous years.

In the LRP, the PMC identified three goals: 1. Identify and evaluate plants; develop technology for their successful establishment and maintenance to solve natural resource conservation problems including protecting soils, improving air and water quality, and enhancing wildlife resources. 2. Provide plant materials and technology that are economically feasible for solving conservation problems. 3. Provide equal access for all Americans to the PMP. Each of these goals contains several objectives that relate to the PMC LRP.

Program Highlights for 2007

Modoc Cypress Study Continues

Evaluation of Modoc cypress continues through 2007. The first success of Modoc cypress is that it survived the winter following the initial planting in 2006. As this conifer is monitored, it will be evaluated for winter and summer survival, disease and pest resistance, and adaptability for use as a windbreak tree. The study was initiated by a need in the Kansas LRP for a conifer-type tree to use in windbreak plantings due to the spread of eastern redcedar in many parts of the state of Kansas and elsewhere.



Silverscape Evaluated

Through the efforts of Constance A. Miller, Nebraska NRCS State Forester, a number of silverscape olive were planted in evaluation plots across Kansas and Nebraska.

Silverscape olive is a hybrid between Russian olive and silverberry. Silverscape is a medium shrub with a weeping growth habit, a moderate growth rate, and has attractive silver-white foliage. It produces small silver fruit with non-viable seed and exhibits reduced suckering compared to its parents.



If silverscape proves to be as hardy as its parents, it should be a beneficial shrub component for planting in many windbreaks and harsh planting sites across Kansas and Nebraska. In Kansas, planting sites include the PMC and the tree/shrub planting sites west of Tribune. Evaluation of the silverscape will continue for several more years.

Saline Site Evaluations

The evaluation of the saline sites continued with the vegetative plantings of inland saltgrass, 'Jose' tall wheatgrass, and alkali sacaton into planting sites in Butler and Greenwood Counties in Kansas.

From prior plantings, the more organic matter there is both on the surface and incorporated, the better success there is in getting a stand of vegetation. Seedlings were planted on the two saline sites to determine if vegetative plantings on the sites would have greater establishment success. This decision was based on the data indicating that high salt levels adversely affect seed germination. Initial plantings with vegetative materials were not conclusive. Additional plantings will be needed in the future.



Tribune, Tree/Shrub Evaluation Site

Additions to the Tribune, Kansas, tree/shrub planting site for 2007 include silverscape and cotoneaster. Cotoneaster is a potential release from the PMC. Evaluations of these plantings in addition to the existing plantings will be completed annually.

Program Highlights for 2007

Langston University

Oklahoma State Conservationist, Ron L. Hillard; Grazing Land Specialist, Steven J. Glasgow; and PMC staff met with agriculture program representatives from Langston University to discuss NRCS and plant materials assistance to the University.

Initial discussion concentrated on brush control and grass management of University property. The University may also serve as a field study planting site for future PMC releases.



AiKiRuti Healing Garden

The Winnebago Tribes AiKiRuti Healing Garden was featured in the My.NRCS weekly newsletter dated February 1, 2007. For several years, the Manhattan PMC has worked with volunteer Robert Starck to provide a variety of plant materials for the AiKiRuti Healing Garden.



The Healing Garden continues to develop into a place where the Winnebago community can focus on some of the plants culturally significant to the Tribe. The PMC continues to annually provide plant materials and technical assistance to the Winnebago Tribe.

Manhattan Plant Materials Center Tours

Tours of the Manhattan PMC are available Monday through Friday during regular business hours. Advance reservations are recommended for group tours.

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