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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 the Natural Resources Conservation Service (NRCS). The Manhattan 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 deliver plant science technology to meet the Nation's natural resources conservation needs. The PMP vision: Productive Lands – Healthy Environment. The PMP is 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 2008

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



Aldous little bluestem



Eureka thickspike gayfeather

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 PMC Functional Review

As directed by the Office of Management and Budget, the Manhattan PMP functional review was completed in April. National Plant Materials Program Leader Robert Escherman, North Dakota State Conservationist J.R. Flores, and Regional Plant Materials Specialist Joel Douglas completed the review of the center.

Foundation seed production, plant development, administrative oversight, and customer base were among the items that were reviewed.



PMC staff and review team

Program Highlights for 2008

Field Study Planting

A field planting sponsored by the Manhattan PMC was installed in early May. Planting sites included four in Nebraska: Lincoln, Bloomfield, Chadron, and North Platte with one planting completed at Tribune, Kansas. The planting in Lincoln, Nebraska, was completed in cooperation with Southwest Lincoln High School biology class.



Southwest Lincoln High School biology class

The planting included two future Manhattan PMC releases of blue grama, along with one cultivar from the Agricultural Research Service (ARS) and two adapted cultivars of blue grama for comparison. Forbs in the planting included both seeded and vegetative plantings of New Jersey tea, leadplant, compass plant, and dotted gayfeather.

Evaluations of these plantings will be completed annually for the next five years recording plant vigor and performance.

Silverscape Continues to be Evaluated

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 attractive silver-white foliage. It produces small silver fruit with non-viable seed and exhibits reduced suckering compared to its parents.



1st year

2nd year

As you can see from the photos, silverscape has demonstrated significant growth in just one year at the Manhattan PMC. It has not yet produced fruit so potential of plant spread by seed has not yet been determined. Continued evaluation of this shrub will determine adaptability to Kansas and Nebraska.

Plant and Soil Science Workshop

The Manhattan PMC hosted the Central Region Plant and Soil Science Workshop. Participants from Kansas and Missouri participated in the workshop. Specialists from the Central National Technology Support Center provided instruction for the participants. John Tatarko, ARS Wind Erosion Laboratory demonstrates a tool used to visually monitor soil roughness. Photographs can be taken for future use and reference.



John Tatarko, ARS, explains methods for determining surface roughness to workshop participants.

Program Highlights for 2008

Plant Materials Committee Meetings

Terry Conway, Kansas NRCS State Resource Conservationist, along with Charlie Barden, Kansas State University Forestry Specialist, review plant materials in the Manhattan PMC lathe house during the Kansas Plant Materials Meeting in 2008.

These materials will be used in Manhattan PMC plantings and in plantings throughout the service area.



Terry Conway and Charlie Barden

Outreach

The Chestnut Gatherers, as they are referred, is a volunteer group that comes each fall to gather chestnuts and share their bounty with the Manhattan PMC. Hundreds of pounds of chestnuts are harvested by the gatherers which enables the Manhattan PMC to provide chestnuts for other projects in the area. Chestnuts are quite popular among the Asian population in the area. Mu Hui, a chestnut gatherer, expresses her enthusiasm from the chestnut crop to John Row, Manhattan PMC Plant Materials Specialist.



John Row and Mu Hui

Chestnuts

Manhattan PMC 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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PMP Web site:

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