

# Manhattan Plant Materials Center



A newsletter in support of the Plant Materials Program for Colorado, Kansas, Nebraska, and Oklahoma

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## Release of 'Chet' Sand Bluestem

The US Department of Agriculture, Agricultural Research Service (ARS) in cooperation with the Oklahoma Agricultural Experiment Station and the US Department of Agriculture, Natural Resources Conservation Service (NRCS), Plant Materials Program announces the naming and release of 'Chet' sand bluestem (*Andropogon hallii* Hack.). Chet is a medium stature plant that is recommended for pasture or hay, complementary rangeland-forage production systems, soil stabilization, or reclamation of marginal croplands in the central and southern Great Plains of the United States.

Chet was derived from a big and sand bluestem collection consisting of 158 accessions received as seed from the USDA-ARS North Central Regional Plant Introduction Station in 1985. The entries in this collection were assembled by the late Dr. Kling Anderson of Kansas State University. Chet was derived from three polycross selection cycles carried out by ARS.

Small plot field evaluation of Chet were conducted in the Central and Southern Great Plains in 2001-2003 at the USDA-ARS Southern Plains Range Research Station at Woodward, OK; Oklahoma State University, Perkins Research Station, Perkins, OK; and at the USDA-NRCS Plant Materials Centers at Manhattan, KS; Knox City, TX; and Nacogdoches, TX. Forage dry matter yield averaged over these locations was 8.8% greater than that of 'Woodward' sand bluestem. The seasonal average crude protein (6.4%) and *in vitro* digestible dry matter were not significantly different from Woodward sand bluestem. The seed yield of Chet was significantly different and was 59% greater than that of Woodward sand bluestem.

Seed of Chet is deposited in the National Plant Germ Plasm System where it will be available for research purposes. Pedigreed seed of Chet will be limited to Breeder, Foundation, Registered, and Certified classes. Foundation seed production will be maintained under the direction of the Oklahoma Foundation Seed Stocks, Inc., Oklahoma State University, Stillwater, OK.

Chet is named in honor of Mr. Chester L. Dewald, Research Agronomist, USDA-ARS Southern Plains Range Research Station, Woodward, OK. Mr. Dewald was instrumental in the breeding and selection of this cultivar prior to his retirement and death. Chet was always a friend to the Plant Materials Program and a real common sense type of researcher. His knowledge of warm season grasses and their breeding systems was extraordinary.

## Western Kansas Bur Oak Evaluation Update

In September the field evaluation of the Tribune Kansas woody study was completed. The study includes a variety of shrubs and hardwood trees in a windbreak setting. Tribune, which is often known for its low rainfall and harsh climate, is an ideal location to test the stamina of the bur oak. Despite these conditions the bur oak is standing out as a tree that can take on the challenges.

Since planting in the spring of 1995, there has been a 95% survival rate for the bur oak in the study area. These oaks are currently reaching heights of 4.46 meters with many of them producing fruit. At planting, weed moisture barrier was applied to the trees. There has been no supplemental watering of the bur oak and mowing has been completed annually between the rows.

Bur oak (*Quercus macrocarpa*) is native to the eastern two-thirds of Kansas. Bur oak is one of the most widely distributed deciduous hardwood trees in Kansas. It is one of the largest and longest-lived hardwood trees reaching a mature height of 50 to 80 feet and a crown spread of 40 to 60 feet. It has a massive trunk, short branches and a large, round crown. It is commonly considered slow growing however, on a fertile site with adequate moisture, after a couple of years establishing its roots; it can grow two to three feet a year.

Initial conclusions, from the Tribune Kansas Woody Study, show that bur oak is a viable species in many arid windbreaks. It is a large, long-lived tree that provides a good staple food for many birds and animals. For more information about bur oak please visit <http://plants.usda.gov/> or

<http://www.kansasforests.org/conservation/deciduous/buroak.shtml>



**Bur oak at Tribune, Kansas**

### PMC Marketing Program

The Manhattan Plant Materials Center Staff has been busy with the marketing of our program this past year. We have updated the entrance sign to the PMC with the new/old NRCS logo and added the Plant Materials Program logo as well. The Staff has also worked with Sheila Forrester (Kansas Public Affairs Staff) to update The Plant Materials Brochure. The Center has provided some pictures and ideas for the text of the new brochure. The current brochure is 1996 model and has some inaccurate telephone and Fax numbers and did not mention the contributions to the program provided by the Plant Materials Specialist. The new brochure will correct these problems and give the Center a more correct up to date picture of our work. Sample copies of the brochures will be sent to all field offices in our service area soon.

### Buttonbush Update

A common buttonbush (*Cephalanthus occidentalis*) Initial Evaluation Planting (IEP) was established at the Center in 2001, consisting of an assembly of 36 accessions. Evaluations have been conducted over the past four growing seasons. Supplemental water has been provided every year except this year. In 2004, frequent rains were adequate to satisfy this obligate wetland species until things turned dry in September. Survival has been excellent although several plants have declined for unknown reasons. Four fairly distinct growth forms have been identified in the IEP, one mostly prostrate, and three erect forms. The erect forms range from sparsely stemmed to full much branched shrubs. One of which has stems that touch the ground. Included in the assembly are some unique traits that may be of interest to horticulturists. Among the most striking ornamental characteristics are plant specimens with dark green leaves and red petioles, or ones with red fruits, or ones with flowers with pink corolla tubes.



### Texas PPFA Announcement

The Texas Forest Service would like to announce that the 2005 Plains and Prairie Forestry Association (PPFA) will be held in Amarillo, Texas September 6-8, 2005. Recent PPFA meetings have been held in the month of June, but due to AFTA (Association of Temperate Agroforestry) hosting their meeting in June 2005, we felt it necessary to adjust our conference date to prevent a conflict. There will be more information to come regarding the conference agenda and registration in upcoming newsletters. We're looking forward to seeing all of you in Texas next year.

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