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MANHATTAN PLANT MATERIALS CENTER
Manhattan, Kansas

Plants for the Heartland

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Colorful pin oak on a fall day at the PMC

INSIDE THIS ISSUE:

Winnebago Tribe of Nebraska's AiKiRuti Healing Garden

A small seed can grow into great things. That is the symbolic idea behind the Winnebago Tribe of Nebraska's AiKiRuti Healing Garden. AiKiRuti – pronounced I-key-ru-dee – is a project that has started small and hopes to grow into something big and beautiful. AiKiRuti means "helping hand." The AiKiRuti healing garden hopes to lend a helping hand in fighting drug and alcohol abuse in the Winnebago Tribe and their community. The Healing Garden will provide a space where visitors can find a spiritual and cultural strength. It will also provide a place where all members of the community can come together and learn more about the Winnebago Tribe's culture and heritage.

CeCe with volunteer Bob Starck at AiKiRuti healing garden

The first phase of the healing garden was started in 2002 when over 100 varieties of indigenous plants significant to the Winnebago people were planted at the one-acre site in Winnebago, Nebraska. Members of the community worked together to clear the land and prepare the site for planting. The Nebraska Loess Hill RC&D worked with the NRCS Plant Materials Center in Manhattan, Kansas, to supply plant materials for the garden. Additional plant materials were provided in 2006 to diversify the seeding.

Community involvement has kept the dream of AiKiRuti alive. For example, in 2003 local children planted plugs of buffalo grass in the future healing garden's Tee Pee ring. According to CeCe Earth, a member of the AiKiRuti Organization, the garden provided a unique opportunity for these Winnebago children to do something to help restore a piece

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Plant Materials Program Studies Arizona and Modoc Cypress

The need for a good conifer tree for use in windbreak plantings was identified as a priority in the Kansas Plant Materials Long-Range Plan. Arizona and Modoc cypress are two conifers that were selected for field evaluation in Kansas.

Initial evaluation of the Arizona cypress indicates that the winters in Kansas are too cold for this native southwest United States' conifer. Out of the 100 seedling trees initially planted, only one survived the winter.

Modoc cypress, native to the northwestern United States, were planted last spring in central and western Kansas. Jack rabbits found the plants tasty so they were replanted this fall and caged to protect them from the rabbits. Follow-up evaluation will be completed next spring to determine winter survival.

During the study, these conifers will be evaluated for establishment, disease resistance, adaptability for windbreaks, and potential for spread. Initial thought is that Modoc cypress may have some adaptation to Kansas.

Arizona Cypress

AiKiRuti Healing Garden continued from page 1

Children look at culturally significant plants

of their Tribe's culture. The Winnebago people used to depend on plants for food, fiber, and medicine. That knowledge has become lost over the years. The AiKiRuti healing garden hopes to help bring knowledge, pride, and culture identity to the Tribe. The plants in the garden are central to that learning process. It is hoped that having an understanding about how the Tribe used native plants will help Tribal members become connected with their culture, the land, and eventually to themselves and each other.

The AiKiRuti Organization wants to move into the second phase of the healing garden soon.

This involves building a Cultural Learning/Visitors Center. The Center's goal is to provide a place of cultural discovery for members of the Tribe and provide an opportunity for non-Indians to participate in cultural and educational activities alongside members of the Tribe.

"It can take a long time for a garden like this to really start to look like something. I think that's also a little like our struggling community. But if you look closely, you can see some beauty and hope emerging," Earth said. The Tribe is hoping this healing garden will live up to its name.

Chinese Chestnuts Offered in Outreach Endeavor

Chinese chestnut produces a reliable crop every year

While most of us don't think of chestnuts as a snack food, the Korean population sure does. Some people like to peel and eat them straight from the tree. The general consensus is that nuts need to be steamed or boiled and then frozen for use over the coming months. The chestnuts are used not only as a snack but may be included in various rice dishes according to Yong Beliveau. They may also be roasted and eaten or put in a poultry dressing. Recently, while gathering chestnuts at the Plant Materials Center (PMC) a gatherer remarked, "these chestnuts are the sweetest I have found anywhere." She rated them superior to ones growing in Japan. The mahogany colored nuts start dropping from the trees in mid-September. It is not long afterward that people start showing up wanting to gather the nuts. It is a lot of work to gather the nuts not to mention the back pain. In an effort to let others know about the PMC, the staff decided to share the chestnuts with those who would pick them up. "This frees up PMC staff for other tasks as fall is such a busy time at the PMC," says Rich Wynia, PMC Manager. "We get what we need to meet the PMC's needs while proving the point that the Chinese chestnut is a good candidate for a cottage industry kind of crop," adds John Row, PMC Specialist, who has been studying the Chinese chestnut since 1989. Groves located near population centers could provide an additional source of income for small farmers or anyone wanting to diversify their operation, though yields are not consistent from year to year. It is estimated that one can expect yields of 1 ½ tons per acre in any given year. While it is possible to get nut production the second year of the tree's life, five to seven years is more likely. It is also worth mentioning that deer and other wildlife relish the chestnuts as well. If we didn't pick up the nuts they'd all be gone by Thanksgiving leaving only a multitude of hoof prints and chestnut husks under the trees.

A husk with three nuts

Bumper crop of chestnuts

Pack Rats Plague PMC

Every day PMC people face the challenging business of developing new and improved plant materials, new methodologies, and new plant technology . The Manhattan PMC staff was not prepared, however, for the challenge that pack rats, formally referred to as the eastern wood rat, have presented. There were isolated incidents such as pack rats stealing items and stuffing them in a tarp stored in our machinery building. Things escalated a bit when pack rats stuffed their booty in the cylinder chamber of our old AC-72 combine over the course of one winter. When the technicians fired up the combine for the first time the following spring, objects the rats had placed in the cylinder chamber were too large and too hard to pass through the threshing mechanism and bent the cylinder bars. The cylinder was already bent from past abuses of running heavy wads of plant material through the machine but at least the combine was functional. All of a sudden we were forced to deal with the cylinder problem. Since parts are difficult to come by, the PMC staff had to locate an old abandoned machine that they could rob parts from. This meant cutting one out of the trees with a chainsaw before taking a cutting torch to the rusty old cylinder that we desperately needed. That was just the beginning of our troubles with pack rats. A few years later they attacked the PMC's irrigation system stripping every shred of insulation from the battery cables to the pumping plant. The rats also went after the fuel lines and chewed them up, spilling diesel fuel on the ground. Jerry Longren, Biological Science Technician (BST), set out to deter the rats by armoring the fuel lines and installing a shut off at the fuel tank. The rats proved to be formidable foes and looked for weaknesses in Jerry's defenses. Jerry battled the problem for some time before winning the fight. Every exposed surface of hose had to be covered. According the Rich Wynia, PMC Manager, the pack rats have cost us thousands of dollars in repairs and labor costs over the years. The problem seems to be getting worse. This past spring the rats clipped off 68 percent of the stems on our potted hackberry trees and chewed up a new garden hose in the PMC's lathhouse. Traps were set and several rats were trapped and several more were cornered and killed. But that has not stopped the onslaught. We have had to repair wiring for trailer lights over and over again and several of the PMC's vehicles have had to go into the shop this fall for repairs to wiring. The battle rages on, and we obviously haven't won it yet.

Trapped rat, small victory for PMC

Facility/Equipment/Security Update

The Manhattan PMC has made some progress this past year with regard to maintenance and upgrading of the facilities. We replaced both furnaces in the seed cleaning building due to failure of the previous heating units (both suffered cracks in their heat exchange systems). We procured the materials and Jerry Longren, BST, constructed a new metal oil house for the PMC. We also installed an exhaust fan and louver system in the shop to remove fumes generated by welding and painting operations. With the state office procurement specialists helping us, we procured two old combines that will be used for spare parts. Parts were becoming increasingly hard to find for the AC-72 (made in the 1950's) and the John Deere 45 (manufactured in 1965) combines. Hopefully, these old machines will keep running for a few more seasons. With regard to security, we finished fencing the last of our propane tanks with chain link fence. The PMC invested in a new master padlock set and replaced all the padlocks with a set opened and locked with a single key. We plan to re-side the lath house this next year.

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SEEKING VEGETATIVE SOLUTIONS TO CONSERVATION PROBLEMS

The mission of the Plant Materials Program is to develop and transfer state-of-the-art plant science technology to meet customer and resource needs. The primary products produced by the program include 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).

We're on the Web!
www.plant-materials.nrcs.usda.gov

In A Quandary

The following story illustrates the importance of providing complete information when making a plant collection for the plant materials program. When people make a plant collection whether it be seeds or plants, they are asked to fill out an ECS-580 Plant Collection Information data sheet. This information helps to document the origin of the plant material being collected. The Agricultural Research Service's Plant Introduction System refers to this information as "passport information." The more complete the data sheet is, the better. When it comes to location (very important), a complete description is needed. Way back in 1958, H. W. Wells, collected common hackberry seeds "from a difficult site." The legal description that was provided with the seed was NE 1/4 22-12-4 rather than NE 1/4 Sec. 22 T12N R4E or R4W. The collection was made in Oklahoma so Jim Henley, NRCS GIS Manager in the Oklahoma State Office, was called upon to assist in determining what county 22-12-4 occurs in. Jim's answer was Oklahoma County or Lincoln County depending on the range designation E or W, because "it depends on what side of the Indian Meridian (East or West) the section occurs on." These two counties are adjacent to each other in the central part of the state. We at least know that much. Which county Wells worked in might shed further light on the matter, but we may never know for certain since he could have visited either county. Why does anyone care 48 years later? Because viable germ plasm is still in the system and is undergoing further evaluation as a promising plant material.