



Tallgrass Prairie

CENTER

Restoring a National Treasure



Mission: The Tallgrass Prairie Center develops research, techniques, education and source identified seed for restoration and preservation of prairie vegetation in rights-of-way and other lands.

Meet the Tallgrass Prairie Center... a (very) brief history!

Spring 2007

The Tallgrass Prairie Center is a strong advocate of progressive, ecological approaches utilizing native vegetation to provide environmental, economic, and aesthetic benefits for the public good. The Center is in the vanguard of roadside vegetation management, Source Identified seed development, and restoration of tallgrass prairie communities native to the upper mid-west.

The Tallgrass Prairie Center was established at the University of Northern Iowa (UNI) in 1999 as the Native Roadside Vegetation Center. It is located on the UNI west campus and utilizes 65 acres of campus and leased land for native seed production plots. The name was changed January 1, 2006 to more accurately reflect its mission, programs and activities.

The primary programs of the Center are the Prairie Institute, the Integrated Roadside Vegetation Management Program, and the Iowa Ecotype Project. The Prairie Institute reflects UNI's 30-year commitment to prairie reconstruction, restoration, management and advocacy. The Integrated Roadside Vegetation Management Program (IRVM) was established in 1988 to assist Iowa counties in implementing IRVM programs utilizing native vegetation. The Iowa Ecotype Project, initiated in 1990, develops regionally adapted Iowa Source Identified foundation seed for commercial production. Many of the programs are accomplished through partnerships with organizations, associations, and federal, state and local agencies including but not limited to Iowa DOT, USDA-NRCS, Iowa County Conservation Boards and Secondary Roads Departments, Iowa Crop Improvement Association, Iowa Native Seed Growers Association, and non-profit organizations.

For more information about the overall mission of the Center contact Dr. Daryl Smith, Director, 319-273-2238 daryl.smith@uni.edu.

Native Plant Workshops at the Tallgrass Prairie Center

Twenty participants from all around the state traveled to the Center recently for a Native Plant Propagation workshop. Information was presented on growing plants from seed, root and shoot cuttings, and corm, bulb, and root division. The workshop is a mix of hands-on demonstrations and presentations, with plenty of time for propagating as many as 30 species to take home. The workshop has been offered every other April, alternating with a popular Native Seedling Identification workshop. A Native Seed Harvest and Cleaning workshop is offered every other fall. Nearly 200 people have participated in these workshops over the past 4 years. Participants from a variety backgrounds and organizations have attended, including US Army Corps of Engineers, USDA Natural Resource Conservation Service, US Fish and Wildlife Service, Department of Natural Resources, Soil and Water Conservation Districts, County Conservation Boards and Secondary Roads Departments, and private nurseries, non-profit organizations, prairie enthusiasts, Master Gardeners, and high-school and university students. The states of Nebraska, Minnesota, Illinois, Missouri, and South Dakota have been represented by attendees of the workshops.

Contact Greg Houseal, 319-273-3305, gregory.houseal@uni.edu if you'd like your name added to the list to be notified of upcoming workshops.





Dave Williams sampling the vegetation in a research plot on highway 20.

Prairie Research

Iowa's interstate and highway ditches are currently undergoing a transformation, from non-native pasture grasses to native prairie grasses and wildflowers. The Tallgrass Prairie Center is assisting Iowa Department of Transportation (Iowa DOT) with these efforts by providing research to improve on how to plant prairie and plant prairie more efficiently. Over the past two years, center staff has conducted three research projects for Iowa DOT. Here are the highlights of these research projects.

- Planting a non-native annual grass, such as annual rye (*Lolium multiflorum*), with the prairie seed will reduce establishment of the natives. If the planting site is not prone to soil erosion, don't include seed of a non-native species with the prairie seed mix!
- Hot and dry weather can make seeding prairie during the summer months risky. However, if seeding during the summer months is the only option, seeding early summer will increase prairie plant establishment over seeding mid or late summer.
- To achieve establishment of 1 prairie grass plant/ft², prairie grasses should be seeded at a rate above 25 seeds/ft². To increase species richness of the prairie planting, forbs should be seeded at a rate at least equal to the seeding rate of the grasses.

For more information on these projects and other research, contact Dave Williams at (319) 273-7957 or dave.williams@uni.edu

Two Ecological Restoration Internships New This Summer

For the past five summers the Center has hired a full-time student employee to work with native seed production plots. This year, for the first time, two Ecological Restoration Internships are being created at the Center to provide UNI students with a diverse array of hands-on experience with restoration techniques in savanna, woodland, upland and wet-prairie plant communities. While the interns will assist with seed production plots, they will also be working on state, county, and private natural areas in northeast Iowa. They will also provide much needed management for UNI's Biological Preserves System including controlling brush and invasive species in riparian woodlands and tallgrass prairie, restoring a small oak savanna on campus, and thinning of a 25 year old oak upland forest reconstruction. Clay Prairie State Preserve in Butler County, owned and managed by UNI, will also benefit from intern activities. They will also work cooperatively with intern crews from The Nature Conservancy and Iowa Natural Heritage Foundation during scheduled workdays on preserves in the region. A special partnership with Iowa NRCS will allow interns to work on wet-prairie restoration on private lands enrolled in the Wetland Reserve Program (WRP) at two sites protected by permanent easements. Seed will be harvested from high-quality remnants portions for seeding on adjacent croplands as part of a pilot project to buffer and restore a growing list of protected private wetlands.

The internships are designed to allow students to acquire career-building experiences and knowledge in ecological restoration and natural areas management. Opportunities to attend conferences, meetings, and field trips will also be provided as they arise.

New Initiatives in Native Foundation Seed Development

The Center is building on long experience with foundation seed increase of native species to expand the scope of the Iowa Ecotype Project. Three new initiatives include: 1) the compilation and publication later this year of a Native Seed Production manual in collaboration with USDA NRCS Elsberry Plant Materials Center (MO), Iowa Crop Improvement Association, and the Iowa NRCS office, with funding from the USDANRCS; 2) the addition of several upland sedge species for foundation seed increase to provide a much needed cool-season graminoid component to restorations. Species include prairie sedge (*Carex bicknellii*), Plains oval sedge (*C. brevior*), Heavy sedge (*C. gravida*), and Troublesome sedge (*C. molesta*); 3) a suite of wetland species are being collected and screened for their potential for foundation seed increase and commercial production. Additional infrastructure will be required to provide adequate irrigation for wetland seed nursery beds.

For more information contact Greg Houseal, gregory.houseal@uni.edu, 273-3005.



Two year old Prairie sedge (*Carex bicknellii*) in fruit, from remnant collected achenes.

Fifty-Two Iowa Counties Pick up Prairie Grass and Wildflower Seed

Representatives from 52 Iowa counties picked up their shares of a \$200,000 prairie grass and wildflower seed purchase, enough seed to plant 1,200 acres of county road right-of-way. County roadside managers will plant a mix of 32 prairie grass and wildflower species. Benefits of the native vegetation include beautification, habitat restoration, erosion control and weed control.

This is the 10th year the Center's Integrated Roadside Vegetation Management (IRVM) has received transportation enhancement funding from the Iowa Department of Transportation (DOT). Iowa DOT administers the funds as a Transportation Enhancement Program and divides the money between three categories: 1) Bicycle and pedestrian trails, 2) Historic preservation (many railroad depots have been restored with these funds) and 3) Natural Resources/Beautification. The Center's IRVM program applies under the last category to obtain funds for the seed purchase. Over the past 10 years 78 different Iowa counties have received seed through the program.

The recent approval of \$200,000.00 in funding for next year brings the total received since 1998 to \$3 million. By making one large purchase on behalf of all participating counties, the state gets more seed for the money. Seed mixes are designed by the IRVM program, and includes only species truly native to Iowa. The program places a priority on purchasing Iowa Source Identified (Yellow Tag) certified seed from commercial native seed producers.

For more information, contact Kirk Henderson, (319) 273-2813/kirk.henderson@uni.edu



Des Moines County Roadside Managers, Jeff Chase and Brian Hand pick up their seed.

Congratulations to Graduating Employees



Justin Nelson

Biology: Emphasis on Ecology and Systematics
Minor in History

- Looking for a job in the Omaha area. Working in Ecology.
- Justin's experience at the center, "I learned a lot about the ecology of Iowa. I felt like it was more of a learning experience than work. I had a lot of fun and never left the center with a bad mood. Everyone had so much wisdom to share."



Allie Rath

Biology: Emphasis on Ecology and Systematics

- Looking for a job with county conservation for the summer, in August will do an internship with SCA, a Student Conservation Association spending a year working with wetlands. Then deciding on Grad. School.
- Allie's experience at the center, "Working at the center helped me apply and gain knowledge in Ecology. I had many different activities at the center, knowing how to use the seed cleaning machines and other skills I gained is something that I will always take with me. I was always glad to come in to work, we had fun and worked hard."



Marshall Herrick

BA Biology

- Accepted to Grad. School at North Dakota State
- Marshall's experience at the center, "I had a great time working directly with my major. I really enjoyed the whole burn process, from planning to execution. I had a great experience with good people."



Justin Huisman

BA Biology Education

- Accepted to Grad. School at UNI. Summer plans: Prairie Ecology class at Iowa Lakeside Laboratory, "Wildfire Power Saws" at the National Wildfire Academy in Jefferson City, Missouri, then working with the Loess Hills Fire Crew, fighting wildfires wherever duty calls.
- Justin's experience at the center, "I've learned skills that would benefit anyone involved in improving Iowa's biodiversity. I was given the opportunity to network with some of the finest ecologists in the Midwest."

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