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Nebraska's Natural Legacy Project

by Kristal Stoner, Nebraska Game and Parks Commission

Nebraska's Natural Legacy Project is part of a nationwide change in the course of conservation. Currently every state in the nation and six territories are developing Comprehensive Wildlife Conservation Strategies or blueprints for conservation at the state or territory level. In 2001, Congress acknowledged the need for wildlife species funding in response to the support from more than 6000 conservation organizations. State Wildlife Grants were appropriated with the hope that a new, proactive approach will turn away from the traditional reactive approach of conserving species when they become listed as threatened or endangered. These blueprints will work to identify species in need of conservation and prevent future endangered species listings. As a condition of receiving State Wildlife Grants, each state and territory must complete a statewide, comprehensive blueprint for wildlife conservation by October of 2005.

Creating a blueprint to conserve all the species in Nebraska is a challenging task. Nebraska is a widely diverse state and boasts of many habitats where wildlife species are thriving, but also has many regions where species are declining. Our state can be divided into four major ecoregions, or areas of similar flora and fauna: tallgrass prairie, central mixed-grass prairie, sandhills prairie, and shortgrass prairie. The tallgrass prairie is on

the far eastern edge of our state and is characterized by grasses that easily reach 5 feet in height. This prairie type once stretched from Ohio to Nebraska. Many species that rely on this habitat are declining, as only 1-2% of tallgrass prairie remains. The central mixed-grass prairie covers the south-central region of our state. This region is interspersed with many streams and wetlands and hosts the rainwater basin. The rainwater basin is a vital staging area for 50% of the mid-continent mallard population, 200,000-300,000 shorebirds, and half a million sandhill cranes. The sandhills prairie is largely an undiscovered treasure to many Nebraskans. This is the largest stabilized dune system in the western hemisphere where many wildlife species are

thriving. The shortgrass prairie is characterized by animals and plants that are adapted to desert-like conditions, as this area can receive 12 inches or less of rainfall annually.

Nebraska is a prairie state, and many of the wildlife species that are thriving in Nebraska owe this to the timeless fit between grazing and prairie ecosystems. The prairie is adapted to disturbance, specifically grazing and fire. Nebraska's ranching industry provides the disturbance needed for the prairie and wildlife to thrive. Many of Nebraska's ranchers are excellent land stewards.

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Photo credit: NEBRASKAland Magazine/Nebraska Game and Parks Commission

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The Center for Grassland Studies is a unit within the University of Nebraska-Lincoln Institute of Agriculture and Natural Resources. It receives guidance from a Policy Advisory Committee and a 50-member Citizens Advisory Council. This newsletter is published quarterly.

Note: Opinions expressed in this newsletter are those of the authors and do not necessarily represent the policy of the Center for Grassland Studies, the Institute of Agriculture and Natural Resources or the University of Nebraska.

Martin A. Massengale CGS Director
Pam Murray CGS Coordinator
Jan Shamburg CGS Secretary
Anne Moore Newsletter Layout



FROM THE DIRECTOR

The Center for Grassland Studies is now ten years old. It was formed at the request of a number of faculty who saw the need for and importance of a multi-disciplinary center dealing with the subject of grasslands in their broadest context. The Center's mission is "to implement focused, interdisciplinary research, educational and service programs and activities that emphasize the role of grasslands as a natural resource and conservation measure and that enhance the efficiency, profitability, sustainability, and aesthetic value of grasslands, wetlands and turfs." In working toward achieving our mission, we have initiated, coordinated or been a significant partner in numerous activities, some of which I will enumerate here.

We have and continue to collect print and video reference material for our resource room, which is used by faculty, students and the public. The Center's Web site provides important information about its activities and is accessed by people all over the world. A statewide Citizens Advisory Council was formed of approximately 50 members with a wide variety of backgrounds. This group meets twice a year and provides advice and support for the Center. A Policy Advisory Committee composed primarily of University of Nebraska faculty and personnel from various state and federal government agencies likewise meets twice a year and provides guidance on policy matters.

Also ten years old are this quarterly newsletter that highlights research, educational and other activities of our CGS Associates, and the CGS Fall Seminar Series. The Associates, which number around 120, are professionals who are involved in research, teaching or outreach in areas related to the Center's mission. They contribute by authoring articles for the newsletter, making presentations, and participating in Center-related projects.

In our educational role, the Center serves as the home for two multi-disciplinary undergraduate majors. The Grazing Livestock Systems major combines parts of animal science, forage/range science, and agricultural economics into a single program. We have good reports on the success of our graduates from this major. Our newest major, Professional Golf Management, combines the areas of business, turf science, hospitality and restaurant management and human relations. This program was accredited by the Professional Golfers' Association of America in February of this year and is only the 15th such program in the U. S. There are 32 students in this first PGM class, and judging by the interest generated by this new program, we expect next year's cohort to be even larger.

Our Center has worked with its Associates in preparation, submission and administration of several interdisciplinary grants, many of which are multi-state. One example is the collaborative work of a regional group of scientists and professionals involved in forage/livestock systems research and extension. The Center helped form that group and continues to serve as a logistics and support center for its activities. The Center also helped initiate and continues to sponsor and provide coordinating support for the annual Nebraska Grazing Conference, which began in 2001 and averages about 200 participants. Additionally, the Center has been involved in co-sponsoring many publications and educational events, both on and off campus.

The Center has been most fortunate to have the services of two outstanding employees from its beginning: Pam Murray (Coordinator) and Jan Shamburg (Secretary). These highly competent individuals have enabled the Center to accomplish much more than would have been possible otherwise. We all look forward to continuing service to our clientele.

M. A. Massengale

Owens Highlights UNL Grazing Activities at Grazing Conference

The following is the welcoming address given by Dr. John Owens, NU Vice President and IANR Harlan Vice Chancellor, at the 2004 Nebraska Grazing Conference in Kearney August 10-11.

It is both my privilege and pleasure to have the opportunity this morning to welcome you to the 2004 Nebraska Grazing Conference. I am sure you are looking forward to the next two days of great topics and excellent speakers. This is the fourth year this conference has brought people together to hear, to discuss, and to exchange a wide variety of ideas. Reading through the list of conference sponsors and supporters, I think how fortunate we are in Nebraska to forge and foster such productive partnerships for the good of our state.

Because Nebraska is home to nearly 23 million acres of rangeland and pastureland – half of which is in the Sandhills – the importance of knowledge in how we can best manage, conserve, and sustain this land cannot be overestimated.

Last September the National Science Foundation awarded the University of Nebraska-Lincoln a \$1.8 million grant that is funding a four-year comprehensive, interdisciplinary study of Nebraska's unique Sandhills region. Our Institute of Agriculture and Natural Resources (IANR) scientists are heavily involved in this work. It builds on years of Sandhills research by team members and other UNL scientists. The work funded by this grant will increase our knowledge of the 20,000 square-mile Sandhills area, which, as I noted earlier, is home to half our state's range and pastureland. We also think it could help expand our understanding of the broader potential impacts of global climate change. This large-scale study focuses on the links between the Sandhills' grass cover, wetlands, groundwater, and regional climate. We hope to discover new knowledge to help us all better understand how climate and environment interact to create and maintain this fragile ecosystem.

Work funded by the National Science Foundation grant is only one of the many projects underway right now to provide us with new knowledge of value to Nebraska and Nebraskans. Currently in the Institute we have ongoing research on developing decision-support tools for grazing management, drought and defoliation impacts on key rangeland forage species, seeded irrigated and dryland forages, grazing system effects on plant communities, wet meadow management, and more. Much more. Grazing and livestock research is especially important to the Institute and to Nebraska. This morning I'm going to provide just a few examples of our programs and research projects focused on grazing in Nebraska, along with some of our other work I think you'll find interesting, as well. In the time we have there is no way we can begin to touch them all, of course, but I think those I'm going to talk about



John C. Owens

today provide a glimpse into the ongoing work so vital for our state.

For starters, there's all the information on drought management the Institute has been disseminating in a variety of ways in the past few years – through Cooperative Extension education meetings, through media, via the Web, and one-on-one, as drought has gripped parts of Nebraska and has held on tight. This is information we wish we never had to use, because drought means hard times as well as hard decisions. It's so very important that we have unbiased, research-based knowledge available to us in times like these, however, to provide information for good decision making. Our researchers have worked hard over the years – as they continue to work hard today – to provide this important knowledge.

In southwest Nebraska last year, participants in a Cooperative Extension beef cattle and drought seminar aimed at helping producers protect drought-damaged rangeland and explore ways to stretch limited feed supplies, estimated the knowledge they gained to be worth more than \$18 per head of cattle, for an average of \$4,700 per producer. In west central Nebraska, four ranchers who treated 6,300 acres for grasshoppers estimated extension information increased their combined profits between \$11,000 and \$12,000.

Discovering and providing knowledge is a part of everything we do. Certainly it's a part of our Beef Basics home study courses, with which I hope you are familiar. Our Cooperative Extension Division recently released Beef Basics VI in a joint venture with Cooperative Extension in Wyoming. Beef Basics VI emphasizes an understanding of range plants, drought management, cattle grazing behavior, riparian management, feed intake, supplemental feeding, weed control, and marketing cattle. Earlier Beef Basics courses – I through V – cover a multitude of other topics: nutrition, economics and forage use, reproduction, genetics and sire selection, health and management of growing calves, financial record keeping and production records, and nutritional strategies for the beef cow herd. Each course is designed by our Cooperative Extension educators and specialists, with input from producers and veterinarians. The courses are designed to stand alone, so you needn't take one through five before participating in six. Some people certainly do choose to take more than one, however, to further their understanding with a wide variety of knowledge. Since Beef Basics began in 1993, there have been more than 4,500 enrollments in the program. Producer evaluations report ideas implemented from the program save an average \$15 per head.

New technology offers us new tools for research, and our Institute scientists are finding some very intriguing ways to use it. One of our researchers uses leather collars with Global Positioning System units on Sandhills cows to track where the cows graze – and don't graze. Because cattle are creatures of habit, once they establish their

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Owens Highlights UNL Grazing Activities at Grazing Conference (continued from page 3)

grazing patterns, they very well may overgraze some spots while undergrazing others. Last summer the GPS collars tracked cattle movements. Data were collected from the collars and downloaded into computers, then cow locations were plotted on topographic/digital elevation maps. Cows' locations also were correlated with such management and environmental factors as temperature, topography, and how far it is to water. This information has been used as a teaching module in a grazing management course on campus. Students study the relationships between grazing livestock and the environment, and examine how different factors affect grazing patterns. The collared-cattle project continues in a longer-term research project to identify key variables that affect cattle distribution on rangeland. Results will be used to develop management strategies to improve grazing distribution.

In other work, university and USDA Agricultural Research Service scientists jointly developed three new wheatgrass cultivars we think will provide some high quality hay and grazing options for ranchers and farmers on the Great Plains. These new cultivars grow out of nearly 20 years of research. Two – named Beefmaker and Haymaker – are intermediate wheatgrasses. The third – NU-ARS AC2 – is a Fairway-type crested wheatgrass.

Beefmaker is a high-protein pasture grass more digestible than any other intermediate wheatgrass. It should provide better gains for yearling beef steers than the existing cultivars we've had. Haymaker produces high, stable forage yields for cool-season hay or pastures in low-rainfall areas. It's seen as primarily for those using dryland hay to support beef cow herds through the winter. NU-ARS AC-2 is the first Fairway-type, crested wheatgrass with yield and forage quality equal to the best standard, crested wheatgrass. The highest yielding Fairway type yet developed, its expected use is in mixtures in more arid regions where crested wheatgrass grows. We'll look forward to seeing these new cultivars in action in the years to come.

In eastern Nebraska IANR researchers are exploring ways to diversify eastern Nebraska's predominantly smooth brome pastures so they provide more nutritious, reliable forage through the summer. They're looking for the right mix of vegetation to supplement brome, and the best grazing system that will allow producers to take full advantage of pastures throughout the season.

While smooth brome provides plentiful, high-quality forage during spring calving season and often again in the fall, it hits a summer slump. Our scientists have found interseeding three legumes in university brome test pastures increased productivity, feed availability, and forage quality from July through September. They interseeded alfalfa, birdsfoot trefoil, and kura clover into the brome. This is part of the Institute's ongoing research to help make the best of pastures all season long. The legumes helped improve beef gains by 25 to 40 pounds per acre. That translates into about \$10 to \$20 per acre of additional income. Once they're established, the

legumes require much less fertilizer than does brome, resulting in an estimated \$15 per acre cost savings.

Because it's difficult to plant and establish legumes in existing brome, our researchers continue to look for ways to improve interseeding effectiveness. They're also finding promise in using native, warm-season grasses such as indiangrass, big bluestem, and switchgrass to complement brome. A key, of course, is finding a grazing system that makes the most effective use of both cool- and warm-season grasses. Research has found it's better for pastures to use a rotational approach to give grasses time to recover from grazing.

When it comes to grazing corn stalks, Institute research shows feeding or grazing genetically-modified corn has no effect on livestock performance. Our studies involved Bt corn for rootworms and Roundup Ready® corn. IANR scientists evaluated performance of livestock fed or grazed on genetically-modified corn for three years to provide information on these new types of corn. Results reinforced earlier findings on the feed value of genetically-modified crops by our scientists here in Nebraska and at other land-grant universities.

I hope you're familiar with our Grazing Livestock Systems major begun in our College of Agricultural Sciences and Natural Resources within the Institute in fall of 1999. It integrates animal science, agronomy, and agricultural economics into a three-for-one package you won't find in many academic programs. Offered through the Center for Grassland Studies, the major focuses on the interrelationships of ruminant livestock production, grassland ecology and management, and business management. We require internships of each of our Grazing Livestock Systems majors. The students and their advisors plan those internships together, based on each student's career and education objectives, so each internship is tailor-made.

We have 23 students enrolled as Grazing Livestock Systems majors this fall. Please encourage the young people you know who are interested in grazing livestock systems to inquire about this interesting major. It's a good one, and our college is a terrific place to study. In fact, we're always glad to talk to any student about the multitude of exciting, productive careers available to them through the College of Agricultural Sciences and Natural Resources. Whether they're interested in *food* – growing it, developing new food products, food safety, and the like; in *business*, where our students go on to careers in agricultural economics, finance, and much more; in *science*, which is so part and parcel of what we do – in *so many areas*, the College of Agricultural Sciences and Natural Resources offers an excellent educational springboard for a student's future.

Perhaps you've read stories of how our veterinary scientists have designed a calving system to reduce calf scours on Sandhills ranches. The system reduces calf exposure to the organisms causing scours by keeping older and younger calves in separate pastures and by moving pregnant cows to new calving areas where calves are born

in pastures free of scours-causing germs. This system significantly reduced calf illness and treatment costs and eliminated calf deaths from scours in tests on two Sandhills ranches under different calving schemes. One 900-head ranch that lost 7% to 14% of its calves to scours before adopting the system has had absolutely no scours deaths since. Because few calves developed scours, antibiotic costs and labor needed to treat sick animals dropped greatly. The herd owner estimated up to \$50,000 savings since implementing the calving system because of improved calf performance, greatly reduced treatment costs, and having more calves to sell. The scours prevention system can be adapted to a variety of calving situations in the Sandhills and beyond. Our team is teaching veterinarians and ranchers how to adopt this strategy.

Our experts at the Center for Advanced Land Management Information Technologies, or CALMIT, have developed tools to help state and federal agencies anticipate, manage, and respond to diseases, natural disasters, and potential bioterrorism. CALMIT is a national leader in Geographic Information Systems and remote sensing research and development. Scientists there designed the animal health GIS mapping system for the Nebraska Department of Agriculture and USDA when animal health officials sought their help. Developing these new tools is part of a wider initiative to better prepare for potential outbreaks of foreign diseases, such as foot and mouth. The system should help animal health officials protect Nebraska's livestock and poultry industries, and also

protect people from diseases affecting both animals and people.

Another accomplishment of which we're very proud in the Institute is that two of our meat scientists are part of a team that received the 2004 International Meat Secretariat Prize for Meat Science and Technology for their beef muscle profiling research. They analyzed more than 5,500 muscles of the beef chuck and round. They found several muscles usually used for ground beef or roasts had potential for use as higher-value products. As a result of this research, we've seen the wholesale value of beef chuck increase by more than 5% at a time the value of other cuts didn't change. That's significant. From their research came the new flatiron steak, which I hope you've had the opportunity to try. It's delicious!

As I end my remarks today I'd just like to note for all who might be interested that there's a Beef Cattle Reproduction Symposium September 1-2 in North Platte focused on new methods and technologies to control and improve reproductive success in beef cattle. It's sponsored by our Cooperative Extension Division as well as Cooperative Extension in several other states, the North Central Region's Bovine Reproductive Task Force, and private companies.

Thank you for this opportunity to be here with you this morning. It certainly is my pleasure. You have a wonderful conference ahead. Those of us in the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln are very happy to be part of it.

Nebraska's Natural Legacy Project (continued from page 1)

As noted earlier, many species are thriving, but unfortunately many species' populations are declining in our state. The efforts stemming from state agencies to help declining species from an agency standpoint have been limited. Traditional sources have been from hunting revenue, and therefore support the species providing the income. Although not the focus, many non-game species have benefitted greatly from these conservation efforts. Not all wildlife populations have remained viable under current conservation initiatives. Until recently, non-game species did not have adequate funding and received little attention until they became a listed species. Also, Nebraska has not had a written, statewide perspective of the areas where biological diversity is thriving and where it is declining. Without a plan to conserve all wildlife, efforts to conserve species have often been opportunistic and reactive. This method of conserving species is often highly controversial and is often not optimal for the species.

Nebraska's Natural Legacy Project will take a habitat-based approach to conservation and move away from the traditional species-by-species approach. By identifying and conserving areas on the landscape that already support a large diversity of habitats and species, 99% of Nebraska's species will be conserved.



Photo credit: NEBRASKAland Magazine/Nebraska Game and Parks Commission

Nebraska Game and Parks Commission (NGPC) realizes that conservation of this magnitude cannot be accomplished alone. In a state that is 97% privately owned, little can be accomplished without the cooperation of the agricultural community and the conservation community.

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Earth, Wind, and Fire in the Flint Hills

by David Hartnett, Konza Prairie Biological Station, Kansas State University

The Kansas Flint Hills have come into the limelight in the context of two current environmental issues: 1) The proposed conversion of a portion of our landscape for industrial wind generation facilities has raised the question of the ecological value and uniqueness of the tallgrass prairie, and 2) The effects of pasture burning on air quality has raised the question of the necessity for regular prairie burning in the Flint Hills. Some recently published statements such as those claiming that the environmental impact of wind farms is similar to that of burning, and that most of the Flint Hills has been tilled and hence not virgin prairie are clearly false and have made it obvious that there exists much misunderstanding of our native grasslands. To address some of these, I offer the following overview and response to some of the questions raised.

The tallgrass prairie of the Flint Hills is indeed a unique ecosystem of significant value, constituting the only remaining significant contiguous area of this ecosystem type on the continent. Of the original pre-European settlement tallgrass prairie in North America, less than 4% remains, most of which is here in the Kansas Flint Hills. On this basis it is ranked as North America's most endangered ecosystem. Contrary to assertions otherwise, the vast majority of the Flint Hills is virgin unplowed native prairie. As settlers moved west and cultivated crops, the Flint Hills were too steep and rocky to plow. Hence the native ecosystem remained. Only some deep-soil lowland areas near rivers and streams were converted to cropland.

This ecosystem has significant ecological value in its high biodiversity relative to other grasslands. It is home to over 600 species of native plants and dozens of species of native grassland birds, reptiles, and mammals. The native prairie vegetation also provides key ecological benefits and "ecosystem services" to us such as the retention of soils, conservation and purification of groundwater and surface waters, wildlife habitat, and the accumulation and storage in its soils of the carbon that we are increasingly releasing into our atmosphere. The slow, gradual accumulation of organic matter in the soils, a defining characteristic of the prairie ecosystem, is the primary reason that the most productive cropland in North America is on soils that were formerly under prairie. The tallgrass prairie also has significant agricultural and economic value in that these grasslands constitute the key foundational resource for livestock grazing, by far the largest sector of the agricultural economy of Kansas (cattle production accounts for approximately \$5 billion of the \$8.1 billion annual agricultural productivity of Kansas). If the Flint Hills is gradually fragmented and converted for development, this unique natural grassland ecosystem will be lost forever, because there is no similar area of tallgrass prairie anywhere else on the continent.

Fire has always been a key ecological process in the tallgrass prairie. A variety of sources of data indicate that in pre-European settlement times the prairie burned in a variable but frequent regime (two to five fires per decade). Periodic fire is absolutely essential to the preservation and sustainability of these grasslands. The prairie cannot continue to exist without fire. Frequent fire increases the growth and abundance of native prairie grasses and prevents the establishment and spread of woody plant species. Recent research continues to reveal many additional ecological benefits of fire, such as reducing the frequency of occurrence of non-native invasive plant species and increasing the diversity of grassland reptiles and amphibians. Fire is also important to livestock production on native rangelands such as tallgrass prairie because it reduces the cover of woody and weedy species, and increases the production and nutritional quality of native forage grasses for grazing animals.

It is true that, just like any other combustion process, controlled burning of prairie releases particulates, oxides of nitrogen, carbon, and other substances into the air. Transient reduction in air quality is an environmental downside of extensive burning. However, I should point out that such effects are very transient and not chronic. An unusual event happened in April 2003 when, due to weather conditions, pasture burning within the region was concentrated into a few-day period and caused air quality problems in neighboring regions. The fact that this occurred over just a few-day period and was the first documentation of such an event over a several-decade period of burning in our region (two days out of several thousand) illustrates that it is possible for regional burning to adversely affect air quality, but that it is a very rare and transient phenomenon.

Research in the Flint Hills conducted by Konza Prairie scientists has demonstrated that, in the absence of fire, the cover of native prairie vegetation disappears completely within as little as 32 years, and it is replaced by continuous cover of shrubby vegetation and/or cedars. Thus, if we value the aesthetic beauty of the Flint Hills landscape shrouded in tallgrass prairie, and value the native prairie grasses and wildflowers, and the prairie birds, butterflies and mammals, and if we value our agricultural ranching heritage and its contribution to the Kansas economy, then we should be strong advocates of continued prescribed burning as a crucial conservation and management tool in the Flint Hills. Because if fire is excluded in the Flint Hills, all of these features would disappear within the lifetime of our children. In the Flint Hills of Kansas, sound stewardship of our natural and agricultural heritage requires periodic fire.

Professional Golf Management Program Tees Off with 31 Students

Terry Riordan, PGM Director, Steve Waller, Dean of the College of Agricultural Sciences and Natural Resources, and Jim White, Director of Operations at Wilderness Ridge Golf Course, were among those welcoming students and their family members to a reception on August 22 celebrating the first year of the accredited Professional Golf Management program at UNL.

The first UNL PGM cohort consists of a fine group of 31 young men ranging from new high school graduates to those returning to college after several years in the workplace. While we're very pleased to have these students, we do hope that next year's cohort includes some diversity, and we will be working actively toward that end.

The Spring 2004 issue of this newsletter provided some details about the PGM program. Here is a brief update.



2004 PGM Student Club. Officers (seated, from left): Jason Harrell, President; Josh White, Vice President; Ross Kupitz, Treasurer; Brade Cloke, Secretary.

The Web site (pgm.unl.edu) was significantly enhanced over the summer, and has proved quite effective as a recruiting tool. The site is also a source of information for our current students such as tournament results and internship opportunities. Our partner golf courses use it to check in PGM students who come to play there. The database section of the site is used to keep track of the extensive data on each student that is required by the PGA.

In August we completed the staffing of the PGM office when Tara Pawling was hired. Tara graduated with a journalism degree from UNL and worked for a sports marketing company in Chicago before moving back to Lincoln and accepting the PGM Administrative Assistant position. The two other members of the PGM team are Director Terry Riordan, a UNL turf scientist with a Ph.D. in plant breeding, and Coordinator Scott Holly, who graduated from the New Mexico State University PGM program and was a golf professional at Bayside Golf Course in Nebraska and RTJ Golf Trail in Alabama prior to joining the UNL PGM team. The Center for Grassland Studies

team of Martin Massengale, Pam Murray and Jan Shamburg will continue to provide their expertise in support of the PGM program.

In October remodeling of the PGM student room as well as the newly-equipped golf club repair and design lab on campus was completed. The student room will be used to watch golf lessons on the golf channel, use a computer for PGA-required activities, read reference materials, view instructional videos, read notices on the bulletin board, register for tournaments, hold small meetings, study or visit with fellow PGM students. The students will use the lab to complete the required activities in the "golf club design and repair" module in their Level 1 PGA books, including regripping and adjusting the lie and loft of their clubs.

Ten PGM tournaments were held at various Lincoln courses in the first two months of the semester. The objective of the heavy tournament schedule is to prepare the students to pass the PGA's Playing Ability Test (PAT), which is a graduation requirement.

Please help spread the word about this exciting new major by referring potential PGM students to the Web site or to the PGM office, 402-472-7467, pgm@unl.edu.

CGS Director Massengale Inducted into CSREES Hall of Fame

In September Dr. Martin Massengale, Director of the Center for Grassland Studies since its inception in 1994, received a letter from Colien Hefferan, Administrator of USDA's Cooperative State Research, Education and Extension Service (also established in 1994), informing him that he is one of ten original inductees into the new CSREES Hall of Fame. The letter stated:

Through sustained, collective efforts, that you were a part of, we see a world in which agriculture is viewed as a science-based, global enterprise, fueled by the hard work and sound decisions of producers, processors, and consumers, sparked by the innovation of scientists and educators. This honor signifies the contributions you have made over the past ten years to help CSREES complete a "Decade of Excellence."

Since 1998 Massengale has served on the Secretary of Agriculture's National Agricultural Research, Extension, Education and Economics Advisory Board, and currently serves as chair.

On October 21 Massengale attended a ceremony in Washington, DC where he accepted the award and addressed the audience on the ten-year history of CSREES.

Nebraska's Natural Legacy Project

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In Nebraska we are resolute in finding **voluntary, non-regulatory conservation actions** that also maintain economic viability of producers. Nebraska's Natural Legacy Project has quickly grown to a diverse collaboration of state, federal and private groups. There are seven teams each with a different role in completing this blueprint by the deadline looming one year away. In addition to the NGPC, the Legacy Project Partnership Team involves 19 other state and federal agencies and organizations: Farmers Union, Nebraska Cattlemen, Nebraska Farm Bureau, Nebraska Audubon, Nebraska Wildlife Federation, Pheasants Forever, The Nature Conservancy, US Forest Service, The Conservation Alliance of the Great Plains, Nebraska Partnership for All Bird Conservation, Nebraska Association of Natural Resources Districts, Natural Resources Conservation Service, Ducks Unlimited, Ponca Tribe of Nebraska, US Fish and Wildlife Service, Nebraska Forest Service, Nebraska Department of Agriculture, Nebraska Alliance of Conservation and Environment Education, Rainwater Basin Joint Venture. These diverse entities are collaborating to rally voluntary conservation of Nebraska's natural resources by both the public and private landowners.

Nebraska's Natural Legacy Project is beginning the next phase of involvement with sixteen public input meetings that will be held across the state. At these meetings the project coordinators will be gathering information from the public regarding conservation actions that are needed at a local scale that will also maintain economic viability and the conservation issues in the region. To learn more about Nebraska's Natural Legacy Project and where the nearest public input meeting will be held, visit the Web site at outdoornebraska.org/wildlife/programs/legacy.

CGS Associates

Terry Klopfenstein received a 2004 U.S. Secretary of Agriculture's Honor Award this summer for "integrating scientific and practical approaches to increase beef production efficiency with available resources, manage waste, and curb *E. coli* 0157:H7 to enhance the physical and financial well-being of rural Americans."

Ellen Paporozzi was elected National Vice President of Pi Alpha Xi, the floriculture, ornamental and landscape horticulture honor society.

Long-time NRCS employee and former CGS Policy Advisory Committee member **Craig Derickson** has been selected by NRCS Chief Knight to serve as the Branch Chief for Stewardship Programs at National Headquarters in Washington, DC.

Kim Stine, former Nebraska State Range Conservationist with NRCS and a member of the Grazing Livestock Systems Stakeholders Board, was recently named National Grazing Lands Conservation Initiative Coordinator.

Calendar

Contact CGS for more information on these upcoming events:

2004

Dec. 8-10: Nebraska Cattlemen Annual Convention, Kearney, NE

2005

Jan. 10-12 Nebraska Turfgrass Conference, Omaha, NE

June 26 - July 1 XX International Grassland Congress, Dublin, Ireland, www.igc2005.com

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