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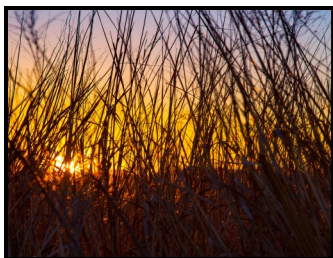
Spring 2017

Center for Grassland Studies, Volume 23, Issue 1, Spring 2017

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# Center for Grassland Studies

Grazing Livestock Systems | PGA Golf Management Program | Beef Systems Initiative

University of Nebraska-Lincoln, 203 Keim Hall, P.O. Box 830953, Lincoln, NE 68583-0953  
Phone: (402) 472-4101 | Email: grassland@unl.edu | Website: www.grassland.unl.edu

Volume 23, Issue 1

Spring 2017

## Massengale Reflects on Four Decades at Nebraska

by Haley Steinkuhler, Media Specialist, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln

Martin Massengale credits the people of Nebraska for his long and illustrious career at the University of Nebraska. The president and chancellor emeritus and founding director of the Center for Grassland Studies and Foundation Distinguished Professor is beginning his transition into retirement after more than four decades at the university.



"I think Nebraskans as a group are some of the most supportive and dedicated people in the world," Massengale said. "That is one of the main reasons I have stayed in the state for 40 years. I like the people, and they are there for you when needed."

Massengale said one of the University's strengths over the years is how it has served Nebraskans, and they have been unwavering with their support in return. Throughout his career, he has been passionate about developing interdisciplinary approaches that bring groundbreaking research to the people.

"The tripartite mission of the University of Nebraska-Lincoln is critical," he said. "If you're going to do research, it needs to be disseminated to the people, and the logical place to conduct that research is where you have faculty members teaching our creative young people and distributing the information."

A Kentucky native, Massengale grew up on a diversified family farm, which guided his interest in agriculture. In 1952, at 18, he graduated from Western Kentucky University after earning his bachelor's degree in agriculture. He moved on to the University of Wisconsin, where he was a research assistant while earning his master's and doctoral degrees in agronomy. Following two years of service

with the U.S. Army as a technical adviser, Massengale joined the University of Arizona as an assistant professor of agronomy in 1958. He quickly rose through the ranks of associate professor, professor and agronomy department head before being named associate dean and associate director of the

Arizona Agricultural Experiment Station.

In 1976, Massengale came to Nebraska as vice chancellor of the Institute of Agriculture and Natural Resources. He was the second person to take the reins of IANR after it was created by the Nebraska Legislature in 1973.

Massengale became Nebraska's 16th chancellor in 1981, a post he held for 10 years. When the farm recession of the 1980s hit the economy hard, Massengale had to work closely with administrators, faculty and staff to ensure growth and progress.

"I'm proud that we were able to manage through that time with minimal disruption," Massengale said. "It's faculty and staff that make the difference in the university, so it was about keeping their best interests in mind."

With the recession past, Massengale was able to build on the University's rising trajectory. Faculty grant funding increased, several facilities were built – including the Lied Center for Performing Arts and the Beadle Center – and the University acquired the Gundmundsen Sandhills Laboratory, resulting in advances in range... (Continued on Page 8)

## Save the Date

- May 31-Jun 1 —  
2017 PGA PGM  
Spring  
Conference,  
Lincoln, NE
- Aug 8-9 —  
Nebraska  
Grazing  
Conference,  
Ramada Kearney,  
Kearney, NE.  
Keynote speakers  
are Jim Gerrish  
and Peter  
Ballerstedt
- Sept 22-23 —  
Inaugural PGM  
PGA Alumni  
Celebration,  
Lincoln, NE

*Masthead Photo by  
Brad Goetsch*

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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 Citizens Advisory Council.

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

## Reflections

by Steven Waller, Interim Administrator, Center for Grassland Studies



The Center for Grassland Studies (CGS) was established in 1994. The mission of the Center is: The implementation of focused, interdisciplinary

research, education, and service programs and activities that emphasize the role of grasslands as a natural resource and enhance the efficiency, profitability, and sustainability of grasslands and turfs. Strengthening linkages and developing partnerships with groups of common interest will be a priority.

Along with the mission, the goals and objectives serve to foster and support the capabilities of the University to relate to issues concerning grasslands and turfs. Specific objectives directed toward grasslands and turf to meet this overall goal include:

- Fostering interdisciplinary teamwork in research and educational activities and encouraging systems approaches for solving problems associated.
- Initiating and expanding linkages in Nebraska and the Great Plains region with federal and state agencies, educational and research institutions, state colleges, community colleges, organizations, private groups, and practitioners.
- Improving the profitability and sustainability while protecting or enhancing water quality, soil quality, and the quality of life.
- Developing proactive programs on emerging issues.
- Attracting new support for research, education, and service programs and activities.
- Enhancing public understanding and awareness of improving the

environment, water quality, soil quality, and the quality of life.

- Establishing the CGS and its associates as leaders in grassland studies and providers of information for Nebraska and the Great Plains.
- Providing a focal point in the University of Nebraska for grassland sciences which is visible in the state, regionally, nationally, and internationally.

The University, Institute and all of us passionate about the breadth, the art and the science of grassland studies were fortunate to have Dr. Martin Massengale, President Emeritus, appointed as the founding director. He has honored the Center's mission since its inception in 1994, and built a foundation upon which the Center will continue to expand. His mere presence brought immediate recognition and stature to the Center. His leadership defined the importance of our grasslands to our state and our shared future. His professional achievements and remarkable accomplishments became the standard for the Center, and the expectation of those the Center serves. Dr. Massengale was synonymous with the Center. He was a role model for servant leadership. Every day, he challenged the Center to engage, facilitate, coordinate, and advocate with integrity and a sincere commitment to service.

Dr. Massengale's professional legacy is only partially found in the history of the Center, but his time with the Center embraces its entire existence and defines the Center. We share his legacy. He oversaw nearly a quarter of a century of the Center's maturation from an idea to a lasting thread in the University's land-grant fabric. The Center touches all missions: discovery, engagement and education. It has always been a beacon for applying interdisciplinary solutions to any challenge.

While we will miss Dr. Massengale, we will celebrate the gift that he has been for the Center and wish him well in his next phase.

## Gayfeathers and Blazing Stars — Great Prairie Wildflowers

by Justin Evertson, Green Infrastructure Coordinator, Nebraska Forest Service, Nebraska Statewide Arboretum

If you're looking for pollinator-friendly prairie wildflowers you can't beat the gayfeathers. Also called blazing stars, these butterfly magnets are known for their "feathery" pink to lavender (sometimes white) flower spikes that sit on stiff stems covered with slender, grass-like leaves. Their featheriness is often more pronounced in the fall after the flower-spikes transform into fuzzy white to light-grey seed heads that dramatically extend the ornamental benefits of gayfeathers well into cold weather.

There are over 40 different species of gayfeather (genus *Liatris*) across the eastern two-thirds of North America including seven species native to Nebraska and the surrounding Great Plains. All gayfeathers help feed and shelter a wide variety of pollinators and other beneficial insects as well as several species of small birds. Butterflies attracted to blazing stars include monarchs, swallowtails, skippers, sulphurs, hairstreaks, fritillaries, painted ladies and red admirals among others. No pollinator garden is complete without one or more species of *Liatris* and here are six that deserve to be planted with abundance in our region.

**Meadow Blazing Star** (*Liatris ligulistylis*) is primarily native to the Northern Plains and Rocky Mountains where it is also known as Rocky Mountain blazing star. It's also native to very southeast Nebraska and parts of Missouri. Meadow blazing star is similar to rough gayfeather, but with more widely spaced flower bracts.



**Rough Gayfeather** (*Liatris aspera*) was relatively common in the tallgrass prairie of the central U.S. including eastern Nebraska. Also called button snakeroot, the plant grows 2-3' tall and is distinguished by its zigzag flower clusters that resemble small brussels-sprouts before they open in late summer. The species name "*aspera*" is Latin for "rough," which refers to the short stiff hairs on the central stem and the narrow basal leaves, which are very rough.

**Scaly Blazing Star** (*Liatris squarrosa*) is more of a southern plains and southeast U.S. native but is also found in Nebraska's Sandhills and northern tier counties. Named for its distinctive scaly and elongated flower bracts, this blazing star grows up to 2' tall and blooms in late summer. Scaly blazing star is typically found on hot, sunny and barren soils making it a good choice for Xeriscape plantings and rock gardens.

**Dotted Gayfeather** (*Liatris punctata*) is one of the most common gayfeathers across the central U.S. and occurs in nearly every county in Nebraska. Named for the dot like bumps on its leaves, this species grows from a taproot that can reach 15' deep giving it amazing drought tolerance. Dotted gayfeather is a shorter species often blooming on 6-10" stems in the western part of its range while reaching up to 2' tall in the east. The flowering period is late, typically from late summer to frost.



**Spike Gayfeather** (*Liatris spicata*) is actually an eastern U.S. native typically found in moist meadows and marshy areas. Also called dense blazing star, button snakeroot, and marsh blazingstar, this plant is perhaps the most common gayfeather sold in garden centers, often under cultivar names like 'Kobold' and 'Floristan Violet'. Similar in appearance to *Liatris pycnostachya*, this species can grow 3-5' tall and typically blooms in late summer and fall. Spike gayfeather is a good choice for rain gardens and other moist areas.

**Thickspike Gayfeather** (*Liatris pycnostachya*) is a majestic species of the tallgrass prairie known for its spectacular spikes of tightly bunched lavender flowers growing atop 4-5' tall stems. The plant is native to southeast Nebraska and goes by many common names including prairie blazing star, button snakeroot, cattail gayfeather and Kansas gayfeather. The name *pycnostachya* is from the Greek for "crowded" referring to the densely crowded flowers which begin blooming at the top and work their way down the stem.



*"Change is inevitable, except from  
a vending machine."*

— Robert C. Gallagher



## CGS Associates Updates

**P. Stephen Baenziger**, Professor and Small Grains Breeder, Department of Agronomy and Horticulture, UNL — Elected as the Hard Winter Wheat Improvement Committee Chair, and is a member of the National Wheat Improvement Committee, which advocates nationally for wheat research. Baenziger also breeds winter triticale and barley, which are important forage crops nationally.

**Craig Derickson**, State Conservationist, USDA Natural Resources Conservation Service in Nebraska — NRCS recently announced plans to launch a soil health initiative in Nebraska with the help of UNL and other partners. NRCS and partners plans to establish a network of demonstration farms across the state to showcase soil health practices and related cropping system comparisons.

**Roch Gaussoin**, Head, Department of Agronomy and Horticulture, UNL — Appointed to the USDA National Agricultural Research, Extension, Education, and Economics Advisory Board by the U.S. Secretary of Agriculture. Gaussoin will be filling a three-year term for Category G: National Crop, Soil, Agronomy, Horticulture, or Weed Science Societies.

**John Guretzky**, Associate Professor, Department of Agronomy and Horticulture, UNL — Chair, Division C06 Forage and Grazinglands, Crop Science Society of America, and is on the second of three-year terms as Science Communications Editor and Associate Editor with the Agronomy Journal Editorial Board, American Society of Agronomy. Guretzky also serves as Chair of the Faculty Coordinating Committee, Grazing Livestock Systems degree program, which is coordinated and administered by the Center for Grassland Studies.

**Sabrina Russo**, Associate Professor, School of Biological Sciences, UNL — Researching plant ecology and ecophysiology. Russo is collaborating with colleagues from Agronomy and Horticulture, and other units, on a project examining rhizosphere microbial interactions among grass species.

**Carissa Wonkka**, Post-doctoral Research Associate, Department of Agronomy and Horticulture, UNL — Developing a model to assess the influence of laws and policies related to fire management on the rate and extent of Great Plains ecosystem transition from grassland to Eastern Red Cedar forest.

## GLS Alumni Updates

**Ben Andrews** — (Nebraska) Ranch manager at Spring Valley Ranch and Cattle.

**Clay Chihasz** (Nebraska) — Production Coordinator with Great Plains Beef.

**Lacy Hoksbergen** (Nebraska) — Working a cow/calf operation and building own herd.

**Lance Johnson** (Nebraska) — Managing family farm operations.

**Tony Klein** (Nebraska) — FieldNET Support Service Technician, Lindsay Corporation.

**Kyra (Baldwin) Jorgensen** (Wyoming) — Independent fashion retailer and ranching operator.

**Brandon Peterson** (Nebraska) — Promoted to District Conservationist, USDA Natural Resources Conservation Service.

**Kristin Schlueter** (Nebraska) — Working as a Resource Conservationist, USDA Natural Resources Conservation Service, and running a Gelbvieh and Balancer cow/calf operation.

**Jessie Warner** (Utah) — Rangeland Management Specialist, USDA Forest Service.



**Saturday, April 22, 2017**

**9:00 AM—2:00 PM**

Free Admission

Pavilion I at the Lancaster Event Center  
The largest gardening event in the Midwest!

For more information go to:

<http://arboretum.unl.edu/spring-affair>

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## PGA Golf Management's Spring Scramble Golf Tournament Set for 2017

by Dann Husmann, Director, PGA Golf Management Program, Center for Grassland Studies

The 2017 Spring Scramble will be held at Wilderness Ridge Golf Course in Lincoln, NE on Sunday, April 22 – a shotgun start planned for 9:30 AM. The cost is \$75 per player (\$35 for current PGA Golf Management program students). The fee includes a round of golf, range balls, a golf cart, and lunch.

This annual event promotes the PGA Golf Management program at the University of Nebraska-Lincoln. More importantly, it serves as a fundraiser for scholarships offered to further students' education in the program, as well as build their passion for golf. In 2016, five \$500 scholarships were awarded to students and \$500 worth of pin prizes were made available, which included rounds of golf at Wilderness Ridge and PGA merchandise.

If you would like to donate to the Spring Scramble, please contact the PGA Golf Management program by calling (402) 472-7467 or emailing [unlpgascramble@gmail.com](mailto:unlpgascramble@gmail.com). For more information about the 2017 Spring Scramble, and to register yourself or your team, go online to [pgm.unl.edu](http://pgm.unl.edu). The deadline for registration is April 15.

Do not miss this opportunity to get out and enjoy a round of golf with friends, perhaps take home a few prizes, and bid on some great silent auction items. We look forward to seeing you at the 2017 Spring Scramble!

## UNL PGA Golf Management Attends 2017 PGA Merchandise Show

by Brad Goetsch, PGA Golf Management Instruction Coordinator, PGA Golf Management Program, Center for Grassland Studies

The University of Nebraska-Lincoln PGA Golf Management program was represented by 27 students at the 2017 PGA Merchandise show held January 23-27 in Orlando, Florida. The event provides opportunities for the students to learn about new golf products and technology hitting the market, as well as to participate in education sessions.

Students attended a Dierks Bently concert compliments of Folds of Honor—a charity which raises scholarships for families of America's fallen and disabled service members. Staffing the UNL PGA Golf Management program booth allowed the students another opportunity to network with leaders within the profession. Participating in a short-game skills challenge was a fun way to compete for monies to support their club. However, two of the most talked about events included the leadership seminar hosted by Titleist, and the luncheon hosted by the PGA, which put students in touch with past presidents or current members of the PGA board of directors.

The golf industry needs more talented golf professionals to support the growth of the game, which was evidenced by the number of industry professionals looking to fill full-time positions within the golf profession. The Billy Casper Golf reception provided one of the many opportunities for students to interact with individuals within the industry to learn more about internships and possible employment opportunities. To support the intern and employment need, the UNL PGA Golf Management program staff will be contacting alumni and supporters to help identify persons interested in Nebraska's program.

Overall, the show helped to put the UNL PGA Golf Management program into the overall context of the golf industry, which is positive.



## PGA Golf Management Students Earn CASNR Dean's List

A total of six PGA Golf Management program students were honored at the February PGM Student Club meeting for making the CASNR Dean's List for the Fall 2016 semester. A grade point average of 3.75 or higher demonstrates this high academic achievement. Congratulations to each one of the following students for the commitment shown to academic studies:

**Vincent Bachteler** — Port Orchard, Washington  
**Reed Becker** — Eagan, Minnesota  
**Ryan Clark** — Blair, Nebraska

**Joel Johnson** — Lincoln, Nebraska  
**Hunter Quinn** — Oxford, Nebraska  
**Cordell Weber** — Welcome, Minnesota

## Beware the (Ornamental) Pear!

by Kim Todd, Associate Professor, Agronomy and Horticulture, UNL



In the Plains states, one of the first flowering trees to welcome spring is callery pear, *Pyrus calleryana* Decne. The cultivar 'Bradford' was developed around 1950, and rapidly became wildly popular as a street tree and a suitable choice for use in parks and private landscapes. It offered a

rounded to oval upright form, outstanding white flowers, glossy green summer foliage, respectable fall color and relatively few, sterile fruits—until recently.

Although some genotypes are self-incompatible, others are not, and the many cultivars commercially available may be grafted on rootstocks of varying genotypes. The resulting cross-pollination between different cultivars within approximately one block of one another has resulted in production of large numbers of viable seeds. The seeds are relished by birds and small mammals, and rapidly distributed by them over large areas. Rootstocks are

typically different genotypes and can thus pollinate the graft, turning a beautiful individual tree into an environmental threat. This tree can also spread vegetatively, forming large thickets and crowding out desirable grassland species that cannot compete with it for light, water and nutrients.

The species has been designated as invasive in several southern states, and has been found spreading rapidly in several locations in eastern Nebraska. The simplest method of controlling the spread of callery pear is to avoid planting it. If white flowers are desired, choose alternate species such as flowering crabapple, serviceberry, Japanese tree lilac, whitebud, yellowwood, or seven-sons-shrub. If seedlings appear in turf areas, regular mowing will control them. However, mowing can also lead to more aggressive re-sprouting. In prairies or infrequently mowed areas or landscape beds, pull the entire root system of young plants or use a broadleaf herbicide according to label directions. Larger trees can be cut down and the stumps treated with glyphosate or trichlopyr. Grinding the stumps to remove them may trigger suckering from remaining roots, which will then need to be treated.

## Nebraska Ranch Practicum

The Nebraska Ranch Practicum provides cutting edge research, idea exchange, understanding of natural resources, and insight into livestock production. In addition, the three-season, hands-on sessions teach participants how to use decision support tools to evaluate management and marketing alternatives dealing with grazing strategies, and many other aspects of ranching. Individuals may earn college or continuing education credits, however, they must attend seven of the eight sessions to receive a Certificate of Completion.

Sessions will be held in North Platte, NE and the Gudmundsen Sandhills Laboratory (GSL), a 12,800-acre working ranch with research and education facilities near Whitman, NE. The 2017-2018 session dates are:

June 6, 2017—North Platte  
June 7, 2017—GSL  
July 6, 2017—GSL

September 6, 2017—GSL  
September 7, 2017—GSL  
November 2, 2017—GSL

January 10, 2018—GSL  
January 11, 2018—North Platte



The registration fee for this eight-session Practicum is \$675.00 (spouse fees are \$350.00) and include all educational materials, noon meals, and breaks. Participants are responsible for their travel and lodging expenses. Applications are available at <http://nebraskaranchpracticum.unl.edu> or by contacting Brent Plugge at (308) 236-1235 or [brent.plugge@unl.edu](mailto:brent.plugge@unl.edu). The registration deadline is May 1, 2017.

## Alumni Spotlight: Ben Andrews

By Bryan Reiling, Associate Professor, Animal Science, University of Nebraska-Lincoln

Ben Andrews was one of our first students enrolled in the Grazing Livestock Systems (GLS) degree program. Since his graduation in 2004, Ben has held a variety of positions that have taken him from Nebraska to North Carolina and back. After graduation, he worked for six months as a large animal veterinary assistant in the heart of Nebraska cattle country. Working with multiple producers through their calving and breeding seasons solidified Ben's thinking of prevention over reaction.

As a herdsman for Flying H Genetics in Arapahoe, NE in 2005, Ben continued to learn multiple aspects of ranching and seedstock production. Within six months of his arrival at Flying H Genetics, they asked him to head to North Carolina. No, they weren't trying to get rid of him, they wanted Ben to help start a new satellite unit in Biscoe, NC. There, Ben met two individuals who helped him define and become a true ranch manager; Mr. Bill Sleigh and Mr. Bobby Myric.

Mr. Sleigh, like Ben, did not have a family operation to which he could return, but he had established himself as a premier and upcoming manager within the beef industry. Mr. Sleigh taught Ben to listen and always continue to learn. Additionally, Mr. Sleigh suggested Ben surround himself with folks who are stronger in the areas where he is weakest, work his tail off, and treat each operation as if it was his own.

Mr. Bobby Myric, owner/operator of JBOB Farms, was like a grandpa to Ben as he showed, through example, what one can build through hard work and perseverance. As a leader in the development of Balancer cattle, Mr. Myric instilled upon Ben the need for moderate-framed, maternally efficient cows that are developed on grass with minimal supplementation. Ben indicated there was a learning curve involved with managing cattle in North Carolina; different grasses and fertilizer schedules that affected stocking rates, regulations regarding water usage, and a different clientele and customer base. Also, there were far more cattle in that part of the country than he ever imagined. In fact, Ben now recommends that students should tour the country and study the various geographical regions of the beef industry as it'll surprise and open students' eyes to new opportunities.

In 2008, Ben was offered the opportunity to return to Nebraska to start and build a grass-based,

maternally-oriented Angus seedstock operation. The operation, Spring Valley Ranch in Rose, NE, selected for and marketed cattle designed to thrive on the native range of the Nebraska Sandhills.

Ben married Sherry in 2009. Sherry is an intricate part of their operation; she does everything from keeping the books to working the cows. Ben indicates they are a team as they work side by side, every day of the year. Still, as a ranch manager, Ben indicates that balancing personal and business life is his greatest challenge. He's got the desire to succeed and create an elite operation, but that takes time. Ben said, "I need to remind myself to take some time off to relax and enjoy family as well." He also indicated that it can be challenging working with owners,

investors, and employees. However, Ben mentioned, "As long as you stay open, be honest and fair, and keep everyone in the loop, relationships are easier to maintain and manage."

In visiting with Ben, it's obvious that he is passionate about the beef industry and grazing management. He enjoys building a seedstock operation and cowherd his own way, and delivering a product to commercial producers that he believes in; the generation of sustainable and profitable mother cows that perform on grass.

As a student Ben participated in the Ranch Practicum, and he encourages current students to take advantage of this opportunity. Being able to converse with producers, see the results of research, and the various cycles on the ranch were valuable. A capstone course allowed him to develop a ranch plan, which was beneficial as it allowed him to put his own ideas and goals onto a piece of paper.

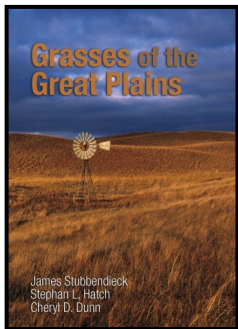
According to Ben, "It's the relationships that you build with people. Plus, studying the data, thinking outside the box, and pushing the boundaries with this major is what probably influenced me the most." Ben says, "Don't be afraid to fail and do things that get you out of your comfort zone. Converse and bounce ideas off of as many people as you can while you're at UNL." The GLS degree program provides an opportunity to do this through their internship program. Ben believes it is a valuable experience and actually suggests that students consider longer-term internships; from six to twelve months. Given the expense, he encourages all students to take advantage of all that is offered by the University. (Continued on Page 9)





## Grasses of the Great Plains

by James Stubbendieck, Stephan L. Hatch, and Cheryl D. Dunn



A vast swath of prairie situated between the Missouri River and the Rocky Mountains, the North American Great Plains extend across ten states in the United States and three provinces in Canada. The dominant vegetation is grass—both the native species that have long thrived here and the cultivated crops such as corn, wheat, and sorghum that are the result of human agricultural activity.

This comprehensive guide, written by three grass specialists, is an invaluable tool for identification of the approximately 450 species of grasses that occur on the Great Plains. In each description, the authors cover distribution, habitat, forage value, and toxicity and include a detailed black-and-white illustration of the grass as well as a range map.

Intended as a reference for landowners, rangeland specialists, students, state and federal agency professionals, and nongovernment conservation organizations, *Grasses of the Great Plains* will serve a wide audience of users involved in and dedicated to grassland management.

**Authors:** James Stubbendieck is emeritus professor of grassland ecology and emeritus director, Center for Great Plains Studies in the Department of Agronomy and Horticulture at the University of Nebraska–Lincoln. Stephan L. Hatch is professor of plant taxonomy in the Department of Ecosystem Science and Management at Texas A&M University, where he is also director of the S. M. Tracy Herbarium. Cheryl D. Dunn is research manager and herbarium curator for the Department of Agronomy and Horticulture at the University of Nebraska–Lincoln, where she teaches courses on wildland plants and plant identification.

In addition, be on the lookout for a new edition of *North American Wildland Plants* (University of Nebraska Press) by the same three authors, which will be available in May 2017. An expanded revision (2017) of *Common Grasses of Nebraska* by Dunn, Mitchell Stephenson, and Stubbendieck is available from the Nebraska Cooperative Extension Division. It will be followed by a *Common Forbs and Shrubs of Nebraska* later this spring. Photo/article reprinted with permission from Texas A&M University Press.

## Massengale Reflects (Continued from Page 1)

...livestock nutrition, beef cattle reproduction, grazing systems, rangeland ecology, low-cost cattle management, groundwater issues and wildlife management.

Massengale was both interim president of the University of Nebraska and chancellor of the University of Nebraska–Lincoln from August 1989 until his permanent appointment as president in 1991. Under his leadership, Kearney State College moved into the University of Nebraska system, becoming the University of Nebraska at Kearney.

Massengale was president until 1994, when faculty approached him with an idea. Recognizing the importance of the livestock industry to the state, they wanted to organize a hub that would integrate research, teaching and service for livestock and feed production associated with the beef cattle industry.

"The faculty who came up with the idea for the Center for Grassland Studies were forward thinkers and were able to foresee where the university could make an important contribution to the state through the livestock industry," Massengale said.

The Center for Grassland Studies was formed within IANR in 1994, with Massengale serving as founding director. 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 to enhance the efficiency, profitability, sustainability and aesthetic value of grasslands, wetlands and turfs.

"I think the Center has a unique spot within the University because it takes a holistic and multi-disciplinary approach to problem-solving," Massengale said.

Massengale is the author or co-author of more than 70 scientific papers and has been a consultant to governments, agencies and universities in 14 countries.

A public retirement reception for Massengale will be 3 to 5 p.m. March 28 at the International Quilt Study Center and Museum, 1523 N. 33rd St. In retirement, Massengale plans to finish some projects for the University, serve on nonprofit boards, and volunteer.

Steven Waller, dean of the College of Agricultural Sciences and Natural Resources, will provide administrative oversight for the Center for Grassland Studies until June 30, when he steps down as dean. He will assume the role of interim director of the Center for Grassland Studies on July 1.

## Welcome Dr. Clint Krehbiel

by Bryan Reiling, Associate Professor, Animal Science, University of Nebraska - Lincoln



The Department of Animal Science at the University of Nebraska-Lincoln (UNL) welcomes Dr. Clint Krehbiel as the new Head of Animal Science. He and his wife, Shelly, have three daughters; Madison, Megan, and Emma.

Dr. Krehbiel grew up on diversified cattle and grain operation near Moundridge, KS, and like many others from Rural America, he was actively involved in 4-H, Future Farmers of America, and athletics. After high school, Dr. Krehbiel attended Kansas State University (KSU) where he majored in Animal Science and was a member of their livestock judging team. Upon completion of his B.S. and M.S. degrees from KSU, Clint earned his doctoral degree in Ruminant Nutrition from UNL. He then held a two-year post-doctoral position with the Meat Animal Research Center in Clay Center, Nebraska before taking a faculty position at New Mexico State University. Most recently, he has served as a Regents Professor holding the Dennis and Marta White Endowed Chair in Ruminant Nutrition and Health, and served as the Assistant Department Head of Animal Science at Oklahoma State University. He is an accomplished researcher who has published hundreds of refereed journal articles, book chapters, abstracts, and extension or research reports throughout his career, which facilitated regional and national recognition from the American Society of Animal Science, Gamma Sigma Delta, and others.

Dr. Krehbiel is a very humble individual who genuinely cares about people and making a difference in their lives. He indicates that interacting with and having a positive impact on students is what he enjoys most about being involved in higher education. His advice for students is to get involved and build networks. Students should look for opportunities to engage in clubs and other activities. He encourages them to become involved in undergraduate research to understand the current state of knowledge, as well as what the future may hold.

Dr. Krehbiel is very optimistic about the future as data indicates that there is greater demand for qualified young people than ever before. Our current and future students will be the ones to help us determine how to continually produce high quality, abundant, and inexpensive protein with fewer resources – challenges, but also great opportunities.

## Beef Systems Research for the Future of Nebraska

By Rick Rasby, Associate Dean of Extension, University of Nebraska



The University of Nebraska-Lincoln (UNL) has been successful in serving the people of Nebraska by achieving teaching, research, and extension objectives relevant to beef cattle production and management. This has

been a coordinated effort based on a systems approach with multidisciplinary teams comprised of scientists from UNL and the Agricultural Research Service, stakeholders in the beef industry and associated groups and partners in government agencies. Most recently, in January 2015 and 2016, more than 70 participants from UNL, U.S. Department of Agriculture (USDA) and the beef industry throughout the state gathered at Beef Systems Workshops to identify high priority areas for future research, extension programming and undergraduate and graduate education in beef production systems.

Synthesis of roundtable discussions held during the Beef Systems Workshops identified two priority areas: 1) Improving perennial grassland harvest efficiency and long-term productivity, and 2) Developing integrated crop-cattle systems that secure livestock feed availability and crop productivity.

Following the January 2016 workshop, a multidisciplinary team came together to develop a plan to address these needs.

For the perennial grassland systems priority area, we propose to identify management practices that achieve optimal harvest efficiency and utilization of grasslands using a case study approach. This plan involves a comparison of grassland and beef production systems of ranches in Nebraska that utilize various management and grazing strategies. The cattle grazing distribution, grassland production, range condition/health, alternative feed resources and harvest efficiency of ranches in Nebraska would be quantified, and key factors that impact harvest efficiency and productivity would be determined through modeling. The modeling results will be the basis for conducting longer-term research involving adaptive management strategies in perennial grassland systems. (Continued on Page 10)

## Beef Systems Research (Continued from Page 9)

For integrated crop-cattle systems, we plan to compare traditional, segregated crop and cattle production to systems that integrate grain crops and beef production, and to evaluate the impact of integrated systems on crop and cattle production, soil quality and economic viability. This involves establishing field-scale replications of a minimum of two systems. Initially, the “traditional” cow-calf systems using smooth brome grass pasture and corn residue would be compared with an integrated system using corn residue and forage cover crop. Additional resources to measure the plant/animal/soil interactions within regionally diverse cropping systems being conducted at other research facilities in the University system and U.S. Meat Animal Research Center (USMARC) near Clay Center will be important to evaluate the effects of cattle on cropland and potential forage production within these different cropping systems.

The data obtained from both priority areas would then be used to populate simulation models to augment systems analysis of economic resiliency and adaptability to changing risk scenarios.

These proposed outcomes will require continuous facility and funding support for at least 10 years to be successful. With the current funding climate, there essentially are no external funding opportunities for maintaining long-term projects designed to answer questions critical to beef systems and to deliver relevant information needed for continued success of the beef industry; thus, annual support from the Institute of Agricultural and Natural Resources (IANR) is essential. Short-term research in beef systems-related areas will continue using short-term external grant funding. As federal funding continues to move toward transdisciplinary team approaches, it is beneficial to have a beef team that is established and working using a systems approach that demonstrates collaboration across disciplines already in place at the University of Nebraska.

Concept papers centered on the two priority areas were developed by the multidisciplinary team of faculty members and presented to IANR administration for review in mid-2016. In response, Deans Archie Clutter and Chuck Hibberd delivered their expectations of the group and outlined the framework of financial support from IANR at the 2017 Beef Systems Workshop. Following are the expectations delivered by the deans:

“It is administration’s intention to empower the Faculty Committee [Integrated Beef Systems Faculty Committee] to leverage the existing concept papers to build a 5-year working plan based on defined available internal funding. It

will be the responsibility of this Committee to bring the perspectives of expertise from a range of relevant disciplines, and a knowledge of the people, animal and physical resources across the statewide IANR system, for the development of a collaborative and powerful plan for Beef Systems at the University of Nebraska. While members of this Committee will likely play important roles in the resulting plan, it is the charge to the Committee to develop the most impactful plan given available resources and to include others in the design and execution of the strategies plan. It is expected that the resulting plan will include strong collaborations (e.g., co-direction of students), and must include two essential elements: 1) strategic integration and optimization of components of the IANR statewide system, and 2) plans for leveraging this investment towards current and emerging external funding sources (public and private-sector).”

The Integrated Beef Systems Faculty Committee will meet multiple times to write the 5-year working plan and will submit the plan to IANR administration in March 2017. Following are members of the Committee: Mary Drewnoski, Galen Erickson, Rick Funston, Jim MacDonald, Jay Parsons, Richard Randle, Daren Redfearn, Walt Schacht and Matt Spangler from the University of Nebraska – Lincoln; Rob Mitchell from Agricultural Research Service (ARS)/USDA Lincoln; and Harvey Freetly from USMARC/ARS/USDA. Photo/article reprinted with permission from Nebraska Cattlemen.

## Alumni Spotlight (Continued from Page 7)

At the same time, Ben now offers suggestions for improvement of the GLS program. He wishes he had spent more time learning about budgets and expense reports, learning how to prepare loan statements, and having a better understanding of factors that affect the market.

Ben’s overall advice for prospective and current students is to, “Meet and talk to anyone and everyone...professors, business professionals, ranchers, feed salesmen, technicians, and others.” He recommends that students get involved with one of the judging teams, if possible; anything that requires students to take a position and have to explain that position to others. “With this business, you’re defending and explaining yourself all the time; to bankers, allied businesses, ranch owners, and customers.”

Finally, Ben suggests that we, “Become a master of observation because the stock, wildlife, range, people, and markets are your best tools to see what has happened, is happening, and will happen...from mineral imbalances showing up in the hair coat to changes in animal behavior that indicate an upcoming storm. Nature will show us what is needed, if we take the time to observe her.”

## Student Profiles: Emily Gill and Emily Critser

By Alexa Johnson, Grazing Livestock Systems Student Ambassador, University of Nebraska-Lincoln



Emily Gill is a junior majoring in Grazing Livestock Systems (GLS) and Animal Science (ASCI) with a minor in Agronomy. She grew up in Gurley, NE on a non-profit 4-H farm, as her family likes to call it. They raised chickens, turkeys, peacocks, and had a few steers. In high school, Emily was actively involved participating in volleyball, track, basketball, FCA, FCCLA, one act, speech, and cheerleading. Emily was also a 10-year member of 4-H and is a lifetime member of Girl Scouts.

Emily learned about the GLS major through her advisor, Dr. Bryan Reiling, and decided it would be a good fit with her other areas of study. Some classes that have taught her a lot include ASCI 240, Anatomy and Physiology of Animals and ASCI 200, Live Animal and Carcass Evaluation. Upon graduation, Emily is considering graduate school options, and she hopes to one day be raising cattle. However, she also thinks it would be valuable to establish an educational farm for inner city children to learn about agriculture.



Emily Critser is a sophomore who hails from Bellwood, NE, where she and her family breed and train Quarter Horses. Her involvement in livestock, came from working for neighbors to help pay for club lambs. In high school, she was involved in golf, speech, and soccer and was also a member of both 4-H and FFA. At the university she is involved with the Collegiate Cattlemen, Block and Bridle, University of Nebraska-Lincoln Agriculture Communicators of Tomorrow, and the UNL FFA Alumni.

Emily is majoring in Grazing Livestock Systems and Animal Science. She first heard about the GLS major during her first semester from other students and added the major to expand her knowledge about the beef industry. Her advisor, Dr. Bryan Reiling, helped her figure out class schedules identifying those that would benefit her the most and has provided ideas for an internship. For the internship, she hopes to focus on Animal Nutrition. Her favorite classes include Genetics, Principles and Prevention of Livestock Diseases, and Physiology and Management of Reproduction. Emily's aspirations are to go to graduate school in either Ruminant Nutrition or Breeding and Genetics. A piece of advice for high school students, from Emily, is "people who are or plan to be an animal science major should add the GLS major to broaden their horizons."

## Technology Makeover

by Brad Goetsch, PGA Golf Management Instruction Coordinator, PGA Golf Management Program, Center for Grassland Studies



The PGA Golf Management facilities are getting a makeover. Our Full Swing simulators are being retrofitted with more reliable and accurate ball tracking technology. In addition, JC Video will be installing two new cameras and a new swing analysis system updated and custom built for the needs of the program and students. The camera and video will provide better analysis of golf swings while using software currently being used industry-wide. As if high-end cameras and software are not enough, the program will incorporate a new 3D system built by MySwing Golf. The MySwing system utilizes a series of 17 sensors on the body and two on the club to gather data about the motion of the golf swing, which is viewable from any angle at any point in time. This will allow an unprecedented look into the mechanics of a swing with accurate measurement data.

Furthermore, a raging debate is taking place within the golf industry pitting two very different ball and club head tracking technologies against each other. One side says that photometric technology is supreme, while the other side looks to Doppler radar to gather data. The University of Nebraska-Lincoln will be the first to house and use the dual Doppler radar TrackMan unit side by side against the newly released GCQuad from ForeSight, the first and only to incorporate quadrascopic camera tracking technology. This provides students with hands-on experience with both systems allowing them to form judgments on each.

This new technology, staged side-by-side among the great technology already in the program (PPhantom camera, K-Vest, and Focus Band) will combine into the single greatest combination of technologies not only across PGA Golf Management schools, but will put it in a league with anything in the world showing that there really is NO PLACE LIKE NEBRASKA!



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## Monarch Miracles

by Duane Hovorka, Executive Director, Nebraska Wildlife Federation

Monarch butterflies migrate several thousand miles from the Great Plains to winter in a mountain forest in the middle of Mexico. In the spring, their offspring begin the long journey back. How do they find their way back to the same mountain forest in Mexico several generations later?

These amazing creatures captivate children and adults alike, but their future is in peril. Over the past 20 years, the population of monarch butterflies has dropped by some 90 percent. Honey bees, native bees, many butterfly species, and other pollinators are facing the same challenges.

For the monarch, it starts with milkweeds. Monarch butterflies lay their eggs on milkweeds—and only milkweeds. The caterpillars that hatch eat the milkweed leaves, which contain a toxin that puts a bad taste in the mouth of anything that tries to eat them.

Milkweeds are essential, but they aren't the only plant that monarchs and other pollinators need to thrive. Planting nectar-rich native wildflowers that bloom throughout the growing season is the key to keeping your butterflies, bees, and other pollinators happy.

In the spring, Plains coreopsis, prairie phlox, and violets can provide early nectar. Summer-blooming natives like prairie coneflower, brown-eyed Susan, and spiked gayfeather provide nectar through the middle of summer. Prairie aster, sunflowers, and Joy-pye weed will carry their blooms late into the fall, providing nectar for the monarchs' long journey south.

With the right mix of food, water, nesting space and cover, and pollinator-friendly practices that avoid pesticides and other chemicals, anyone can have a monarch and pollinator garden. Contact the Wachiska Audubon office for a recipe for creating high-quality habitat for monarchs and other pollinators, even in a small space. E-mail [office@wachiskaaudubon.org](mailto:office@wachiskaaudubon.org) or call (402) 486-4846 for more information. Photo/article reprinted with permission from Wachiska Audubon Society.

