



# Center for Grassland Studies

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Photo: E Freese

Grassland Systems | PGA Golf Management | Beef Systems Initiative

March 2021

## New PGA Professional in Residence by Dann Husmann, Director, PGA Golf Management, University of Nebraska-Lincoln

Exciting news! On March 1, Joe Canny, PGA, joined our team as a PGA Professional in Residence in the College of Agricultural Sciences and Natural Resources with an office housed in the Center for Grassland Studies and PGA Golf Management Program.

Joe comes to us from Lincoln City Golf where he was the Player Development Supervisor for their team. Joe is a past recipient of the Nebraska PGA Youth Player Development Award and the Bill Strausbaugh Award. He is also certified in the American Development Model (Long-term Athlete Development) and is a certified club fitter for Callaway and PING. Joe also served in an administrative position with the PGA of America in Port St. Lucie, Florida prior coming back to Nebraska. Joe is a 2009 graduate from the University of Nebraska-Lincoln with a degree in PGA Golf Management (High Distinction).

This is an excellent opportunity for our PGA Golf Management Program and we look forward to Joe's involvement and efforts in expanding our recruitment efforts in attracting the best women and men to our degree program here at the University of Nebraska-Lincoln. His expertise will quickly be utilized to strengthen our ties and collaborations with the Nebraska PGA Section, our program alumni, and the surrounding golfing community.

Make sure you take the opportunity to introduce yourself to Joe and welcome him and his family to the PGA Golf Management Program in the Center for Grassland Studies.



**Joe Canny, PGA Professional in Residence, Center for Grassland Studies,  
PGA Golf Management Program**

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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 University of Nebraska – Lincoln.

To simplify technical terminology, trade names of products or equipment sometimes are used. No endorsement of products is intended nor is criticism implied of products not mentioned.

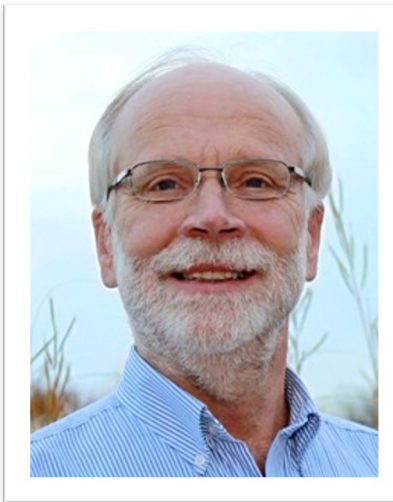


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## Director's Column by Walt Schacht, Interim Director, Center for Grassland Studies



In accord with its mission and objectives, the Center continues to work with other University of Nebraska-Lincoln units and scientists to balance the use and management of grasslands for multiple ecosystem services, including beef cattle production and biodiversity/conservation. Of particular interest is the study of the dynamics between efficient use of forage resources by cattle and wildlife habitat on grazing lands. At current levels of use, US grazing lands can only support 35% of present daily beef output indicating the need to better understand the productive capacity of various segments of our beef production, including productivity and

harvest efficiency (percentage of available forage that is consumed by grazing livestock) on grazing lands. Increased harvest efficiency generally requires more even spatial and temporal distribution on grazing lands, which often minimizes heterogeneity of structure and composition of vegetation cover - characteristic of fully utilized, low diversity grazing lands.

Recent assessment of data from the National Agriculture Statistics Service and the National Resource Inventory of the USDA, suggests that, on a state-wide basis, perennial forage resources on Nebraska grazing lands are fully utilized unless harvest efficiency is increased by more widespread use of grazing management strategies that increase the efficiency of use of forages on grazing lands. To increase harvest efficiency with the goal of increasing beef production per acre, current research is analyzing production systems where cattle may spend more time grazing crop residue or more cows are fed in a dry lot setting instead of grazing. These systems could reduce the demand for perennial grazing resources while maintaining an equivalent cow/calf productive capacity or, more likely, increase the demand on perennial grazing resources as the cow herd increases in size because of the increased use of crop residue and annual forages. Overall, land management goals to increase efficiency of use of grazing resources and increased livestock production have the potential to decrease heterogeneity and quality of wildlife habitat. For instance, the reduction in grassland birds in the northern Great Plains since the 1970s has been linked to such things as low-quality habitat on grazing lands.

To further assess the trade-offs of different grazing land management strategies, the Center and partners are developing further research to explore how profitable and sustainable livestock production systems fit within healthy, multi-functional grazing land systems.

## Range Club Competes in Virtual SRM Conference by Jessica Windh,

Doctoral Student and Recruitment Coordinator, Center for Grassland Studies



Asha Scheideler and Kaitlyn Dozler watched the Students Awards ceremony virtually from the UNL campus. Photo by J. Windh

The University of Nebraska-Lincoln (UNL) Range Management Club spends the fall semester preparing for the Society for Range Management's annual conference. This year's Feb. 15-18 conference was held virtually due to COVID-19. Despite the unprecedented circumstances, the UNL students were able to compete in virtual versions of events and represented UNL very well.

Kaitlyn Dozler won first place in the Extemporaneous Speaking contest. She had 4 hours to prepare, record, and upload a 5-minute speech on prescribed fire. A team consisting of **Asha Scheideler**, **Nick Sanders**, **Lydia Regier**, **Kaitlyn Dozler**, **Brandon Jelinek**, and **Cole Liable** completed the Undergraduate Range Management Exam and finished a few points behind the fifth place team. The one-hour timed exam covered all topics within the field of rangeland management. **Jordan Springer**, **Asha Scheideler**, **Collin Eaton**, and **Robert Witkowski** completed the Plant Identification contest, where students are given a limited amount of time to identify up to 100 mounted plant specimens. The students were supported by advisors/coaches **Cheryl Dunn**, Research Manager/Herbarium Curator in Agronomy and Horticulture, and **Jessica Windh**.

**Asha Scheideler**, Range Club president, was honored by the Nebraska Section of the Society for Range Management and awarded their annual scholarship. The scholarship is based on "...scholastic achievement, leadership, and participation in activities, especially those that are range-related."

The Center for Grassland Studies extends congratulations to all of these students for their achievements!

## Register Now: Nebraska Range Short Course by Mitchell Stephenson, Range and

Forage Extension Specialist, Panhandle Research, Extension and Education Center, Scottsbluff, NE

The Nebraska Range Short Course is designed to provide individuals who have an interest in range management, natural resources, or agriculture an opportunity to increase their knowledge in the field of range management. It will provide underlying principles of range management for efficient, sustainable use of range land for multiple purposes including livestock grazing and wildlife habitat.

**Eligibility.** Individuals who are interested in improving their understanding of range management and have a general background in range or plant sciences (either through practical experience or formal education) will be eligible to apply for the short course. The short course will be limited to the first 50 applicants who have registered for the class before May 15, 2021.

**Credit and Instructors.** The short course can be taken for credit or for non-credit through the University of Nebraska-Lincoln or Chadron State College. Sixteen (16) CEU credits are available for the SRM "Certified Professional in Rangeland Management" program. You can register for CEU credits during the short course at Chadron. Instructors for the Range Short Course include faculty from the University of Nebraska-Lincoln and Chadron State College, USDA/ARS, NRCS, U.S. Forest Service, and ranchers.

**Schedule.** The week-long course, June 21-24, is taught through a series of classroom and field sessions focusing on underlying principles of range management for efficient, sustainable use of rangeland for multiple purposes. The diversity of course topics include plant identification, plant growth and development, rangeland soils, range inventory and monitoring methods, prescribed burning, rangeland restoration, ecosystem services, wildlife management, grazing management and range livestock production.

To learn more about the course and how to register, go to <https://agronomy.unl.edu/nebraskarangeshortcourse>. Questions may be directed to **Mitch Stephenson** at [mstephenson@unl.edu](mailto:mstephenson@unl.edu) or (308) 632-1355.

# Getting it in the Ground: Equipment Options for Seeding Perennial Grasslands

by Nate Van Meter, Science Instructor, Bennet, NE

A consideration when establishing or renovating perennial grasslands is the equipment used to place the seed in the ground. There are often multiple ways to successfully complete this task, and the “best” way for an individual project will depend on a variety of factors. Type and condition of seed, equipment availability, soil characteristics, existing ground cover, project goals and expectations, and agency specifications are all important factors to consider. This article will explore the equipment options for seeding perennial grasslands.

**Grassland Drills.** Drills designed to handle a variety of different seed types and ground conditions are one of the most practical choices for seeding. Many of these drills utilize multiple seed boxes that meter and direct seed between or behind double disc furrow openers (Fig. 1). These drills have three important features for seeding perennial grasslands; 1) different agitation and “picker” types to effectively meter fluffy seed (Fig. 2), 2) adjustments that ensure shallow seed placement, and 3) no-till coulters to cut through or move existing vegetation. These features combine to make these drills versatile tools for establishing or renovating perennial grasslands.



Fig. 1. Drill with multiple seed boxes. Photo by J. Soper

**Double Roller or “Brillion” Type Seeders.** Seeders of this type that are designed to handle native seeds have a similar seed box arrangement as grassland drills. The difference is how they place the seed on and in the soil. These seeders meter and drop seed onto the soil surface between two heavy cultipackers. The first cultipacker firms and evens the seedbed

ahead of the seed. The second presses the seed into the soil. These seeders do a great job of ensuring shallow seed placement, leaving some seed visible on the soil surface or in the shallow furrows created by the cultipackers, particularly when the seedbed is relatively smooth and firm prior to seeding. This type of seeder is most effective when vegetation residue on the soil surface is light enough to allow most seed to contact the soil when dropped.



Fig. 2. Seed box with an agitator. Photo by J. Soper

**Broadcast and Drop Seeders.** Another method for seeding perennial grasslands is to use a broadcast or drop seeder. These implements include ground or tractor PTO driven fan or pendulum spreaders, drop spreaders designed for native seeds, and drop spreaders designed for applying fertilizer and lime on agriculture fields. These seeders vary in how they deliver the seed, but can be used successfully to get the seed to the ground. In many cases, a cultipacker, drag mat, or harrow is used to improve soil to seed contact and to lightly incorporate some of the seed into the soil. Because this method is less consistent in the way the seed is placed into the soil, government conservation program specifications often require an increase in the seeding rate when using broadcast seeding. Prairie restoration specialists have utilized broadcast seeding (often without using a cultipacker or harrow following seeding) to plant high diversity prairie and wetland restoration sites. This is a viable option, especially when seeding mixes with a high percentage of forbs and wetland plants, and when project goals and requirements allow for this more natural approach. Just as with double  
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## Getting it in the Ground (Continued from Page 4)

roller seeders, this approach is best used when existing vegetation cover is thin enough to allow seed to contact the soil surface.

**Conclusion.** The selection of equipment for seeding perennial grasslands typically comes down to the size of the project, site conditions, and availability of suitable equipment. For large renovation projects, the typical choice is a no-till grassland drill. When the project involves establishing new grasslands in crop stubble or on prepared seedbeds broadcast seeding is a viable option when project specifications allow. With any method it is critical to take the time to properly calibrate and adjust the equipment to ensure proper seeding rate and depth.

*Nate is a science instructor residing in Bennet, NE. Additionally, he is a member of the Center's Citizens Advisory Council and may be contacted at [nvanmeter1@gmail.com](mailto:nvanmeter1@gmail.com).*

## Scholarship: Northern Seed Trade Association

Northern Seed Trade Association is taking applications for its Local Impact Scholarship through April 1. The \$2,000 scholarship is designed to support students interested in pursuing careers in the Seed Trade Industry. Local Impact areas for 2021 are Nebraska and Colorado. Preference is given to qualified applicants whose hometown is in or who attend school in the designated Local Northern Seed Trade Association is taking applications for its Local Impact Scholarship through April 1. The \$2,000 scholarship is designed to support students interested in pursuing careers in the Seed Trade Industry. Local Impact areas for 2021 are Nebraska and Colorado. Preference is given to qualified applicants whose hometown is in or who attend school in the designated Local Impact Scholarship award area(s); however it is not a requirement for applicants and all qualified applicants will be considered. To learn more, go to <http://www.nstaannualmeeting.com/scholarship/>.

## Your Support Matters

The Center for Grassland Studies and its students are very fortunate to have donors who are passionate about its Grassland Systems and PGA Golf Management programming and activities. Our stakeholders and alumni are committed to the education of our future stewards and professionals. Your financial contribution may support the programs in the following ways:

**Grassland Systems.** A gift to the Center for Grassland Studies Fund (through the University of Nebraska Foundation) benefits and supports academic and professional development scholarships for Grassland Systems students, student internships, presentations by state and national speakers with expertise in grasslands and conservation, student club activities through field trips and in-person panel discussions with alumni and professionals, management of the Center's grasslands/prairies, and outreach and research programs.

**PGA Golf Management.** A gift to the PGA Golf Management Program Excellence Fund or the Terrance P. and Judy S. Riordan Scholarship Fund (through the University of Nebraska Foundation) benefits and supports the needs of the PGM major and students, including student scholarships, travel grants, student registration for meetings, student club activities, student awards, graduation reception, and teaching equipment.

**Nine-Mile Prairie.** The Nine-Mile Prairie Fund (through the University of Nebraska Foundation) supports management, conservation, and education at UNL's unique 235-acre tallgrass prairie. Resources from the Nine-Mile Prairie Fund allows CGS to hire student land managers, run our prescribed fire training program, manage invasive species and encroaching woody vegetation, and restore rare prairie species.

To learn more or make an online or mail-in contribution, go to <https://grassland.unl.edu/support-our-programs>. Questions regarding your gift may be directed to **Doug Carr**, Director of Development, UNL Institute of Agriculture and Natural Resources, at [doug.carr@unfoundation.org](mailto:doug.carr@unfoundation.org) or (402) 458-1160.

## Alumni Update: Vicki Simonsen by Margo McKendree, Center for Grassland Studies

As a young girl, Vicki Simonsen spent a lot of time outside exploring the pastures, fields, and trees around the house situated on her great grandparent's farm near Ruskin, NE. This is where her interest in the environment began.

Her passion for wildlife and nature led Vicki to the School of Natural Resources at the University of Nebraska-Lincoln (UNL). While attending college, she would study how wildlife interacted with their environment. It soon became clear, however, that grassland was the one ecosystem was nearer and dearer to her than the others. But Vicki's interests did not stop with grassland studies.

During her freshman year, Vicki's advisors asked what degree she wanted to pursue. Vicki told them she wanted not one degree, but three. Her interest in wildlife made studying fisheries and wildlife an obvious must. Her love of grasslands provided her with an interest in majoring in grassland ecology and management. And, as humans play a big role in shaping grasslands and how wildlife interact with grasslands, a major in environmental studies seemed appropriate as well. Vicki said, "It took a lot of planning and classes, even classes during the summer, but I graduated with all three degrees in four years."



**Vicki Simonsen, University of Nebraska-Lincoln graduate.**

Even with a heavy class load, Vicki still had time for extracurricular activities. One of her favorite activities was being a member of UNL's Range Club. Through club activities she met and interacted with other students in her major, both inside and outside of the classroom, allowing her to form many friendships, many of which continue to this day. She was able to get to know her professors better, which she feels helped her tremendously in class. And the graduate students were always supportive and helpful as well. "I feel lucky to have made the connections I did through Range Club as they were a great resource, I always felt I had people to call and ask questions of," Vicki added.

Besides having fond memories of Range Club, Vicki says that without a doubt Cheryl Dunn's wildland plant identification class was the most beneficial course she has ever taken. She uses her plant identification skills whenever she goes out into a pasture, and it helped her identify many plants and weeds that were brought into the extension office in which she worked.

During her undergraduate education, Vicki set her sights on getting involved in research and worked with Dr. Joseph Fontaine of the Nebraska Cooperative Research Unit in the School of Natural Resources. She started as a technician working on a shorebird project but was able to conduct her own research on pheasants through UCARE funding. After graduating in 2015 with her three degrees, Vicki continued her studies after being accepted as a masters student at UNL. This allowed Vicki to work with Dr. Fontaine once again, this time on a bobwhite quail project and artificial nest meta-analysis. She earned her Master of Science in Natural Resource Sciences in 2018.

Vicki feels that even though Grassland Ecology and Management may not have been the biggest major on campus, the size of the program enabled her to get to know the entire department personally, which she appreciated. According to Vicki, "Because I knew the professors so well, it opened doors for me to work as a research technician at the Niobrara Valley Preserve (The Nature Conservancy), collaborate on an extension publication, and attend three national Society for Range Management conventions with the Range Club."

As Vicki neared the end of her graduate studies, she decided she wanted to be a county extension agent because she enjoyed helping people, and it was an opportunity to continue learning while sharing information. **(Continued on Page 7)**

## Alumni Update (Continued from Page 4)

She applied for and was offered a position as an extension agent for K-State Research and Extension. Her work was never dull as she answered questions that ranged from insects to cattle grazing to wildlife and much more. According to Vicki, “The many diverse classes required for my grassland ecology and management degree served me very well by allowing me to be familiar with many topics (at least enough to have a starting point to look up an answer).”

At this point in her life, Vicki has decided to come back to the “good life” and answer the call of the family farm. She now works on the farm as a fourth-generation farmer doing bookwork with her mother and all the other many jobs of a farmer alongside her father. Vicki concludes, “I like that each day is different, and there is always something new to learn or some puzzle to solve to keep me on my toes.”

## Stretching Prairie Remnant by Kay Kottas, President, Prairie Legacy, Inc., Western, NE



Collecting silphium. Photo by E. Freese

Nebraska’s tall-grass prairies are considered critically imperiled by Nebraska’s Natural Heritage Program. Most of these prairies exist as remnant patches, scattered across the eastern edge of the State. These imperiled ecosystems hold the key to their own survival. Tiny bits of prairie make a big impact when the seed collected there can be increased and sown again in other prairie restorations or recreations. In order to recreate, replant, and revive these prairies with genetically appropriate and diverse material, Prairie Legacy collects seed from as many as 200 species of plants each year from these remnant prairies.

Generation zero (0) describes seed coming from the wild. It is ideal for planting into seed production plots. This is because, the genetic makeup of this seed has been directed by years of living among the native soil biome, the native flora and fauna and the native climate into which we will eventually

plant its progeny. After these plots have run their course, 3 to 4 years on average, generation 0 seed is again used to plant new plots. This keeps the seed from developing new traits that favor its life in the seed plots rather than the prairie system in which it thrives. Preserved, remnant prairies are therefore very important in the on-going supply of native seed.

Planting into seed plots is accomplished by transplanting machine or seed drill. Collection begins as early as May and ramps up from August through October. Harvesting is done by hand, with homemade collection devices and with machinery. Cleaning can be accomplished with many different machines depending on whether you have handfuls of seed or trailers full. We have used a kitchen blender, our feet, a woodchipper, lawnmower, combine, thresher, hammermill and fanning mill.

We are always seeking additional prairies as sources of seed and additional species. The practice of spraying pastures to remove forbs in favor of grasses as well as heavy spring grazing, have made spring species particularly scarce. In addition, current management practices support grazing or haying, so seed is often destroyed before it ripens. Having many prairie remnants from which to collect helps keep seed supplies available. We encourage those who have access to remnant prairie to preserve it, to allow it to rest and reseed on occasion and to contact us if you would like help assessing or preserving it.

*Prairie Legacy Inc. has over ten years of prairie restoration and management experience offering professional botanical and biological survey experience in wetlands, woodlands, tallgrass, mixed grass, and Sandhills prairie. To learn more about Prairie Legacy, Inc., go to <https://prairielegacyinc.com/>*



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## Nebraska Ranch Practicum Registration Open Now

The Nebraska Ranch Practicum is a three-season, hands-on educational program designed to give participants the skills and education needed in today's complex ranching industry. Participants benefit from cutting-edge research in range livestock production and marketing at the University of Nebraska–Lincoln (UNL) Gudmundsen Sandhills Laboratory, a nationally-recognized research and education facility.

Attendees will develop the ability to efficiently use decision support tools to critically evaluate numerous management and marketing alternatives dealing with: grazing strategies and systems, methods of managing market risk, calving and weaning dates, winter livestock nutrition, cull cow management, and feed rations and seasonal mineral supplements.

Students may take the Nebraska Ranch Practicum for college credit (4 undergraduate hours or 3 graduate hours) through the Animal Science or Agronomy and Horticulture Departments at UNL. Make arrangements for college credit during the initial Practicum session. Additionally, the course is approved for continuing education credits by the Society for Range Management for their Certified Professional in Range Management program and Nebraska Board of Veterinary Medicine and Surgery. For additional information, contact **Jerry D. Volesky** at (308) 696-6710 or [jerry.volesky@unl.edu](mailto:jerry.volesky@unl.edu).

A completed application and fees should be submitted by May 3, 2021. All educational materials, noon meals and breaks are included. Participants are responsible for travel and lodging expenses. Applications are available from the Ranch Practicum website at <http://nebraskaranchpracticum.unl.edu/>, or by contacting **Troy Walz** at (308) 872-6831 or [troy.walz@unl.edu](mailto:troy.walz@unl.edu).