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PGA Golf Management Honors and Other News

UNL PGA Golf Management (PGM) personnel, alumni and current students have been in the news lately.

At the March 4, 2013 Nebraska Section PGA meeting, several people associated with our program were honored. Internship Coordinator **Scott Holly** received the Horton Smith Educa-

tion Award. Jim White was recognized as the Senior Player of the Year and Greg Johannesen as the Teacher of the Year; both of them work with our Player Development Program. Gil Russell (class of 2011), who has worked at ArborLinks in Nebraska City since his graduation, was honored as the Assistant Professional of the Year.

In February, Callaway
Golf announced the ten
members of the X Hot
Long Drive Team, including our current student
Andrew Frakes. The ten
long drive professionals will
join RE/MAX World Long
Drive Champions Jamie
Sadlowski, Joe Miller and

Bobby Wilson as Callaway Ambassadors — playing and promoting Callaway products around the country.

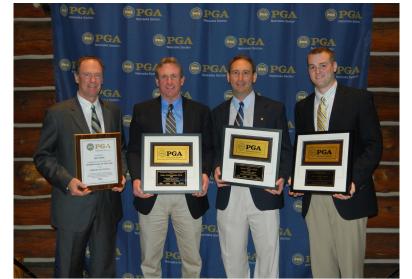
In recognition of how sales have increased in his territory, **Kevin Moberg** (class of 2008) recently received the Rising Star award from TaylorMade Golf.

Four UNL PGM alumni have recently come home to roost. Two came from their most recent positions at Kansas City Country Club; **Maureen Farrell** (class of 2009) is now the Head Professional at Wilderness Ridge Golf Club (our program's primary golf course), and **Nick Muller** (class of 2007), is the

new Director of Golf at the Country Club of Lincoln. Also coming from a neighboring state is Nathan Munford (class of 2011), who recently left Manhattan Country Club to accept the position of Head Golf Professional at Platteview Country Club in Bellevue. After a few years in Florida as Player Development Coordinator for The PGA of America, Joe Canny (class of 2010) came back to Lincoln to be the Nebraska **Junior Golf Tour Director** and Player Development Coordinator for the Nebraska Section PGA.

For the second year in a row, PGA Golf Management Director **Alan Baquet**

was honored as one of the recipients of a UNL Parents Association award for those who have made a significant difference in their students' lives.



From left: PGA Professionals Jim White, Greg Johannesen, Scott Holly and Gil Russell received awards at the 2013 Nebraska Section PGA meeting.



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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.



Martin A. Massengale	CGS Director
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From the Director

the agriculture industry. First, Congress has not passed a new Farm Bill, so issues such as support prices, risk insurance, assistance for research, education and conservation practices are unknowns. Sequestration is now a reality, and while it remains to be seen how this will eventually impact agriculture, we do expect that there will be less federal government money available to support agricultural programs. Further, the widespread 2012 drought severely impacted our grasses and grassland, and all indications point toward another dry year in 2013.

Significant increases in the prices of corn and soybeans have caused land owners to convert large acreages of grassland to cropland. A recent study by researchers at South Dakota State University reports a loss of 1.3 million acres of grassland shifting to cropland over a five-year period (2006-2011) in the western Corn Belt. These scientists indicated that there had not been such a high rate of grassland conversion since the 1920s and 1930s.

A high percentage of these converted acres has come from Conservation Reserve Lands (CRP) and native prairies. Many of these converted acres have been from marginal or highly erodible lands by both wind and water, providing even more exposure to droughts. Also, a percentage of these converted acres border wetlands, significantly impacting wildlife.

Prospects for continuing drought, uncertainty in federal budgeting, unknown status of conservation programs and the lowest hay supply on farms in history, according to the National Agricultural Statistics Service, are among the factors causing cattle producers to consider how best to manage their cow herds and/or grazing systems during the forthcoming year. With low soil moisture at the beginning of the grazing season, unfavorable future forecasts, and grasses likely to be in a weakened condition from last year's drought and grazing, we anticipate 2013 production will be lower than in a normal year. Therefore, it is especially important to use grazing strategies that obtain maximum productivity without damaging the plant's long-term production and health.

In December I attended the 5th National Conference on Grazing Lands sponsored by the Grazing Lands Conservation Initiative (GLCI). The GLCI is a nationwide consortium of individuals and organizations working together to maintain and improve the management and health of the nation's grazing lands.

Some topics discussed at the meeting included soil health, cover crops, grazing practices, calving dates, livestock handling and dealing with drought. It was pointed out that soil health is the foundation for good grass production and that cover crops enable the producers to grow more forage as well as extend the grazing season. Several livestock producers from the northern Great Plains states were enthusiastic about moving their calving dates from February/March to May/June. Although producers had different reasons for delaying the calving season, essentially everyone indicated that it increased their profitability.

Dr. Gary Lacefield, forage specialist at the University of Kentucky, presented the concept of a "sacrifice" pasture during drought years. The idea is to avoid overgrazing several or all pastures by placing cattle in one pasture and using supplemental feed. He said doing so would allow ungrazed pastures to rebound faster when the rains do come.

M. A. Massengale

Management of Crop Residues Is Key to Forage Supply Now and in the Future

By Jim MacDonald, Department of Animal Science, UNL

The 2012 drought has reminded us once again just how fragile our forage supply can be. For beef producers, lack of forage production caused forage reserves to be used up, the price of harvested forage to skyrocket, and the outlook for 2013 to be uncertain. Structural changes in agriculture have affected forage supply as well. Marginal acres once thought to be best utilized as pasture have been converted to corn production, thereby reducing pasture available for beef producers. These issues have caused us to ponder the future sources of forage that make up 85% of the feed inputs in most beef production systems.

The likely answer to this situation is far from exciting, but it is very practical. Nebraskans have been accustomed to seeing cows grazing corn stalks for decades. We have very good information related to utilizing corn stalks by beef cows. For example, we know that cows can graze corn stalks during the last trimester of pregnancy without supplement and not suffer negative impacts on reproduction, calf performance, or the reproductive performance of the heifer progeny. We also understand the performance responses of providing supplement to growing calves grazing corn stalks. So why continue to research a production system that has been commonly adopted by producers for a long time?

First, corn residue is one of the few forage resources that are increasing in production. In addition to increasing corn acres, corn yields have increased dramatically over time. Since the proportion of plant and grain remains relatively constant, the increases in corn yields have resulted in increases in corn residue available after harvest. Second, the price of corn has increased substantially. This fact has rightfully caused corn producers to closely evaluate the impacts of residue removal on subsequent corn yield.

We have collected 16 years of data in eastern Nebraska comparing fields where the residue was grazed vs. those where no grazing occurred in a corn-soybean rotation. Over those 16 years, grazing had no impact on subsequent corn yields and a slight increase in soybean yields. Similar results were obtained near Brule, NE, suggesting no difference between irrigated corn that has been grazed compared to ungrazed residue. Other research in eastern Nebraska suggests removing some residue is beneficial to subsequent yields. While these results may not be indicative of every corn field in Nebraska, the data certainly indicate that corn acres can be grazed without damaging future yields.

An interesting dynamic as we watched cattle graze corn residue is their preference and ability to select for specific plant

parts. An experienced cow will first seek out any residual corn remaining in the field. Next, she will select the husk and leaves, which also happen to be the most digestible forage components. The stalk is the least desirable component of the corn plant to a cow, but is the most desirable component to be left on the field to cover the soil. The system works well because the husk and leaves make up approximately 40% of the corn plant (without grain), and the stem makes up approximately 50%. Therefore, fields can be managed to allow for removal of the components of the corn plant that are most valuable to the cow while the components that are most valuable to the field remain.

Occasionally we hear that corn residue does not seem to have the same nutritional value that it has in years past, and this can be related to the introduction of Bt hybrids. There are data that suggest the stems of Bt hybrids have a greater lignin content compared to non-Bt hybrids. However, as stated above, cattle don't prefer the stems. Our digestibility estimates suggest there are no differences in digestibility of corn plants with or without the Bt-gene. Additionally, we have previously observed steers given access to corn residue from hybrids with or without the Bt-gene. Steers grazed both fields equally, suggesting no preference for or against Bt hybrids. We hypothesize that any apparent reduction in nutritive quality of grazed corn residue is related to improved harvest efficiency of the grain rather than a real reduction in the nutritive value of the corn plant.

The good news in identifying corn residue as a key forage resource for beef production is that corn and beef production have been symbiotic for decades. Nearly 75% of the \$21.8 billion generated from Nebraska agriculture is from beef and corn production. Additionally, there is plenty of residue to meet the needs of cattlemen without removing excessive amounts of residue. We estimate that the 2 million beef cows and 2.5 million head of cattle on feed at any time in Nebraska could utilize 2.8 million tons of the 42 million tons of residue generated from 10.3 million acres of corn. That equates to 6.7% of the residue in Nebraska. Like many other issues, there are problems with distribution of cows across the available corn acres, but this also represents opportunity for new ideas, technology, and relationships. If there is a positive to come from the current drought in Nebraska, it is that the relationships that develop because of the current need to rely on corn residue for forage may benefit both beef and corn production in the future.

Fire Research

Lance Vermeier, USDA-ARS, Fort Keogh Livestock & Range Research Laboratory

Fort Keogh is conducting a continuing and systematic assessment of fire effects in the northern Great Plains. Efforts have included fire in all seasons of the year, but focused on summer fire because that is when most fires occur in our region. Precipitation is always the primary driver, so we have examined fire effects on the plant, soil and animal communities across a broad range of weather conditions.

Our work has clearly indicated the dominant perennial native grasses are resistant to summer fire. Even under extreme

conditions of the second driest and the wettest springs on record, productivity has equaled or exceeded that of non-burned sites the first growing season after summer fire. Cool-season perennial grasses have increased 40-100% by the second post-fire season. Total productivity

have increased 40100% by the second
post-fire season.

Total productivity
has been similar between burned and non-burned sites because
gains in perennial grasses have been offset by reductions in annual grasses and forbs. The annual grasses and forbs reduced by
fire have typically been non-native weeds. Fire has also reduced
prickly pear cactus and Wyoming big sagebrush is widely known

Post-fire grazing management has been a major focus because of the lack of data on the subject and the high costs associated with deferment or complete rest from grazing, which are often recommended after fire. We first examined grazing to different levels of utilization in June the first year after summer fire. Productivity was the same for non-burned sites that were not grazed and for burned sites that were not grazed or were grazed to 17, 34, or 50% removal of biomass. We also confirmed that animal weight gain decreases when grazing is deferred until August compared to starting in mid-May or late June. Deferment to late summer showed no benefits to the plant community in terms of productivity or species composition, even at 60-76% utilization.

to be fire-sensitive. Silver sagebrush and fringed sage, on the other

hand, sprout and recover quickly following fire.

We also examined plant response to heat dosage to facilitate control of unwanted species with fire and predict fire effects on desirable species. Fuel load (amount of combustible material) is a primary predictor of heat released by fire. This work has included fire effects on grasshoppers, weed seeds, and mature plants. We selectively controlled pest grasshopper species in the field with fire and verified in laboratory experiments that the controlling factors were heat dosage and depth that grasshopper eggs were buried in the soil. White-whiskered grasshoppers, one of the top pest species, were consistently reduced about 85% in the field and lab.

Concern about weed infestations following fire prompted us to test fire effects on weed seeds that were deposited on the soil

surface. Fuel load explained 98% of the variation in heat dosage, and emergence of the weeds decreased with increasing fuel load. Japanese brome, leafy spurge, spotted knapweed and Russian knapweed were reduced 79-88% by fire with as little as 890 lb/ ac of fuel. Results



indicate fire is unlikely to eradicate weeds, but may cause abrupt changes in seed availability and facilitate control with other methods. Similar research indicated fire reduced prickly pear cactus 42-57% with fuel loads common to the region, and 83% of surviving plants experienced insect or browsing damage.

Native perennial grasses are considerably more resistant to fire. Testing fuel loads greater than 8000 lb/ac, well above those commonly encountered on rangeland, we observed limited mortality. Mortality was less than 1% for western wheatgrass and threadleaf sedge, 16% for blue grama, and 14% for needle-and-thread. Mortality increased with increasing fuel load and heat, but extreme levels (fuel loads > 7100 lb/ac) for each were required to reach 0.5 probabilities. Mortality from direct fire effects is not likely with fire conditions common to the tested species.

We are also examining fire seasonality and return interval effects on the plant community, nutrient cycling, and grass bud production. We look forward to sharing results of this work as well and as always, appreciate your input.

Editor's Note: This article was reprinted with permission of the author. It was originally published in the December 2012 issue of the *Fort Keogh Researcher* newsletter (see http://www.ars.usda.gov/SP2UserFiles/Place/54340000/December2012.pdf).



Turfgrass Update

By Zac Reicher, Department of Agronomy and Horticulture, UNL

Record drought and heat during the summer of 2012 took a toll on the cool-season turf across the northern Great Plains. Adding insult to injury was continuation of the drought into the fall, limiting seeding during the prime establishment period, and thus turf remained thin going into winter. However, a relatively snowy and mild winter limited damage from desiccation or direct cold temperature, so at least the turf damage did not worsen over the winter. Many cool-season turf areas will require some intervention early this spring to improve density and aesthetics.

As of writing this article in mid-March, consistent warming temperatures are not yet in the extended forecast, but it is still important to seed Kentucky bluegrass or tall fescue as soon as possible. Seeding from Thanksgiving through usually mid-March is considered dormant seeding because germination would not be expected for weeks to months when soil temperatures warm. The earliest references to dormant seeding in turf that I found was a 1923 version of the United States Golf Association's Green Section Record, though it was likely used much before that in agriculture. The benefit of dormant seeding is that the seed is in the ground, likely has absorbed water, and is ready to begin the germination process as soon as temperatures warm. Waiting to seed after temperatures warm up in spring may lead to delays due to wet soils, wind, busy schedules, etc., thus costing the seedlings valuable time to mature. Seeding coolseason grasses in the spring is hampered by weed competition from crabgrass and other weeds, increased water requirements because of shallow rooting, and poor tolerance of immature plants to summer's heat. Dormant seeding should maximize the time for seedlings to mature prior to summer stresses. The downsides of dormant seeding could include some seed loss from predation or erosion, or seedling death from extended warm periods in winter followed by cold temperatures. The latter becomes less of an issue as we move later into winter. We currently compensate potential seed loss of winter by increasing seeding rates by 10-20%; we are currently conducting research to try to understand potential changes in seed viability or seed loss during the winter.

Regardless of whether turf areas were dormant-seeded or yet to be seeded this spring, weed management is critical. All herbicides labeled for turf have restrictions for use over seedlings. However, minor herbicide injury to seedlings is quickly compensated by reduced weed pressure, so much of our recent research focuses on identifying herbicides that can be used safely and effectively over newly-seeded cool-season grasses. Recently released herbicides have increased the flexibility in weed control in new seedlings. A summary of our research results follows:

• Mesotrione (Tenacity®) is probably the most flexible product to use over cool-season seedlings and can be used in the seedbed as a preemergence (PRE) herbicide and as early as 28 days after emergence (DAE) according to the label. Our research indicates it could be applied earlier with little risk to seedlings and it will control crabgrass as well as many broadleaf weeds PRE and POST.

- Quinclorac (Drive® and many trade names) is labeled for use at 28 days after emergence (DAE), but our work shows it could also be applied earlier with little risk of damage. Do not use the methylated seed oil additive when using over seedlings. It will control crabgrass as well as many broadleaf weeds POST.
- Carfentrazone (QuickSilver®) is a contact broadleaf herbicide and has almost no restrictions on use over seedling turf. However, multiple applications will be required since it is a contact herbicide.
- Quinclorac+carfentrazone (SquareOne®). Can be used as early as 7 DAE and control crabgrass as well as many broadleaf weeds POST.
- Dithiopyr (Dimension® and others) (primarily preemergence plus early postemergence on annual grasses) is the safest of the typical PRE herbicides and can be used usually after the second mowing. This herbicide is often recommended after an application or two of quinclorac (Drive) or mesotrione (Tenacity) for long-term PRE control.
- Siduron (Tupersan®) is an older PRE herbicide that can be used in the seed bed to provide crabgrass control while allowing the cool-season grasses to germinate. Siduron has a short residual and therefore will require repeat applications about every 3 to 4 weeks for extended control; or one or two applications can be used shortly after seeding followed by traditional PRE's with better residual.

The drought has spurred tremendous interest in converting lawns to buffalograss. Our buffalograss breeder/geneticist Keenan Amundsen has been extremely busy spearheading the last details for releasing our newest seeded cultivar, "Sundancer," as well as collaborating on research to further refine establishment and management of buffalograss. One frequent complaint on buffalograss is its slow establishment. However, in side-by-side research plots seeded in spring, buffalograss that is maintained properly will establish almost as fast as tall fescue and faster than Kentucky bluegrass. We believe the complaint on slow establishment is usually a result of consumers perceiving buffalograss as a low maintenance grass that needs "little or no inputs." However, buffalograss requires similar irrigation, fertilization and mowing as Kentucky bluegrass or tall fescue during the first year of establishment to maximize cover, and only then can maintenance be dramatically reduced. We are also in the process of evaluating a number of new herbicides with apparent safety on seedling buffalograss. In the past, quinclorac was the standard herbicide, and though it is still effective, a number of new products like Tenacity (mesotrione), Dismiss® (sulfentrazone) Solitaire® (sulfentrazone+quinclorac), or Echelon® (sulfentrazone+prodiamine) can be applied at seeding with little risk of buffalograss injury. Different herbicide options should improve buffalograss establishment and thus reduce long-term inputs. Much more information on dormant seeding as well as establishing and maintaining buffalograss can be found at http://turf.unl.edu.

Many Good Speakers Lined Up for 2013 Nebraska Grazing Conference



The 13th annual Nebraska Grazing Conference will be held at the Kearney Holiday Inn on August 13-14. As always, there will be a mixture of university and agency speakers as well as those who manage grazing operations — from Nebraska and other states.

While the program was not finalized at press time, we can tell you that this year's topics and speakers include:

- Management practices of 2012 Leopold Conservation Award winner, Buell Family, Rose, NE
- Grazing plan historical and where they are now, Bob Price, daughter Lindsey Smith and their consultant Terry DeGroff, Burwell, NE
- Fitting grazing strategies to your environment, Nebraska producer panel: Doug Olson, Harrisburg; Jeff Pribbeno, Imperial; Dan Stelling, Pierce
- Semiarid range: how to make it work, Grady Grissom, Rancho Largo Cattle Co. LLC, Fowler, CO
- First talk on key indicators of ranch efficiencies and a second talk on resource management and monitoring, Burke Teichert, former Rex Ranch manager, Orem, UT
- Managing grassland for multiple uses: making the pieces fit, Jim Faulstich, Highmore, SD
- Grassland management aspect of Gracie Creek Ranch for grazing and ecotourism business, Sarah (Switzer) Sortum, Burwell, NE
- Managing three billion gallons of water, Lyle Perman, Lowry, SD
- Cows away from home: successfully grazing other people's stalks, TBA panel

The two-day pre-registration fee of \$80 (payable to 2013 Nebraska Grazing Conference) is due to the Center for Grassland Studies by August 1. The fee covers lunch both days, the evening banquet, break refreshments, and the conference proceedings. One-day registrations are also available. Registration fee will be waived for students who will still be in high school next year and who preregister by the August 1 deadline, compliments of the UNL College of Agricultural Sciences and Natural Resources. Reduced registration fees apply for other full-time students. Higher fees apply to registrations postmarked after August 1 and to walk-ins.

Participants of any of the previous Nebraska Grazing Conferences as well as all Nebraska extension educators will receive a brochure in the mail in June. Others may contact the CGS office to be placed on the mailing list. Information and the registration form will also be on the CGS web site (www.grassland.unl.edu).

The conference is a collaborative effort with many cosponsors. Contact the Center for Grassland Studies, one of the underwriting sponsors, with questions.

Innovations on the Land Symposium

The majority of the land in the United States is privately owned, so America's farmers, ranchers, and foresters are critical to the health of our natural resources. To exchange ideas about agriculture and conservation, Sand County Foundation, Nebraska Cattlemen, Nebraska Land Trust, and UNL Center for Grassland Studies will bring together dozens of Leopold Conservation Award-winning landowner conservationists for "Innovations on the Land: Private Conservation for the Public Good," July 25-26, 2013 in Lincoln, NE.

The symposium will convene leading farmers, ranchers and foresters to address private-public partnerships, conservation and economics, and other issues important to the agricultural community and the general public.

There are several goals for this gathering. First, it will provide an opportunity for Leopold Conservation Award recipients, other landowners, award partners and sponsors to educate, interact, and exchange ideas with award recipients from other states. Second, bringing Leopold Conservation Award recipients together to address challenges will help us all to identify innovative solutions and opportunities involved in private lands conservation. This interaction and subsequent conversations will foster a sense of community among the award recipients and generate ideas of how they, as a growing national group, could tackle important agricultural and environmental issues. Our third goal is to develop education and communications materials incorporating and crystallizing themes and discussions covered during the conference. This will allow participants to carry the information beyond the symposium to families across the nation who work the land.

The second day of the symposium is an optional half-day coach bus tour of the Rainwater Basin Wetland Complex. The Rainwater Basin lies at the narrowest portion of the migration route know as the Central Flyway. A 160-mile-wide region gathers up millions of migrating ducks, geese, shorebirds and other water birds that have wintered along the Gulf Coast, across Texas and Mexico, and farther south. The Rainwater Basin Joint Venture Partnership will host a special tour of the Rainwater Basin Wetland Complex to highlight the Working Lands Initiative. The initiative was established to support integration of cattle production back into the Rainwater Basin Region.

You can read more about the symposium and register online at www.innovationsontheland.com.



Nebraska Youth Range Camp in June

By Shelly Taylor, NYRC Director

Students age 14-18 with an interest in learning about the outdoors are encouraged to attend the Nebraska Youth Range Camp that will be held June 10-14, 2013 at the Nebraska State 4-H Camp in Halsey.

The Nebraska Youth Range Camp, which celebrates its 50th anniversary this year (see side bar), consists of a four-and-a-half day dynamic curriculum that appeals to students with a wide array of interests including, but not limited to, rangeland management, conservation, ecology, animal science, and wildlife. With 50 years to perfect and evolve this curriculum, every student, regardless of prior experience, will learn substantial information that will help them become more aware of Nebraska's most prevalent land use. Rangelands cover nearly 50% of Nebraska and approximately 60% of the United States. These numbers convey the dominance of this land use, but recently there have been several political issues regarding the management of these rangelands. This further emphasizes the reason it is important to educate the youth so we may enable them to become proficient and effective leaders in resource management as well as educated voters.



The students that attend Range Camp will be actively involved with field activities, lectures, hands-on experience, recreational leadership and teambuilding activities that are all led by up to 20 of Nebraska's most respected and dedicated leaders, teachers and professionals from various agencies, colleges and universities. Each student will be sent home with a binder that is filled with educational materials and a t-shirt.

Financial sponsorship is available! Every student that attended last year received a substantial level of sponsorship. Interested individuals can find more information, the Range Camp application, and the brochure by visiting the Nebraska Society for Range Management web site at www.nesrm. org and then clicking on the Nebraska Youth Range Camp link on the left of the page, or by sending an e-mail to shelly_ann7@hotmail.com. Applications need to be submitted by May 24th. Range Camp is an event that is made possible through the Nebraska Section of the Society for Range Management with assistance from several Nebraska ranches, the Nebraska Grazing Lands Coalition, the Sandhills Task Force, several of Nebraska's Natural Resource Districts, the Natural Resources Conservation Service, the University of Nebraska—Lincoln Extension Service, and many volunteers.

Nebraska Range Camp Turns 50 — Reunion in August

One of the longest running natural resource management camps in the country is celebrating its 50th anniversary this year. The anniversary will be celebrated with a Nebraska Range Camp Reunion on Saturday, August 24, 2013 at Halsey State 4-H Camp. The event will feature a tour, speakers from each decade of the camp, and an evening barbeque. Past crew bosses, speakers and campers are invited to join the celebration and submit their favorite range camp memories. For more information on the reunion, contact Mary Reece at mary.reece@ne.usda.gov. To share range camp memories, contact Nadine Bishop at nadine.bishop@ne.usda.gov.

The camp was created by a group of Nebraska ranchers working with the University of Nebraska and the Soil Conservation Service. The purpose of the camp is to provide training to young people in practical range management, create an awareness of Nebraska's greatest natural resource, develop an appreciation of range and livestock management, and encourage and develop future leadership in the field of range and natural resource management. The camp provides a balance of educational and recreational activities for the participants.

The camp, which started in 1963 under the leadership of Dr. John F. Vallentine, has been held every year at the State 4-H Camp in Halsey, except 1968 when it was held at the Nebraska College of Technical Agriculture in Curtis and in 1969 when it was not held. Attendance at the camp has ranged from 27 the first year to more than 60 participants.

A number of Natural Resource Districts, FFA Chapters, banks and private individuals support the camp by providing scholarships to youth attending the camp. Several Nebraska ranches have also sponsored the camp with donations and the use of their brands. Eight to 12 range professionals volunteer their time to serve as group leaders/educators (crew bosses) for the week-long camp. An additional 10 to 12 range, livestock, and natural resource specialists present on a wide variety of educational topics.

Over the years, the curriculum for the camp has changed, but the primary objectives remain the same. Today, the focus is range management, but conservation, ecology, animal science, and wildlife are also important components of the week-long camp.



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CGS Associates

Roch Gaussoin, who became the permanent Head of the UNL Department of Agronomy and Horticulture last year, received two distinguished service awards in early 2013. At the Nebraska Turf Conference in January, he was presented with the Nebraska Turfgrass Association's Distinguished Award for his tireless work helping to improve the turf industry of Nebraska and the country over the last 20 years. The next month, at the Golf Industry Show & Education Conferences in San Diego, he was one of four people to receive the 2013 Golf Course Superintendents Association of America Col. John Morley Distinguished Service Award. The award recognizes individuals who have made an outstanding, substantive, and enduring contribution to the advancement of the golf course superintendent profession.

Plant geneticist **Ken Vogel** earned a place in the Agricultural Research Service (ARS) Science Hall of Fame for discoveries that enhance perennial grass breeding and bioenergy production systems. As an example, his innovative and strategic research led to the development of switchgrass, a previously obscure prairie grass, as a bioenergy crop. He developed two switchgrass cultivars, Trailblazer and Shawnee, which are the most widely used of this species in the Great Plains and Midwest.

Dayle Williamson, a member of the CGS Policy Advisory Committee since its formation in 1995, was named the recipient of the 2012 Maurice Kremer Groundwater Achievement Award. He had a long career in conservation-related positions with state government, including reorganizing and then serving as director of the Nebraska Natural Resources Commission for 30 years. After that, he continued to be involved in agricultural and conservation issues, most recently as a member of Senator Ben Nelson's staff until Nelson retired early this year.

Resources

Water and Land Issues Associated with Animal Agriculture: A U.S. Perspective. This CAST (Council for Agricultural Science and Technology) Issue Paper 50 was released on the CAST web site late summer 2012. The authors consider issues of water use and water quality associated with the livestock sector and the related environmental and economic impacts. The paper also includes a discussion of livestock land use, land degradation, land application of manure and manure-based composts, and deforestation related to farm policies. Additionally, the authors discuss how to reduce the environmental impact of livestock agriculture while preserving resources and quality of life. Online at http://www. castscience.org/media/cms/CAST_summary_of_ activities 3Q2012 0B689F891022C.pdf.

"Conservation Jam: Saving the Plains" was an hour-long event held on Feb. 1, 2013 and hosted by The Nature Conservancy and the University of Nebraska Center for Great Plains Studies. Several conservation leaders from around the state were each given the podium for three minutes to discuss what they believe needs to be done to save the Great Plains. Video of the event is at https://connect.unl.edu/p40mgnfvie8/.