

Grazing Cover Crops throughout Nebraska

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The Nebraska Grazing Lands Coalition (NGLC) received a grant through the Nebraska Environmental Trust (NET) to evaluate the efficacy and demonstrate the practical use of grazing cattle on cover crops and annual forages within integrated crop and livestock systems. The NGLC along with the collaborations with producers and the University of Nebraska-Lincoln (UNL) began this 3-year project in 2016. Eight private landowners throughout Nebraska were selected to implement or enhance cover crop use within their own operations with the agreement that data collection would occur throughout the duration of the project.

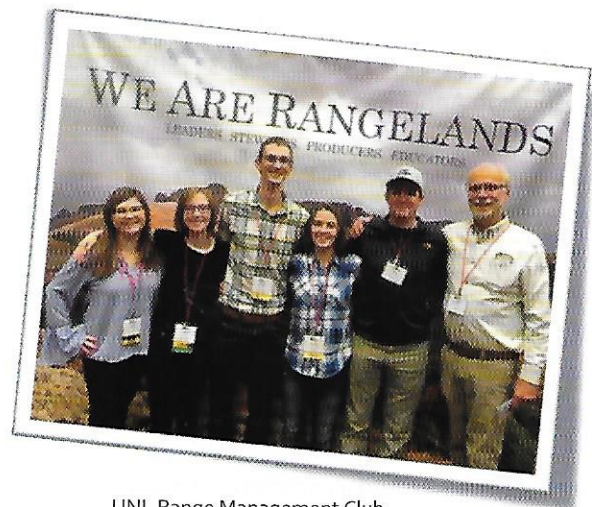
The NGLC is a nonprofit organization made up of ranchers and private landowners throughout the state who realize the importance of healthy and sustainable grazinglands in Nebraska. This group puts education and learning at the forefront of their agenda and, with the rise in interest among livestock producers on the use of annual forages, the NGLC developed a proposal that would help producers better understand the use of this practice through on-ranch demonstration and research. The overall goal of the project is to document the use of annual forages on different

ranches from the cost of the seed, to the amount and kind of forage produced in different mixes, to the actual number of animal grazing days that the producer was able to use. With this information, producers can make more informed decisions on what annual forages may work best in their operation. In addition to the above ground biomass, soil tests are also being collected to provide the producers with an understanding of their soil organic matter, nitrogen, and other factors of soil health.

Grazing is a potential way to get an economic return from a cover crop while still gaining benefits of ground cover. Some species that the collaborating producers have been using in their mixes include sorghum, grazing corn, purple top turnip, nitro radish, cowpeas, and more. Grasses have provided the bulk of the biomass production in the mixes used by the producers, but brassicas, legumes, and other species may help provide other ecosystem services. The wide variety of cover crops allow producers to choose mixtures that will benefit their operation dependent upon their needs and management objectives. (Continued on Page 7)

Range Management Club Attends Annual SRM Meeting

The University of Nebraska-Lincoln's Range Management Club attended the 2018 Annual Meeting of the Society for Range Management in Reno, NV from January 27 to February 2. Club members participated in a number of events and competitions including the Undergraduate Range Management Exam. The team (**Ethan Freese, Cecile Renfro, Evan Laible, Autumn Dunn, and Asha Scheideler**) finished in sixth place out of 25 teams from universities through central and western North America. Cecile Renfro placed 8th and Ethan Freese placed 12th out of 200 students. The students also participated in the Range Plant Identification and Extemporaneous Speaking competitions. Ethan Freese presented on his grassland ecology research in the Undergraduate Paper Session. The club is advised by **Dr. Walt Schacht**, Professor, Department of Agronomy and Horticulture.



UNL Range Management Club

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For example, one producer near Upland, Nebraska utilized the mixture outlined in Table 1 in a rotation between irrigated wheat and soybeans with the objective of feeding cattle in the early fall. The producer also wanted to include other species to increase diversity and potentially provide some nitrogen fixing with 2 legumes. This mix was planted July 20th of 2016 with no additional application of fertilizer following the wheat crop. A mixture of weaned calves and 1st calf heifers totaling 140 animals grazed for 121 days from November 1st to March 1st resulting in 16,940 animal grazing days.

Figure 1 shows the production data by group for the seed mix in Table 1. As we can see the grasses were the main producers of biomass followed by other (e.g., sunflower, buckwheat, etc.) and then the legumes. Data regarding forage quality is being evaluated at each site as well and this data will provide additional information on the value of these different mixes.

The project is also working towards learning from the wealth of knowledge that the collaborating producers have in managing their crop and livestock systems. Understanding the motives of why producers are using these crops and incorporating their combined experiences will provide a much more robust outcome to the project and provide real world examples of the management. Some of the questions we are asking the producers include: why did you decide to use cover crops, what seedbed preparation method was used and why, and how did you choose to graze. The NGLC along with the producers utilize all this information to educate the public and other producers who take part in the field days at each site. In 2017, field days and demonstrations with the cooperating producer ranches were attended by over 250 learners. Moving forward we can use what we have learned from this project to help new producers implement cover crops on their operations and enhance the efficacy of current uses.

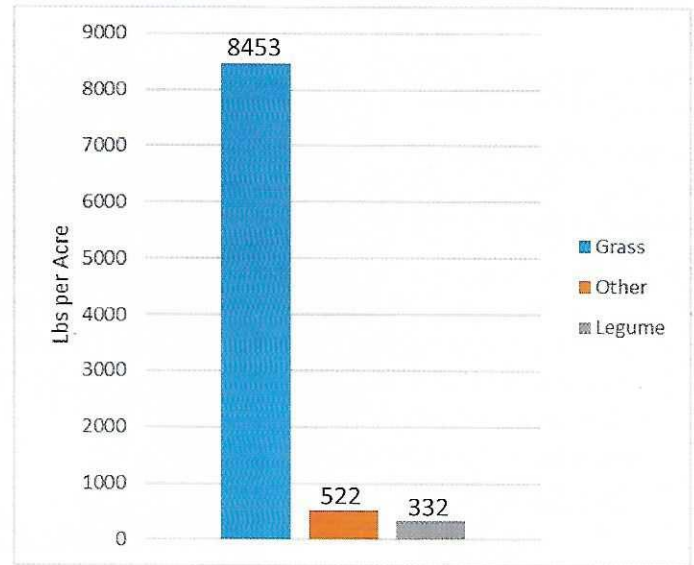


Figure 1: Production data for Upland, Nebraska site.

Forage	Rate (lbs/acre)	Cost (per acre)
<u>Grasses</u>		
Dwarf BMR brachytic sorghum	3	\$3.75
Grazing Corn: BMR84	5	\$2.25
Spring Oat Rockford	20	\$4.60
Sub-total	28	\$10.60
<u>Brassicacae</u>		
None		
Sub-total	0	\$0.00
<u>Other</u>		
Sunflower: Black Oil Seed	1	\$0.50
Okra: Emerald	0.5	\$0.75
Squash: Lebanese	0.5	\$1.50
Buckwheat: Mancan	2	\$1.30
Sub-total	4	\$4.05
<u>Legume</u>		
Sunn Hemp: VNS	2	\$3.60
Cowpeas: Iron & Clay	5	\$4.25
Sub-total	7	\$7.85
<u>Mixing, Bagging, Etc</u>		
Micro Noc	2	\$1.60
Sub-total		\$1.60
Total	39.0	\$24.10

Table 1: Seed mixture for Upland, Nebraska site.