

The Buell Family



A Sand Hill Legacy

Taking Root in the Sandhills

When most people think of Benjamin Franklin, they think of one of the founding fathers of the United States. But there was another Benjamin Franklin who also had a large impact on our society today: Benjamin Franklin Buell, the founding father of a ranching tradition grounded in the ecological ideal of conservation and amelioration of natural resources.

Benjamin Franklin Buell, a cigar maker and schoolteacher from Michigan, was just 21 years old when, on his way to Washington State, he traveled through Nebraska and became enamored with the Sandhills. After working for a short time as a timekeeper and bookkeeper in a Washington lumberyard, the vastness and beauty of the rolling hills in the nation's midsection pulled him back to Nebraska. In 1882 he settled in the Duff community south of Long Pine. One year later he filed a claim, and the ranching heritage of the Buell family began.

Benjamin was known as a keen businessman, and he and his wife, Harriet, envisioned the development of the cattle industry in Nebraska. However, Benjamin's vision went beyond the business aspects of the cattle industry; he strove to preserve the unique landscape of the Nebraska Sandhills.

Succeeding Generations: Continuing What Benjamin Began

Benjamin and Harriet's son, Homer, and Homer's son, Barney, continued what Benjamin began. During their lifetimes, Homer and Barney not only made the name *Buell* synonymous with high-quality cattle, but also used the technology and ideas that were available to them to raise such cattle in an environmentally friendly way. They both were avid fisherman and hunters with a love of the Sandhills, its landscape, and its wildlife; thus, their ranching practices aimed to utilize the land for their business with an ecological perspective. One of Benjamin's specific goals was the development of a recreation area with a fishpond close to the Calamus River; although this was never achieved in Benjamin's lifetime, it did come to fruition in the 1940s under Homer's direction. The "lakes" with their abundant wildlife are still a centerpiece of the Buell ranch today.

Barney and his wife, Susan, had three sons (Roger, Larry, and Homer) and one daughter (Jan), all of whom returned to the ranch, after college, with their spouses in the late 1960s and early 1970s. Jan and her husband, Don, later left the ranch to pursue other careers. Roger was killed when struck by lightning in the late 1970s, and his wife, Sue, remarried and left the ranch as well. Larry and his wife, Nickie, and Homer and his wife, Darla, remain on the ranch today, and they

and their families have continued to promote an environment in which the region's natural plant and animal life can flourish along with cattle and crop production.

A Primer on the Sandhills

To understand the extent and ramifications of the Buells' environmental practices, it is necessary to know a little bit about the Nebraska Sandhills. Geologists aren't certain how the Sandhills formed. Some believe they were molded during the last Ice Age; others think that strong northerly winds created the dunes but suggest that they were formed during a desert period. Either way, they probably formed 25,000 to 60,000 years ago. They make up nearly one-quarter of the state of Nebraska, encompassing 20,000 square miles of tallgrass prairie and boasting an abundance of underground water. The beauty of this ecosystem is undeniable; its fragility is equally undeniable. The Buell ranch has always been managed in a way that, while profitable, ensures the long-term sustainability of its natural resources.

Range Management: Monitoring by the Numbers

Perhaps nothing is more important to continued ecological health than monitoring practices and then making necessary changes.

In the early years of the Buell ranch, monitoring was accomplished visually; assessments were made to promote the philosophy of harvesting forages in a way that promoted long-term sustainability, and then adjustments were made accordingly. In those early years, no records were kept.

Monitoring practices became more exact and effective with the introduction of record keeping several decades ago. In the 1980s, the Buell family instituted, with guidance from U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) representatives, picture sites and began recording usage on an animal unit months (AUM) basis.

Range management practices also improved greatly in the 1980s when family members attended Holistic Resource Management (HRM) schools, worked with a grazing consultant named Willie Joe Holmes, who had been involved with NRCS for many years but had retired, and joined the Society for Range Management—all of which increased the Buell family's knowledge and understanding of forage management and monitoring. In that same period, the Buells founded a ranch management club, which stayed in existence for many years. The club, which usually consisted of eight to ten members that lived within a one-hundred-mile radius,

met four times a year, and a different member was in charge of meeting content each time. Quite often, such content centered on managing the land to maintain sustainable production combined with long-term profitability.

Through those years, the Buell ranch incorporated many fine advancements in forage production; but in the early 1990s, the family made a change that turned out to have a long-term positive effect on its operation: incorporation of a computer-based information-gathering system. At the time, the Buells were looking for a better way to determine what effect they were having on the land with their grazing practices. With the help of Dr. Terry DeGroff, a veterinarian and management information systems expert, the Buells began using a DOS computer program developed at Texas A&M University called Grazing Manager to orchestrate grazing plans. Information on pasture sizes, carrying capacity using demand days, forage growth curves, rainfall, etc., was entered; then, data about the various cattle groups such as numbers, weight, stage of lactation, etc., were entered as well. From this information, a grazing plan was developed. During the first three years, noted Homer Buell, “we adjusted the pasture input numbers, carrying capacity, and growth curves to the point that we felt we then had those critical inputs correct. Since then, we have not changed that information, knowing that changes in grass that could be harvested, either up or down, were due to our forage harvesting techniques. This was and is a good way to monitor what effect our grazing management strategies are having.”

Grazing Manager later became a Windows-based program, which was more user friendly. About six years ago, a company in Iowa stepped in. The company had received a grant from USDA and was looking for a program to promote to landowners to use in drought management. The company picked Grazing Manager along with some others to examine closely, and then it brought in several developers to explain and demonstrate the capabilities of their software. In the end, the company chose Grazing Manager to develop further. At that time, the Buell family was one of the few major users of the software in the United States, so the Buells were invited to meet with company representatives first in Rapid City, SD, and later in Omaha, NE, to give input on necessary additions and improvements. Through this collaboration, Grazing Manager became an even better tool to help the Buell ranch reach its goals.

In the last few years, the Buell family added to its monitoring system when it began to work with NRCS in its Conservation Stewardship Program. One part of this program focuses on monitoring. The Buells set up picture points in pastures to monitor plant composition along with plant height, density, etc., over time in order to measure the effect of grazing practices.

Grazing Control: Optimal Pasture Management

Water

Water is, naturally, a critical part of any cattle program as well as any conservation program, and the Buells have not neglected this significant element.

In the 1970s, the Buells began to add windmills in order to better distribute grazing and to run larger herds. Placing windmills in appropriate areas drew the cattle to parts of pastures they had been underutilizing and kept them away from the overgrazed areas. Running larger herds ensured more even grazing of pastures, and therefore, improved plant health.

In the 1980s, the Buells began to add pipelines for many of the same reasons that they had added the windmills. Although they contemplated solar power, after comparing costs and available technology, they decided to go with electric power. After completion of the entire pipeline system in 2009, the Buell ranch included over 50 miles of pipeline watering close to 100 pastures, with an average pasture size of approximately 300 acres.

The present water system allows flexibility in running the number of cattle deemed appropriate for a certain pasture grouping. Combined with timed movements and better cattle distribution, this gives the pastures more rest between grazing periods and thus better recovery, better ground cover, and increased production.

Cross-Fencing

When Larry and Homer returned to the ranch after college, one of their first changes was dividing pastures into smaller sizes. Some of the bigger pastures were two sections, and even with good water distribution or salt bunk placement, it was hard to get the cattle to graze evenly throughout, especially in the sections with rougher hills. One factor in cross-fencing was, of course, cost for the fencing relative to the cost of the land. The first division fences were made of barbed wire, but in later years the Buells replaced those with two-wire (in a few cases, one-wire) high-tensile electric fence wire. The cross-fencing plan was greatly improved by the installation of the water pipeline.

Wildlife Habitats: Encouraging Native Species

Buell Lakes

The family members' love of the natural beauty of the Sandhills and the native plant and animal life that contribute to this landscape is reflected in the lakes, mentioned earlier as the centerpiece of the Buell ranch. The lakes were established in the 1940s under the direction of Benjamin Franklin's son, Homer. Where the river was winding in an oxbow shape he straightened it, leaving three small lakes to one side. The lakes combined covered about 20 to 25 acres.

The lakes were originally stocked, with the help of the Nebraska Game and Parks Commission, with bass, bluegill and crappie. In the 1950s, 1960s and 1970s, one of the lakes was stocked solely with trout. In those years, the lakes were designated fish hatcheries, and many neighbors came and gathered fish for their farm ponds. In the 1960s, two of the lakes were joined together to better provide for boating activities, swimming and family fun. In the early 2000s, the Buells invested over \$25,000 to clear out some of the silting and for some general renovation.

In order to provide a sanctuary for bird and animal life, about 50 acres is fenced off around the lakes, and no hunting is allowed within that border. Deer, turkey, swans, ducks and geese by the thousands can be viewed in a single crisp winter day.

Creeks

In addition to the lakes and the Calamus River, two natural creeks—Bloody Creek and Skull Creek—meander through the prairie on the Buell ranch. Abundant vegetation along these water bodies, as well as across the gently flowing nearby hills, provides homes for the native animal species of the Sandhills. In some areas of the ranch, hay is not harvested right next to the creeks to leave wildlife cover. In other areas, grazing is managed so cattle are around the creeks for only a couple of weeks in a year, leaving ample cover there as well.

Species Rejuvenation

Beginning in the late 1990s, the Buells noticed what they considered to be an alarming trend: a shrinking pheasant population on the south end of the ranch. The Buells suspected the reason for this was the fact that there was less farming in that area. To ensure a rich habitat for the pheasants and other birds and animals, the Buells entered into an agreement with the Sandhills

Task Force and the Nebraska Game and Parks Commission (NGPC) to fence off a mile of river, allowing cattle access to this area only every other year in late summer—and only allowing light usage. The cost was shared equally among the three entities involved. The Buells have since turned some pheasants loose and have seen a slight population increase.

The Buells also worked with the NGPC to establish more geese and otters in the area, allowing the Commission to release those species along the Calamus River and close to or on the Buell Lakes. The geese were released about three years in a row in the late 1970s. The geese have come back to nest each year, and to this day goslings can be seen swimming on the lake in the spring. In the fall and winter they are there by the thousands.

In the late 1980s, again working with the NGPC, a camp site was established along the Calamus River for people canoeing. This gave others a chance to stop and enjoy what the Sandhills have to offer.

Miscellaneous Wildlife-Friendly Practices

In many other ways, the Buells also encourage the maintenance and rejuvenation of wildlife. As part of the NRCS Conservation Stewardship Program, mentioned earlier, the Buells engage in wildlife-friendly practices such as the way hay is harvested. Meadows are cut in a back-and-forth pattern, forcing wildlife to the sides where the grass is not harvested. Pastures are kept idle for the first third of the growing season. Staying out of many pastures for much of the growing season allows young birds time to grow so they will not be bothered by the cattle. Bridges have been constructed for cattle water tanks to allow small animals like turtles to exit the tanks. Through the years trees have been strategically planted, then fenced around, to provide windbreaks for cattle during harsh winters. These trees are good habitat for both turkeys and deer.

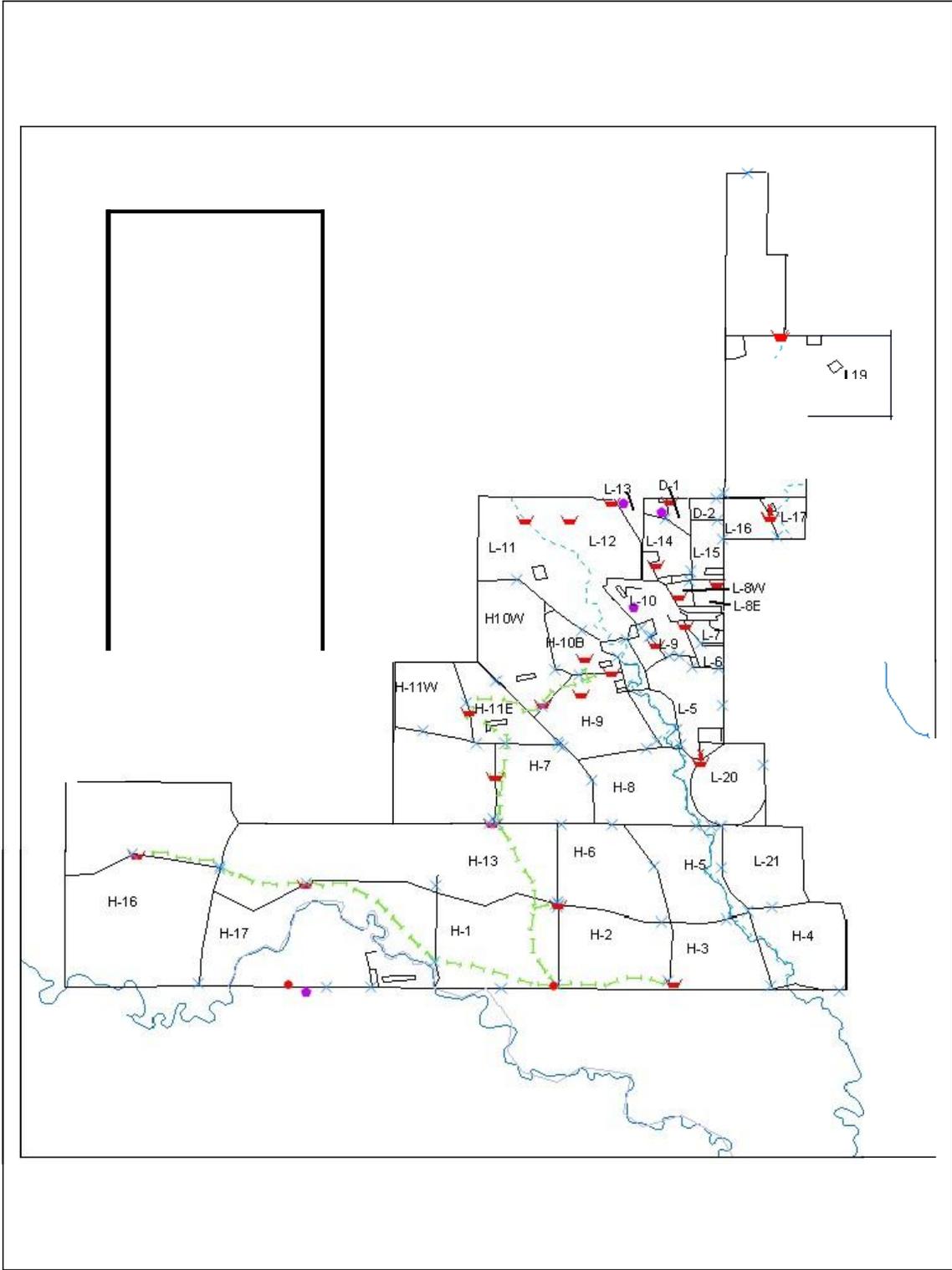
Education—of Others

The Buell family believes that education never stops—it's a lifelong pursuit. "One of the ways we learn is from other ranchers, so we've always thought it was important to share how we do things," said Homer Buell. Hosting tours for people from Nebraska and surrounding states and as far away as France, Australia and Russia has been one way of doing this. Speaking at field days, to UNL classes, at grazing conferences and at cattlemen's colleges, and being part of mentoring programs, are other ways that the family has tried to pass along what it has learned. Educating others about the importance and benefits of a land ethic will, the Buell family hopes, translate into more families adopting an ecological viewpoint toward ranching.

For the Love of the Land

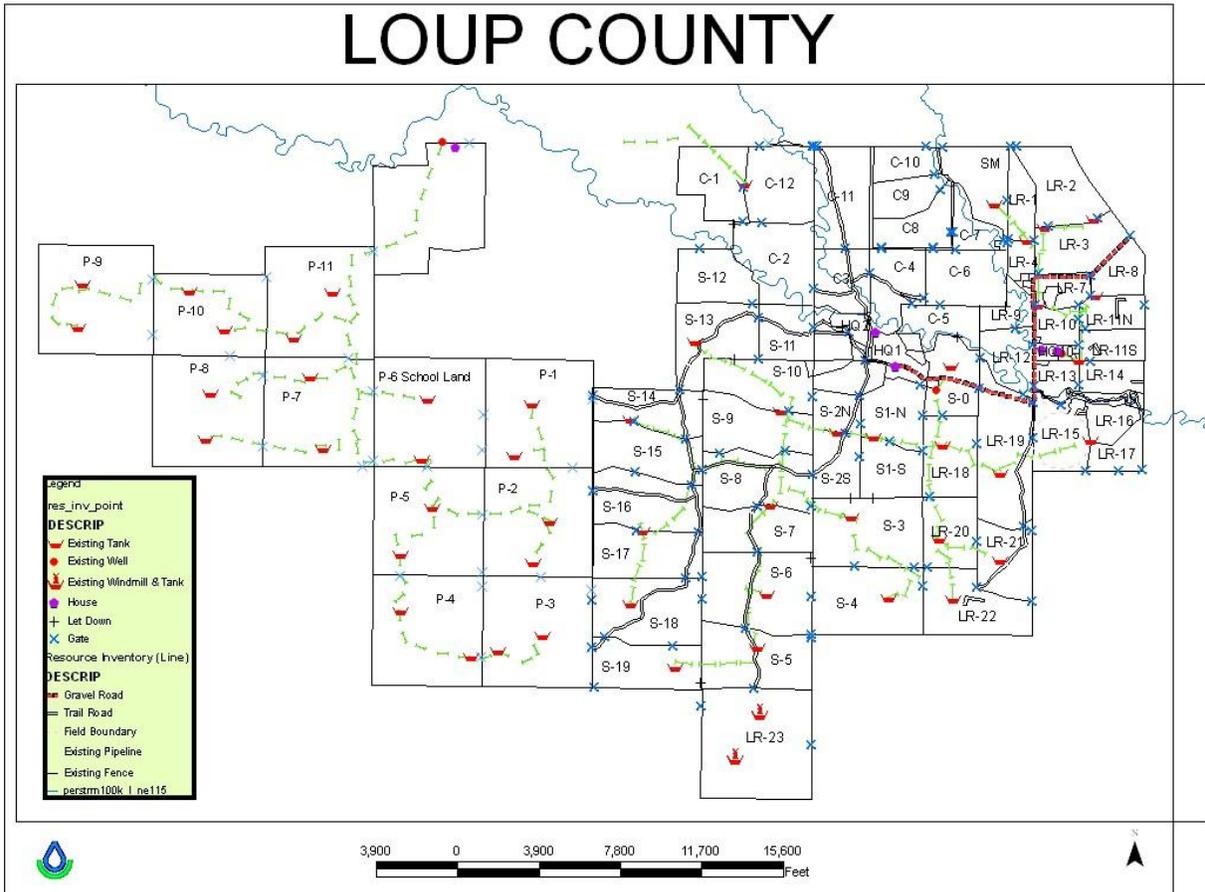
The Buell family now has its fifth generation working the land on a profitable cattle ranch that, consistent with the vision of Aldo Leopold, never loses sight of the land ethic.

“It is often said that if you take care of the land, it will take care of you; and all of us that derive our livelihood from the land understand this very well,” said Homer Buell. “One of the goals of each generation of Buells has been to pass along a heritage that runs deep with love for the Nebraska Sandhills, its gently rolling tallgrass prairies, and its landscape bubbling with life. For 128 years that has happened, and we hope that it will continue for a long time to come.”



Rock County Land

LOUP COUNTY



These maps show the layout of pastures, with present water systems, trails, gates, and homes.



Through grazing practices, we have been able to save this blowout from further erosion. The top picture was taken in 1990, and below is the same blowout in 2011.





Here is another example of how the grazing practices used have helped restore vegetation to the pasture.

The top picture is from 1992 and the bottom is the same pasture as seen today.





From 1990 to 2011 there has been a great increase in vegetation in this pasture due to rotational grazing practices.



The following pictures were taken in September 2011. They will be used to monitor pastures for the CSP program.





The Buell Lakes were originally created for recreational fishing. Over the years they have provided a wonderful place for recreational activities for family as well as habitats for numerous wildlife.





Each winter thousands of geese come to the Buell Lakes to winter. Ducks, swans and other water fowl have been known to visit the lakes as well.





Areas along the river have been fenced out for the purposes of rebuilding the pheasant population. This also provides habitat for numerous other wildlife.





The campsite along the Calamus River for people canoeing.





Grass left along creek for wildlife.

Shovel Dot Ranch

Grazing Schedule By Herd

TGM Printout

Simulation Year 2011

Herd	Pasture	<u>Date In</u>	<u>Date Out</u>	<u>Days Grazed</u>
LR North				
	LR-7	05/08/2011	05/11/2011	4
	LR-10	05/12/2011	05/30/2011	19
	LR-11	05/31/2011	06/06/2011	7
	LR-8	06/07/2011	06/12/2011	6
	LR-3	06/13/2011	07/04/2011	22
	LR-2	07/05/2011	07/28/2011	24
	LR-7	07/29/2011	08/08/2011	11
	LR-11	08/09/2011	08/24/2011	16
	LR-8	08/25/2011	09/13/2011	20
	LR-3	09/10/2011	09/26/2011	17
	C-3	09/27/2011	10/12/2011	16
	C-11	10/13/2011	11/03/2011	22
LR North				184.00
LRSouth				
	S-2N	05/04/2011	05/07/2011	4
	S-2S	05/09/2011	05/12/2011	4
	S-3	05/13/2011	05/20/2011	8
	S-1S	05/21/2011	05/24/2011	4
	LR-18	05/25/2011	05/30/2011	6
	LR-19	05/31/2011	06/13/2011	14
	S-0	06/14/2011	06/21/2011	8
	S-1N	06/22/2011	07/06/2011	15
	S-1S	07/07/2011	07/07/2011	1
	S-3	07/08/2011	07/21/2011	14
	S-2S	07/22/2011	07/26/2011	5
	LR-18	07/27/2011	08/07/2011	12
	LR-21	08/08/2011	08/18/2011	11
	LR-22	08/19/2011	09/05/2011	18
	LR-21	09/06/2011	09/07/2011	2
	LR-19	09/08/2011	09/30/2011	23
	LR-3	10/01/2011	10/01/2011	1
	LR-1	10/02/2011	10/02/2011	1
LRSouth				151.00
South Cell				
	S-11	05/10/2011	05/11/2011	2
	S-13	05/12/2011	05/17/2011	6
	S-14	05/18/2011	05/23/2011	6
	S-9	05/24/2011	05/30/2011	7
	S-10	05/31/2011	06/10/2011	11
	S-11	06/11/2011	06/19/2011	9
	S-12	06/20/2011	07/04/2011	15
	S-13	07/05/2011	07/20/2011	16
	S-11	07/21/2011	07/21/2011	1
	S-13	07/22/2011	07/25/2011	4
	S-14	07/26/2011	08/12/2011	18

Shovel Dot Ranch

Grazing Schedule By Pasture

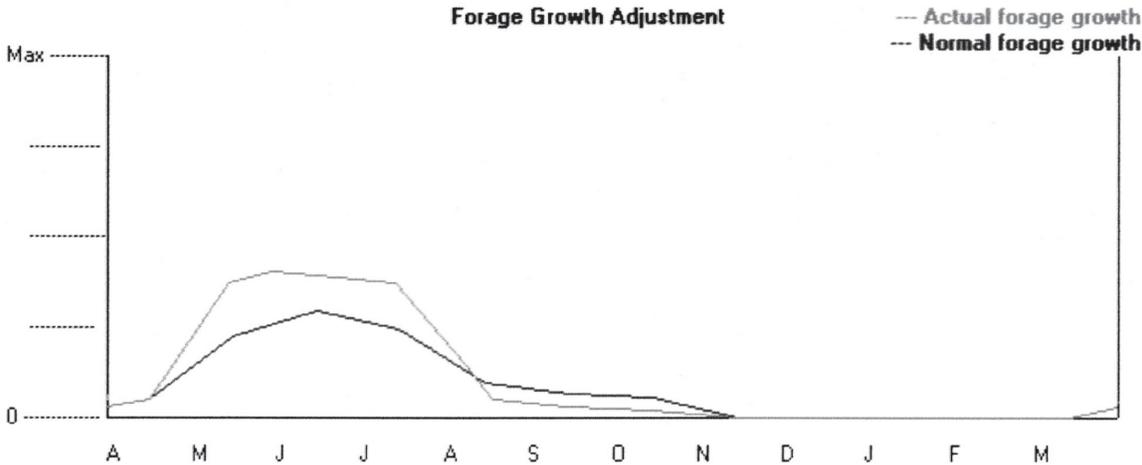
TGM Printout

Simulation Year 2011

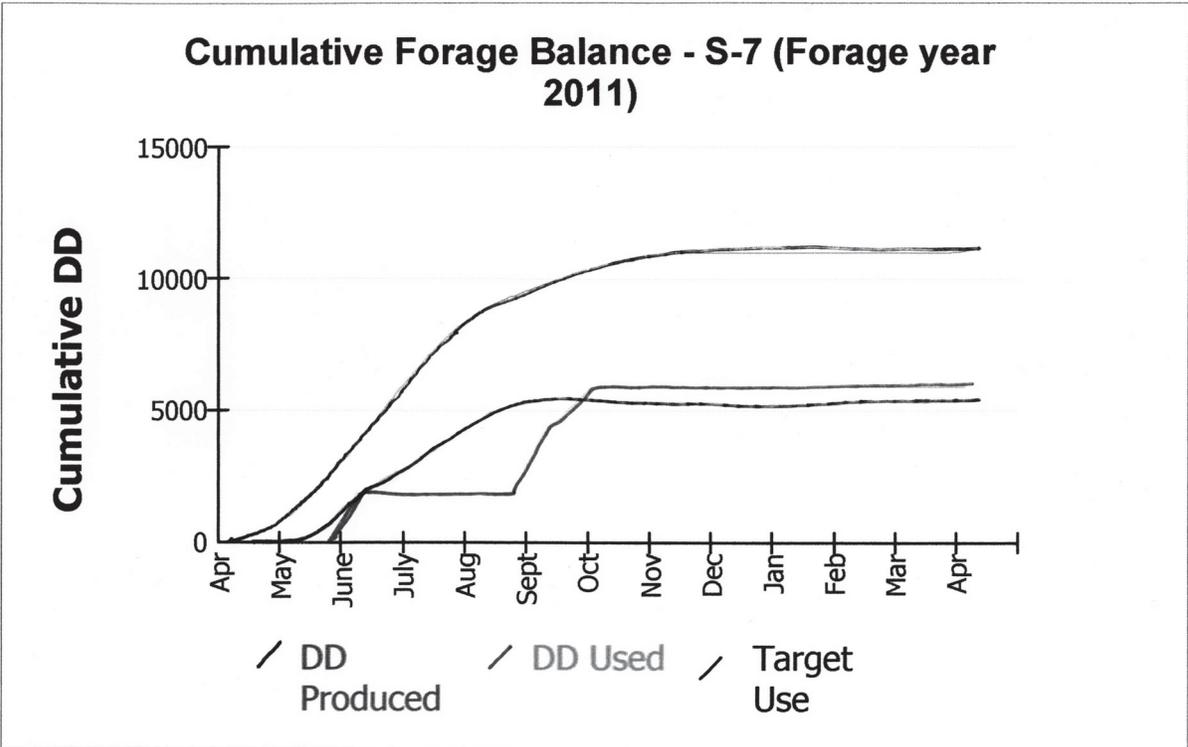
Pasture	Herd	Date In	<u>Date Out</u>	<u>Days Grazed</u>
<u>BLots</u>				
	Steers, light 1	07/06/2011	07/06/2011	1
	Weaned Cows 2	10/10/2011	10/14/2011	5
<u>C-1</u>				
	cabin Cell	05/04/2011	05/09/2011	6
	Cabin Cell	09/26/2011	09/26/2011	1
	Weaned Cows 2	10/15/2011	10/25/2011	11
<u>C-10</u>				
	Bulls	05/06/2011	05/15/2011	10
	Bulls	09/26/2011	11/08/2011	44
	Bred Cows 1	12/13/2011	12/16/2011	4
<u>C-11</u>				
	cabin Cell	05/20/2011	05/30/2011	11
	LR North	10/13/2011	11/03/2011	22
	Weaned Cows 2	11/08/2011	11/13/2011	6
<u>C-12</u>				
	cabin Cell	05/10/2011	05/19/2011	10
	cabin Cell	09/27/2011	09/28/2011	2
	Weaned Cows 2	10/26/2011	11/07/2011	13
<u>C-2</u>				
	cabin Cell	08/29/2011	09/25/2011	28
<u>C-3</u>				
	cabin Cell	05/31/2011	06/11/2011	12
	LR North	09/27/2011	10/12/2011	16
<u>C-4</u>				
	cabin Cell	06/12/2011	06/20/2011	9
	Weaned Cows 2	11/14/2011	11/18/2011	5
	Bred Cows 1	11/21/2011	11/22/2011	2
<u>C-S</u>				
	cabin Cell	08/14/2011	08/28/2011	15
<u>C-6</u>				
	cabin Cell	06/21/2011	07/06/2011	16
	cabin Cell	07/18/2011	07/18/2011	1
	Bred Cows 1	11/23/2011	11/27/2011	5
	Bred Cows 1	12/17/2011	12/18/2011	2
<u>C-7</u>				
	cabin Cell	07/07/2011	07/17/2011	11
	Weaned Cows 1	10/29/2011	11/06/2011	9
	breeding heifers	10/29/2011	11/06/2011	9

Forage Growth Adjustment

Select forage growth rate curve Upland Pastures



TGM allows you to make adjustments for rainfall amounts to better predict forage growth.



This graph can be used during planning to show predicted production and planned usage for a single pasture. After grazing occurs we change it to show actual usage.

Editor's Note: The Sand County Foundation, which administers the **Leopold Conservation Award** in several states, solicits nominations for the award. People can nominate themselves or others. The criteria, nomination process and deadlines can be found at <http://leopoldconservationaward.org/>. As you can see from the below summary of the nomination process, it is relatively simple. The deadline for nominations for the Nebraska award is March 1 of each year. The award is announced in late April.

Criteria

Landowners are key producers of conservation. Private citizens who have responsibility for land possess the capacity, the aptitude, and the desire to improve natural habitats. We believe that giving the people closest to the land improved tools to heal and better manage working ecosystems will result in the most durable conservation results. The Leopold Conservation Award Review Panel will be evaluating properties based on responsible and sustainable land management, economics, innovation, overall land health, and community outreach and leadership.

Applications

Please answer each of the following questions, based on the criteria of the award. Each answer must be limited to 1,000 words.

1. **Responsible Management:** Describe the applicant's approach to land and resource management and how it may have changed over the years.
2. **Sustainable Revenues:** Describe how the applicant is generating additional revenue or lowering production costs in ways that help achieve long-term sustainability and conservation outcomes.
3. **Leadership:** Describe any significant achievements the applicant has made within the agricultural community in Nebraska.
4. **Overall Land Health:** Describe specific conservation efforts that contributed to improved land health.
5. **Innovation:** Describe any innovative techniques that the applicant has used to improve natural resources on their land.
6. **Outreach:** Describe any efforts where the applicant has shared their management techniques with others inside and outside of agriculture (examples: research, educational and media tours, et cetera).
7. Describe any other factors the review panel should take into consideration.
8. Provide at least three letters of recommendation.

With your application, we encourage you to include supporting materials such as news articles, photos, maps, or any resources that would assist the panel in reviewing your application.