



NE-ECS-528 - GCRP - GRASSLAND CRP

JULY, 2016

FIELD OFFICE: ANYTOWN COUNTY: ANY COUNTY NRD: ANY NRD
CLIENT: ROBERT GREENJEANS DATE: 7/15/2016

Farm/Tract(s) F-1010, T-234

Legal Description: ALL SECTION 35 T-2-N R-35-W

Management Objectives: To incorporate this section of seeded grass into grazing operation. To increase the production of the amount of native warm season grasses by improving the health and reproduction of those grasses.

Design Information: **Natural Resources Conservation Service (NRCS) Representative or Technical Service Provider (TSP):**

Inventory by: _____ Date: _____
Designed by: _____ Date: _____
Approved by: _____ Date: _____

I have received a copy of the specifications for prescribed grazing and understand the contents and requirements.

Signature of Producer: _____ Date: _____

Practice Certification:

This applied practice meets Nebraska NRCS standards and specifications:

Signature: _____ Date: _____

Representing: _____

This practice has been applied as designed:

Signature of Producer: _____ Date: _____

Required if financial assistance is being provided for Prescribed Grazing

**NE-ECS-528-GCRP - GRASSLAND CRP -
FORAGE INVENTORY SUMMARY**

JULY, 2016

CLIENT:				ROBERT GREENJEANS					DATE:		7/15/2016		
Number	Total Pasture Acres	MLRA	ECOLOGICAL SITE	Plant Community (as listed in ESD) or dominant seeded grasses See Data Tab or Use Clipping Data	Est. lbs. Production / acre	Planned Degree of Use	Planned Harvest Efficiency	Ac. plant community / site Combination	AUM/ac	AUM for Site	Adj. Factor*	Adjusted AUM for Site	AUM for pasture
1	320	MLRA 72	Loamy Upland 72	Smooth Bromegrass	1500	50%	25%	47	0.41	19.3	0.75	14.5	
		MLRA 72	Loamy Upland 72	Big & Little Bluestem/Switch/Indian	2500	50%	25%	108	0.69	74.0	0.75	55.5	
		MLRA 72	Limy Upland 72	Little Bluestem / Sideoats Grama	1650	50%	25%	125	0.45	56.5	1.00	56.5	
		MLRA 72	Closed Upland Depression 72	Annual Forbs & Sedges	1000	50%	25%	25	0.27	6.9	1.00	6.9	133.4
2	320	MLRA 72	Loamy Upland 72	Intermediate Wheatgrass	1300	60%	30%	205	0.43	87.7	0.80	70.1	
		MLRA 72	Limy Upland 72		130	60%	30%	90	0.04	3.8	1.00	3.8	74.0
TOTAL AUM'S FOR UNIT :												207.4	

COMMENTS:

Field #1: Production for Loamy Upland sites based upon clipping - Seeded grasses are dominated by little and big bluestem, switchgrass and indiangrass. This is a more productive community than any listed in ESD. Smooth bromegrass has invaded portions of the loamy upland site. Approx. 25% of the loamy upland site is dominated by six weeks fescue, maretail and other plants that are not grazed. Field #2: Used Low management intensity yields from forage suitability group descriptions.

* Adjustments are reductions to forage due to topography, tree cover, brush cover and other factors that reduce the amount of forage available for livestock.

FIELD OFFICE:	ANYTOWN	CLIENT:	ROBERT GREENJEANS	DATE:	7/15/2016
----------------------	----------------	----------------	--------------------------	--------------	------------------

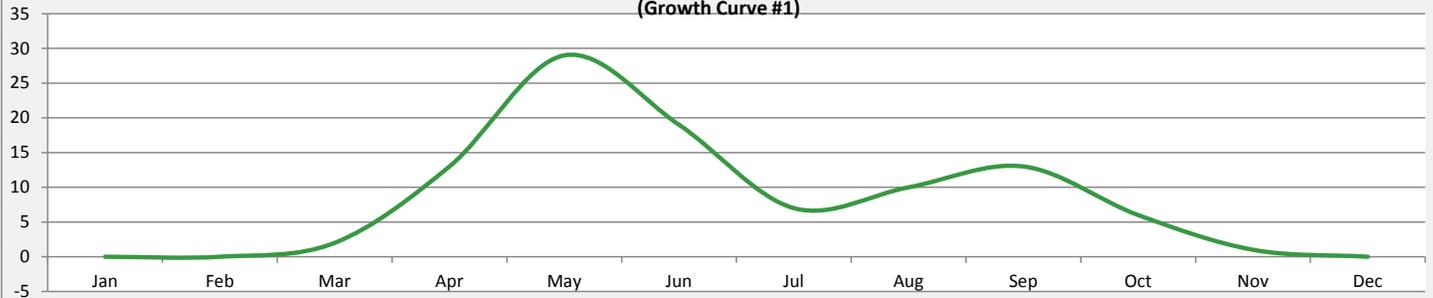
Livestock Numbers and Forage Needs

Livestock	Planned number	AU equivalents	Total AU's	AU's of forage needed - for operation or portion of operation - for each month											
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
cow/calf pair	50	1.25	62.5				62.5				62.5	62.5			
			0												
			0												
			0												
			0												
Total Forage Needs (AUM's)		187.5		0	0	0	63	0	0	0	63	63	0	0	0

Comments: Wildlife objectives are to leave the pastures ungrazed during the primary nesting period.

% of Total Forage Produced by Month

(Growth Curve #1)



Growth Curves

Description	Curve Number	% Forage Produced by Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
75 Smooth Bromegrass	1	0	0	2	13	29	19	7	10	13	6	1	0
72-Uplands:bluestem/sideoats dom.	2	0	0	2	10	20	30	20	10	5	3	0	0
	3												
	4												
	5												
	6												
	7												

FIELD OFFICE:

ANYTOWN

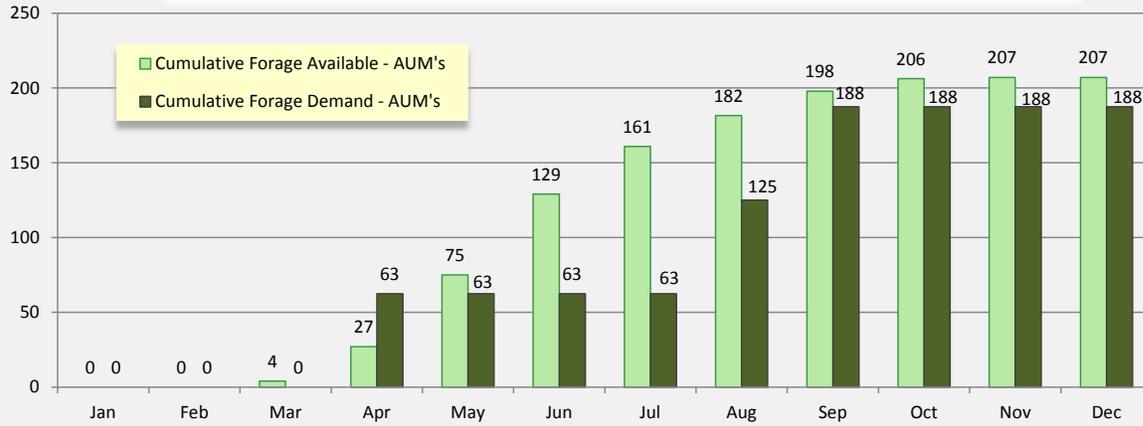
CLIENT:

ROBERT GREENJEANS

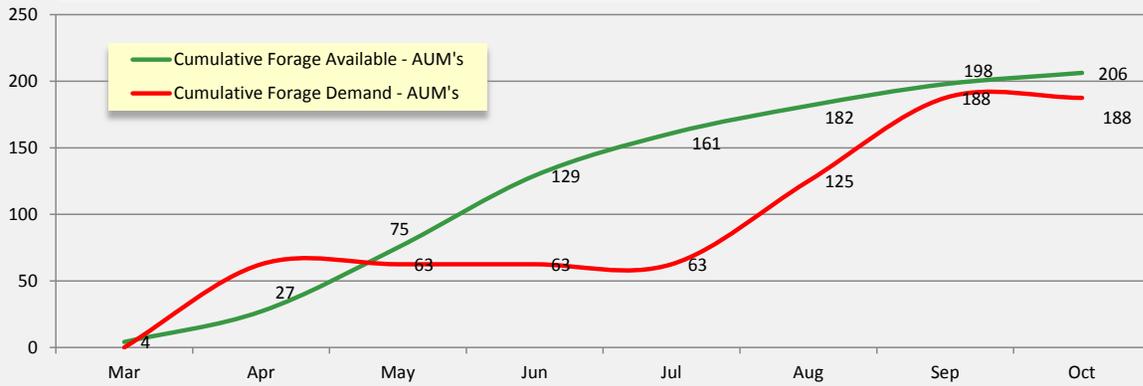
DATE:

7/15/2016

Cumulative Available Forage Compared to Cumulative Forage Demand



Cumulative Growing Season Available Forage Compared to Forage Demand



Grazing management systems are planned forage and livestock management programs designed to accomplish range improvement. A grazing system is developed to maintain or improve range similarity index, productivity, health and vigor while simultaneously achieving a high, sustainable level of livestock production.

Types of Grazing Systems: Prescribed grazing is a grazing system which is tailored to the individual operation and designed to achieve the specific objectives of the operation. There are several general types of grazing management systems:

- 1. Rest Rotation:** In a rest rotation grazing management system, one or more pastures are left ungrazed for the entire growing season. Each year a different pasture(s) is ungrazed; in other words, the rest is rotated. Incorporating rest so that each pasture is ungrazed once every 5-7 years builds in resilience, aids in drought recovery and provides wildlife habitat. Stocking rates should be adjusted to account for the forage that is unavailable each year.
- 2. Deferred Rotation:** In a deferred rotation grazing management system, a herd is rotated through three or more pastures. While one pasture is being grazed, the remaining pastures are not grazed (deferred). The pastures are grazed in a planned sequence. The sequence of grazing is generally changed each year.
- 3. High Intensity/Low Frequency Rotation:** In a high intensity/low frequency rotation grazing management system, one herd of livestock grazes eight or more pastures in a planned sequence. Livestock are moved into one pasture and the other pastures are rested. When the forage is grazed to the desired intensity, livestock are moved to the next pasture in the rotation. Livestock typically stay in a pasture 10 to 25 days. The frequent moves allow long rest periods for each pasture. The sequence of grazing is generally changed each year.
- 4. Short-duration. (Management Intensive Grazing.)** This is similar to the high intensity/low frequency system, except the speed of the rotation is adjusted according to the growth rate and the required rest period of the plants. During the peak of the growing season, livestock are moved rapidly with slower moves when pasture growth rate slow down.

Purpose of prescribed grazing management systems:

- Maintain or speed up improvement in plant cover while properly using the forage in all pastures.
- Improve efficiency of grazing by uniformly using all parts of each grazed pasture.
- Permit a higher level of livestock production.
- Insure a supply of forage throughout the grazing season.
- Insure that an adequate feed and forage balance is maintained for the unit.
- Improve control of undesirable plants.
- Allow easier handling and observation of livestock.
- Enhance wildlife habitat.
- Enhance watershed protection.

PRESCRIBED GRAZING JOBSHEET

NE-ECS-528

CLIENT: ROBERT GREENJEANS

GRAZING SCHEDULE - YEAR #1

Date: 7/15/2016

JULY, 2016

Grazing management systems are planned forage and livestock management programs designed to accomplish range improvement. A grazing system is developed to maintain or improve range similarity index, productivity, health and vigor while simultaneously achieving a high, sustainable level of livestock production.

Types of Grazing Systems: Prescribed grazing is a grazing system which is tailored to the individual operation and designed to achieve the specific objectives of the operation. There are several general types of grazing management systems:

1. Rest Rotation: In a rest rotation grazing management system, one or more pastures are left ungrazed for the entire growing season. Each year a different pasture(s) is ungrazed; in other words, the rest is rotated. Incorporating rest so that each pasture is ungrazed once every 5-7 years builds in resilience, aids in drought recovery and provides wildlife habitat. Stocking rates should be adjusted to account for the forage that is unavailable each year.

2. Deferred Rotation: In a deferred rotation grazing management system, a herd is rotated through three or more pastures. While one pasture is being grazed, the remaining pastures are not grazed (deferred). The pastures are grazed in a planned sequence. The sequence of grazing is generally changed each year.

3. High Intensity/Low Frequency Rotation: In a high intensity/low frequency rotation grazing management system, one herd of livestock grazes eight or more pastures in a planned sequence. Livestock are moved into one pasture and the other pastures are rested. When the forage is grazed to the desired intensity, livestock are moved to the next pasture in the rotation. Livestock typically stay in a pasture 10 to 25 days. The frequent moves allow long rest periods for each pasture. The sequence of grazing is generally changed each year.

4. Short-duration. (Management Intensive Grazing.) This is similar to the high intensity/low frequency system, except the speed of the rotation is adjusted according to the growth rate and the required rest period of the plants. During the peak of the growing season, livestock are moved rapidly with slower moves when pasture growth rate slow down.

Purpose of prescribed grazing management systems:

- Maintain or speed up improvement in plant cover while properly using the forage in all pastures.
- Improve efficiency of grazing by uniformly using all parts of each grazed pasture.
- Permit a higher level of livestock production.
- Insure a supply of forage throughout the grazing season.
- Insure that an adequate feed and forage balance is maintained for the unit.
- Improve control of undesirable plants.
- Allow easier handling and observation of livestock.
- Enhance wildlife habitat.
- Enhance watershed protection.

Grazing management systems are planned forage and livestock management programs designed to accomplish range improvement. A grazing system is developed to maintain or improve range similarity index, productivity, health and vigor while simultaneously achieving a high, sustainable level of livestock production.

Types of Grazing Systems: Prescribed grazing is a grazing system which is tailored to the individual operation and designed to achieve the specific objectives of the operation. There are several general types of grazing management systems:

1. Rest Rotation: In a rest rotation grazing management system, one or more pastures are left ungrazed for the entire growing season. Each year a different pasture(s) is ungrazed; in other words, the rest is rotated. Incorporating rest so that each pasture is ungrazed once every 5-7 years builds in resilience, aids in drought recovery and provides wildlife habitat. Stocking rates should be adjusted to account for the forage that is unavailable each year.

2. Deferred Rotation: In a deferred rotation grazing management system, a herd is rotated through three or more pastures. While one pasture is being grazed, the remaining pastures are not grazed (deferred). The pastures are grazed in a planned sequence. The sequence of grazing is generally changed each year.

3. High Intensity/Low Frequency Rotation: In a high intensity/low frequency rotation grazing management system, one herd of livestock grazes eight or more pastures in a planned sequence. Livestock are moved into one pasture and the other pastures are rested. When the forage is grazed to the desired intensity, livestock are moved to the next pasture in the rotation. Livestock typically stay in a pasture 10 to 25 days. The frequent moves allow long rest periods for each pasture. The sequence of grazing is generally changed each year.

4. Short-duration. (Management Intensive Grazing.) This is similar to the high intensity/low frequency system, except the speed of the rotation is adjusted according to the growth rate and the required rest period of the plants. During the peak of the growing season, livestock are moved rapidly with slower moves when pasture growth rate slow down.

Purpose of prescribed grazing management systems:

- Maintain or speed up improvement in plant cover while properly using the forage in all pastures.
- Improve efficiency of grazing by uniformly using all parts of each grazed pasture.
- Permit a higher level of livestock production.
- Insure a supply of forage throughout the grazing season.
- Insure that an adequate feed and forage balance is maintained for the unit.
- Improve control of undesirable plants.
- Allow easier handling and observation of livestock.
- Enhance wildlife habitat.
- Enhance watershed protection.

CONTINGENCY PLAN ¹

Forward planning is recommended to address any unpredictable event that reduces the amount of forage available. Unpredictable events include flood, fire, hail, insects, and most commonly drought. There is no special prescription for management of grazing lands impacted by unpredictable events. Years of good grazing management prepares grazing land for recovery. This embodies utilizing a prescribed grazing strategy which manages grazing frequency, grazing intensity and adequate recovery periods after grazing, proper livestock distribution, season of use, and stocking rate.

A basic understanding of the potential capabilities and limitations of all range resources is fundamental to sound management. High levels of plant vigor and range health are critical for the endurance of and rapid recovery from drought and other natural events which damage plants. It is equally important to know which practices optimize livestock performance and minimize risk of financial loss. Drought considerations must be incorporated into each year's management plan.

A contingency plan should minimize financial hardships and hasten vegetation recovery. While the remainder of this contingency plan refers primarily to drought, the principles involved are applicable to any natural event (fire, hail, flood, insect infestation) that removes forage beyond the planned level. Contingency plans identify action to be taken at the first sign of drought as well as with continued indications of pending forage shortages. Plans for stocking rate adjustments need to be specific in terms of method and date. A drought contingency plan will include trigger dates, trigger conditions and planned responses to those triggers.

Past Stocking Rates and Management:

Grazing management during years proceeding drought is a major factor in range vegetation response to drought. Stocking rates can increase even when livestock numbers are static. The amount of forage consumed in a pasture depends upon animal size as well as animal numbers and days of grazing. Inadvertent increases in stocking rates due to larger animal sizes may lead to overgrazing and reduced plant vigor before drought. All range livestock land managers need to critically evaluate their animal weights and use an appropriate animal unit (AU) equivalent when calculating stocking rates. Inadvertent overstocking may reduce animal performance and will damage the forage resource.

Seasonal Checkpoints:

Seasonal Checkpoints are critical dates when management decisions need to be made to respond to drought conditions. On critical dates, current and predicted forage production should be evaluated. This production estimate should be compared to the forage demand. When current production does not meet current demand, actions must be taken.

Critical dates should be based on rapid growth windows for the dominant grass species. Soil moisture and precipitation before and during the rapid growth period of these species are critical to forage production. In situations where the forage is a mixture of cool-season and warm-season grasses, multiple critical dates are helpful.

The average total annual precipitation for the two preceding years is a good indicator of the amount of production that will occur during May and June. Additionally, depth of moist soil in mid-April correlates to the amount of forage produced by early August. On mixed and short-grass prairie on loamy and silty sites in Nebraska, the amount of production is correlated to precipitation received in May and June.

The dates listed below are "average" for Nebraska. The dates will need to be adjusted 1-3 weeks based on green-up dates.

April 1:

- Determine average depth of moist soil and estimate probable stocking rates
- Evaluate the volume of precipitation received from October through March as compared to normal.
- Estimate probable forage production from rangeland.
- Review short-term precipitation and temperature forecasts.
- Assess current standing herbage.
- Assess all residual herbage.
- Assess growth of introduced cool season pastures.
- Evaluate stand quality and probable forage production of winter and spring small grains.
- Determine if yield of native cool season species on rangeland is above or below average.
- Alternative forages, stocking rate reductions and modified grazing strategies may be needed if there is a delay in plant green-up and growth.

May 1:

- Monitor green up of native warm season species on rangeland.
- Continue to review short-term precipitation and temperature forecasts.
- Assess current standing herbage.
- Assess all residual herbage.

June 1 - 15:

- Assess establishment and stand quality of summer annual forages and soil moisture conditions.
- The majority of plant growth in Nebraska will occur by the end of June. If drought conditions continue into June, forage production will be dramatically reduced for the season even if good moisture occurs after June 30. Serious consideration should be given to stocking rate reductions and herd management.

July 1:

- Determine if yield of native warm season species on rangeland is above or below average.
- Assess establishment and stand quality of late planted summer annual forages.
- Assess soil moisture conditions.

August 1:

- Estimate or measure yield of summer annuals harvested for feed or grown for late season grazing.
- Diet quality of annual forages declines dramatically after the soft dough stage. If high forage quality is the objective, harvest at the late boot to soft dough stage. If maximum tonnage is the objective, then harvesting after the soft dough stage may be desirable.

September 1:

- Assess current year and carry-over winter feed inventories. Purchase hay resources as needed.
- Make a final assessment of yield of annual forages grown for late season grazing.
- Inventory other harvested feed and determine the quantity of crop residue on cropland.
- Estimate amount of forage in winter pastures (if applicable).

October 1:

- Use September through October precipitation to predict stocking rates for the next summer.

Note: *Even a small amount of spring or fall green-up can cause a false sense of security and delay of prudent management decisions. Premature, aggressive restocking can cause serious economic loss because of long-term reductions in the rate of vegetation recovery. If vegetation recovery is slow or restricted by continued drought, a de-stocking plan will be needed.*

Herd Management:

One alternative for drought management is to reduce total forage requirements. Reducing stocking rates during drought pays dividends in terms of:

- Optimized animal performance
- Reduced supplemental and winter feeding costs
- Minimized damage to forage resources
- Enhanced range and pasture recovery following drought

Consider removing or relocating livestock as soon as shortages in forage and feed resources are anticipated to take advantage of best market values. If additional shortages in forage occur, calculate the additional costs associated with keeping livestock on the ranch (feed, interest, labor, etc.) or transporting livestock to another location with adequate feed or forage. If calculations show an unreasonably high cost of livestock production, it may be prudent to sell or relocate part or all of the livestock.

The following practices can help to minimize liquidation of the breeding herd:

- Early weaning can extend the forage base
- Practice early and heavy culling of less productive animals such as late calving cows and older cattle
- Remove yearlings from summer pastures early
- Consider curtailing of replacement animals for one year
- Supplement vulnerable classes of livestock such as heifers earlier than other classes of livestock
- Maintain a percentage of the livestock as a readily marketable class such as yearlings or stockers

Diverse practices can be used to maintain ownership of cows under drought conditions. Some ranches will liquidate or relocate part or all of their breeding stock. The value of keeping breeding herds on the ranch must be weighed against the additional costs that are probable when drought continues. Recovery of additional production costs will depend upon: (1) productivity of livestock, (2) productivity of grazing lands, and (3) livestock market prices during and following drought. The use of excessive stocking rates during drought can reduce animal performance and cause dramatic reductions in plant vigor. Overgrazed land in combination with prolonged drought can cause rangelands to shift across transition zones to states that may not recover to pre-drought production levels for decades. Under severe or prolonged drought conditions the cost of replacement livestock is almost always less than the cost of long-term reductions in grazing land productivity.

Additional information may be obtained from the Drought Mitigation Center website: <http://drought.unl.edu/>. In depth information about developing a drought mitigation plan can be found in the handbook "*Managing Drought Risk on the Ranch*" which is available at: <http://drought.unl.edu/ranchplan/Overview.aspx>

¹ The majority of the information in this section was obtained from "Managing Drought Risk on the Ranch: A Planning Guide for Great Plains Ranchers", published by the National Drought Mitigation Center, UN-L and USDA Risk Management Agency.

Client: **ROBERT GREENJEANS** Calendar Year: _____ Date: _____

Contract Number: _____

Pasture Name / Number	Acres	Planned Grazing Sequence	Kind of Livestock (pairs, yearlings, heifers, etc.)	Number	Grazing Period - In & Out Dates			
					Planned		Actual	
					Begin	End	Begin	End
1	320	2nd	pairs	50	8/1	9/30		
2	320	1st	pairs	50	4/1	4/30		

Animal Information (Needed to calculate AUM')		Comments:	
Average Cow Weight:			
Average Calving Date:			
Weaning Date:			
Average Weaning Wt.:			
Average Bull Weight:			
Average Heifer Weight:			
Average Yearling Weight:			
Average Horse Weight:		Report Prepared by:	