



## Animal Enhancement Activity – ANM30 – Ultra high density grazing system to improve soil quality

### State Criteria (same as NATIONAL CRITERIA)

#### Additional Criteria for Nebraska

- 1) Determine pre- and post-grazing average stubble heights for forage plants for each paddock
- 2) Considerations for determining stock density rates can be determined as follows:
  - a. Producers should determine the animal-days per acre (ADA), based on the average herbage production of the proposed paddock acreage sizes. The suggested ADA should assist the producer in determining or modifying paddock sizes.
  - b. The ADA is calculated as such:  $\text{animal-days per acre} = \frac{\text{no. of animals} \times \text{days in paddock}}{\text{acres of land}}$
  - c. The product of the above equation will inform the producer approximately how many animals an acre will provide enough forage for a day. The producer should first understand the approximate pounds per acre of forage that the proposed paddock will provide.
  - d. A suggested example for determining the needed acres is as follows:
    - i. 50, 000lbs of beef cow per acre is about 50, 1,000 pound mature beef cows.
    - ii. Assume a mature beef cow or beef cow-calf pair requires approximately 30 pounds of air-dry forage per day.
    - iii.  $50 \text{ beef cows} \times 30 \text{ lbs. air-dry forage} = 1,500 \text{ pounds of total air-dry forage needed for 1 day.}$
    - iv. An acre of warm-season rangeland currently has 800 pounds per acre (air-dry weight) standing yield. The producer wishes to harvest at least 60% to achieve the soil and vegetation improvement goals. Therefore,  $800 \text{ lbs.} \times 0.60 = 480 \text{ pounds per acre available forage.}$  The producer will need to allow for 320 pounds per acre of herbage left on the ground.
    - v.  $1,500 \text{ lbs. (of air-dry forage (1 day) for 50 beef cows)} \div 480 \text{ lbs. herbage per acre (air-dry weight, 60\% standing herbage for 1 acre)} = 3 \text{ acres will be needed for 1 day for 50 beef cows.}$
- 3) Prepare a contingency plan for events such as fire, flooding, drought, hail, insects, etc.

### Documentation Requirements (SEE NATIONAL ENHANCEMENT ACTIVITY JOBSHEET)

#### Additional State Documentation Requirements:

1. Provide a record of pre- and post-grazing average stubble heights of forage plants. Producer may use form NE-ECS-414, Proper Grazing Use Worksheet. Suggested pre- and post grazing heights of common Nebraska range and forage grasses are based on [NRCS Prescribed Grazing practice standard \(528DP\)](#) Table 4:
2. Representative photographs of each paddock following livestock occupation.
3. Producer must submit a contingency plan for events such fire, flooding, hail, drought, insects, etc.



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Complete the table below to document approved operation/maintenance and management activities:

To be completed by NRCS and Producer during planning			To be completed by Producer during certification (if different than planned)	
1	2	3	4	5
Tract	Field	Acres	Begin And End Grazing Heights	Date Measurement Taken
<i>EX. 1</i>	<i>R1</i>	<i>640</i>	<i>8 inches 6 inches</i>	<i>05/01/2011 06/11/2011</i>

EX= EXAMPLE, COLUMNS 1-3 NRCS COMPLETES, COLUMNS 4-5 PRODUCER COMPLETES

**I certify that the ultra high density grazing system to improve soil quality meets the requirements for my livestock operation and meets these specifications including the NATIONAL ENHANCEMENT ACTIVITY JOBSHEET documentation requirements.**

**Certified by:** \_\_\_\_\_ **Date:** \_\_\_\_\_



<sup>1/</sup> **Table 4. Recommendations for Beginning and Ending Grazing (Heights and Dates) for Nebraska Pastures**

Species	Begin Grazing		End Grazing	
	<sup>2/</sup> Minimum Height of Vegetative Growth (inches)	Approximate Date*	<sup>2/</sup> Minimum Residual Height (inches)	<sup>2/</sup> Minimum Residual Height Before Killing Frost (inches)
Alfalfa	6	May 15	3	6
Alsike and red clover	6	May 15	3	6
Biennial sweetclover	6	May 1	3	6
Big & Sand bluestem	10	June 1	6	10
Birdsfoot trefoil	6	June 1	3	6
Cicer milkvetch	8	May 20	5	8
Creeping foxtail	6	May 1	3	6
Crested wheatgrass	4	April 20	3	6
Eastern gamagrass	18-20	June 1	8	10
Indiangrass	10	June 1	4	10
Intermediate wheatgrass	6	May 1	5	8
Kentucky bluegrass	4	May 1	2	3
Meadow brome	6	May 1	5	6
Orchardgrass	6	May 1	5	8
Pubescent wheatgrass	6	May 1	5	6
Reed canarygrass	8	May 1	4	8
Russian wildrye	6	May 1	3	4
Smooth brome	6	May 1	4	7
Switchgrass	10	June 1	6	10
Tall fescue	6	May 1	3	6
Tall wheatgrass	7	May 1	4	8
Timothy	6	June 1	4	5
Western wheatgrass	6	May 1	3	6

<sup>1/</sup>Grass and legume mixtures should be grazed in a manner that favors the dominant or desired species.

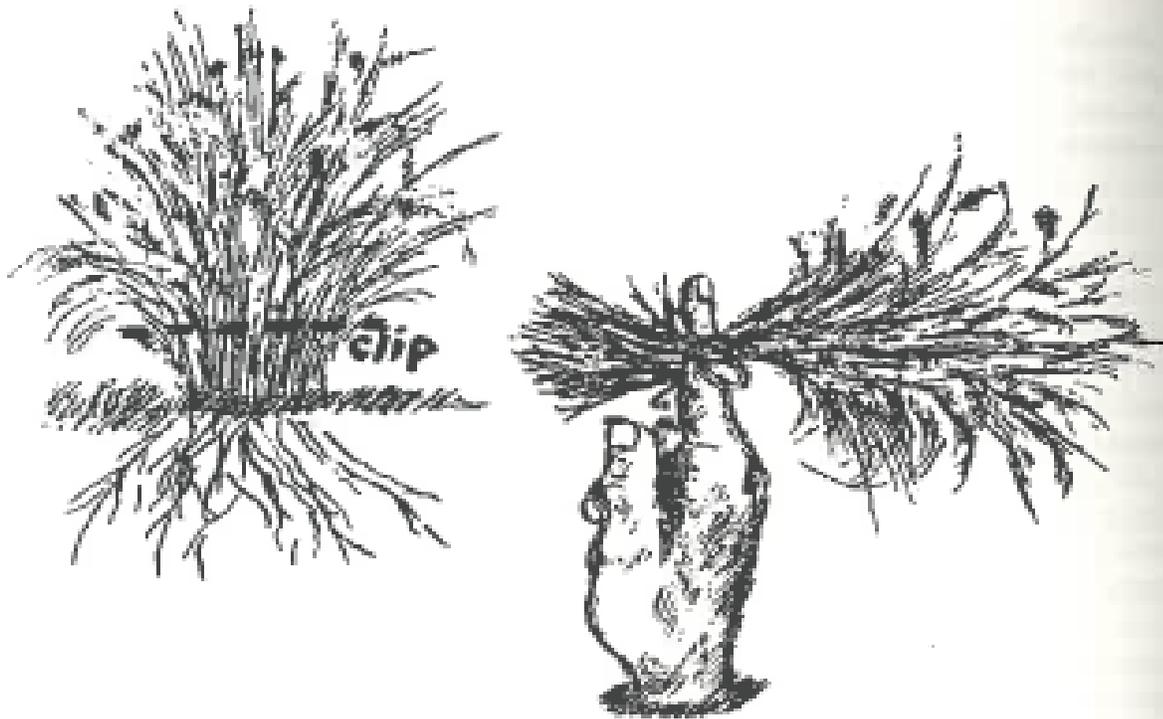
Height is the average height when **leaves** are lifted in a vertical position.

<sup>2/</sup>All heights listed in Table 4 can be adjusted downward by 25% for all species in Vegetative Zone I in the Panhandle of Nebraska..

**Figure 1. Simple Height/Weight Determination**

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*Fig. 70. A practical way to determine approximately half of the current production of a grass plant. (Drawing by Jack Douglas.)*

From: "Rangeland Management for Livestock Production". 1973. H.M. Bell.