

## ***Prescribed Grazing (528) Fact Sheet***

**Managing Grazing Lands for Forage Production, Persistence, and Quality**



(Photo Courtesy of NRCS)

**Prescribed grazing will increase forage production, persistence, and quality. This practice will improve soil, water, animal, plant, and air resources. The practice has the potential to increase economic returns by decreasing inputs and increasing outputs. Increased management is required.**

### **A. GRASS HEIGHT:**

Maximum intake of forage is achieved when the forage height is 5 to 8 inches tall. Forages taller than the maximum grazing height (generally greater than 8 - 10 inches) lose palatability and digestibility and are more prone to damage from trampling. When forages within a rotation get taller than 10 inches, it is best to use this paddock for hay and skip ahead to the next paddock in the grazing rotation. An exception would be stockpiling cool season grasses in the fall. Harvesting for hay a field that can be grazed does not make good economic sense.

### **RECOMMENDED GRAZING HEIGHT:**

<b>Kind of Forage</b>	<b>Ending Grazing Height <sup>1</sup></b>	<b>Starting Grazing Height <sup>2</sup></b>
<b>Cool season grasses</b> (i.e. orchard grass and tall fescue)	<b>3 - 4"</b>	<b>5 - 8"</b>
<b>Bermuda</b>	<b>2 - 3"</b>	<b>5 - 8"</b>
<b>Tall Grasses</b> (i.e. pearl millet, sudan grass)	<b>6 - 8"</b>	<b>12 - 24"</b>

<sup>1</sup> Ending Grazing Height - The forage height at which grazing should end.

<sup>2</sup> Starting Grazing Height - The maximum forage height at which grazing should begin (forages at this height or above should be harvested for hay).

Forage heights less than recommended are acceptable during late winter (February-March) just before green-up, and may even encourage additional legumes.

### **DETERMINING WHEN TO ROTATE:**

Use the **LOOK DOWN, LOOK AHEAD, LOOK BACK,** and **LOOK AT** the weather technique.

# *Prescribed Grazing (528) Fact Sheet*

## Managing Grazing Lands for Forage Production, Persistence, and Quality

1. **LOOK DOWN** - Is the forage height within recommendations? When forage is at or approaching minimum grazing height, consider moving to the next field. It is better to leave too much rather than too little.
2. **LOOK AHEAD** - Is the next paddock ready to graze or getting beyond grazing height? When forage in the next field is at the maximum grazing height or above, consider speeding up the rotation or cutting for hay and skipping to the next field.
3. **LOOK BACK** - Are paddocks previously grazed regrowing adequately? When regrowth is inadequate, either leave higher residue (higher stubble height) or rest longer.
4. **LOOK AT THE WEATHER** - Is frost, rain, or drought anticipated? When frost is predicted, avoid grazing sorghums (i.e., Johnsongrass) due to prussic acid poisoning. When rain is predicted, forage growth will be increasing. When grazing wet-natured ground, move livestock off before rain to prevent pugging. When drought is continued, forage growth will be decreasing.

### **B. FIELD/PADDOCK NUMBERS AND GRAZING EFFICIENCIES:**

Rotational grazing for cow/calf operations typically works best with eight paddocks per herd. A rotational system with eight paddocks and 5-day grazing periods will allow for a 35-day rest period. Extension of grazing through most droughts will occur with 35-day rest periods.

<b>Number of Paddocks/Fields</b>	<b>Days Grazing Paddock*</b>	<b>Grazing Efficiency</b>
1	Continuous (greater than 14 days)	40% or less or 80% if overgrazed, low yield
4-6 paddocks	7 to 9 days	40-55%
8-10 paddocks	4 days	55-65%
24-45 paddocks	1 day or less	70-80%
Hay	-	70-80%

\* Rotations should be based on actual grazing heights instead of days. Days are used for estimating rotation periods. Estimated days will vary depending on time of year and rainfall.

### **C. STOCKPILING COOL SEASON FORAGES:**

1. **Benefits of Stockpiling:** Stockpiling cool season forages for winter grazing reduces the amount of hay that needs to be fed. Allow 1 acre of stockpiled forage per animal unit. Stockpiling can produce an additional ton of standing forage per acre. On average, this standing acre will provide 54 days (approximately 2 months) of grazing. Stockpiling can replace a ton of hay for each acre stockpiled. (Cost of stockpiling with 60 lbs. of Nitrogen (N): 60 lbs./N x \$0.50 lb./N = \$30; value of 1 ton of hay is \$60 for a savings of \$30.00) Stockpiling without N will typically produce 1,300 lbs./acre.

# *Prescribed Grazing (528) Fact Sheet*

## **Managing Grazing Lands for Forage Production, Persistence, and Quality**

2. **How to Stockpile:** Remove livestock about September 1, or when fall rains are predicted, and apply 60 lbs. of Nitrogen/Acre (180 lbs. of Ammonia Nitrate/Acre). Grass and grass/clover mixes respond well to fall N application. Keep cattle off until after frost, and then begin strip grazing. Allow livestock no more than 3 to 4 days grazing on any one strip. Single-strand temporary fencing may be used for strip grazing. Start strip grazing at the water point and move the temporary fence forward every 4 days or less.

### **D. GRAZING MANAGEMENT FOR WINTER ANNUALS:**

When grazing high quality winter annuals, time-limit grazing or feeding supplemental feed such as high quality hay, soybean hulls, or corn may be needed. This will slow down the rate of passage through the livestock's digestive system to give maximum benefit of the winter annuals.

### **E. FORAGE MANAGEMENT DURING DROUGHT OR WET PERIODS:**

During drought periods, protect paddocks from overgrazing by confining livestock to one pasture and feeding hay across that field so manure is evenly distributed. This will protect other paddocks from overgrazing and allow them to re-grow much faster when rain does occur.

During wet times, when pastures tend to pug or mire, continue to rotate livestock, paying special attention to maintaining no less than one plant every 6 inches. Before the visible stand of desired vegetation decreases to one plant every 6 inches, confine livestock to one area. The confinement area needs to have good surface and subsurface drainage and be 100 feet or more (300 feet or more is best) away from drainage, depression, and water areas.

### **F. REFERENCES:**

- Cowboy Math
- Forage Harvest Management Job Sheet
- Graze Program
- Pasture Condition Score Sheet
- Pasture and Hay Planting Job Sheet
- Planning Tool for Beef Feeding Sites

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer."