

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**PRESCRIBED GRAZING**

(Ac.)

**CODE 528A**

**DEFINITION**

Managing the controlled harvest of vegetation with grazing animals.

**PURPOSES**

This practice may be applied as part of a conservation management system to accomplish one or more of the following purposes.

- Improve or maintain the health and vigor of plant communities.
- Improve or maintain quantity and quality of forage for livestock health and productivity.
- Improve or maintain water quality and quantity.
- Reduce accelerated soil erosion, and maintain or improve soil condition.
- Improve or maintain the quantity and quality of food and/or cover available for wildlife.
- Promote economic stability through grazing land sustainability.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to all lands where grazing animals are managed.

**CRITERIA**

**General Criteria Applicable for all Purposes**

Removal of herbage will be in accordance with site production limitations, rate of plant growth, and the physiological needs of forage plants.

Application of this practice will prescribe the rest period, intensity, frequency, duration and season of grazing to promote ecologically and economically stable plant communities that meet both the land managers objectives and the resource needs.

Flexibility must be used when managing the kind of animal, animal number, grazing distribution, length of grazing periods, and timing of use to provide sufficient deferment from grazing during the growing period.

Protect soil, water, air, plant, and animal resources when locating livestock feeding, handling, and watering facilities.

Manage grazing animals to maintain adequate vegetative cover on sensitive areas (i.e. riparian, wetland, habitats of concern, karst areas). Continuous grazing will not be planned on management units where sensitive areas occur.

For the purposes of this standard, the term "browsing" may be used synonymously for grazing.

Two or more management units (pasture, paddock, field, etc.) must be established through fencing, control of water, natural barriers, or other separation for operations where:

- a. grazing occurs yearlong or
- b. perennial species make up a significant amount of the potential forage supply and grazing occurs each year during the growing season.

Only one management unit is required:

- a. when the potential forage supply is primarily annuals harvested seasonally or
- b. where grazing only occurs during the dormant season or
- c. when, during the growing season, all livestock will be removed following a specified removal of forage (AUMs) and an adequate deferment for forage recovery is provided.

See Appendix 1 for acceptable degrees of use on rangeland, native pasture, grazed forestland, and grazed wildlifeland. Table 1 of Appendix 1 lists acceptable use heights on pastureland.

See Appendix 2 for appropriate deferment periods.

At least one key grazing area with one or more key forage species will be established for each management unit or for a group of management units with similar topography, soils, grazing duration, and seasons(s) of use.

**Additional Criteria to Improve or Maintain the Health and Vigor of Plant Communities.**

Duration, frequency, and intensity of grazing will be based on desired plant health and expected productivity of key forage species to meet management unit objectives.

Adjust grazing periods and/or stocking rates to meet the desired objectives for the plant communities and the associated resources, including the grazing animal.

Schedule livestock movements based on rate of plant growth, available forage, and utilization - not calendar dates.

Periodic deferment from grazing or a complete rest for a year or more will be applied as needed to maintain or restore the desired plant

community following episodic events, such as wildfire or severe drought.

Rest or defer areas for a period of time to ensure the success of prescribed fire, brush control, seeding or other conservation practices. See Appendix 2 for appropriate deferment periods.

**Additional Criteria to Improve or Maintain Quantity and Quality of Forage for Livestock Health and Productivity**

Plan grazing duration, frequency, and intensity to match forage quantity and quality with goals of the livestock producer.

**Additional Criteria to Improve or Maintain Water Quality and Quantity**

Maintain adequate ground cover and plant density to maintain or improve filtering capacity of the vegetation.

Minimize concentrated livestock areas through fencing, water point placement, supplemental feed placement, and shade or cover manipulation to enhance nutrient distribution and improve or maintain ground cover.

**Additional Criteria for Soil Erosion and Condition**

Maintain adequate ground cover, litter, and canopy to maintain or improve infiltration and soil condition.

Minimize concentrated livestock areas, trailing, and trampling to reduce soil compaction, excess runoff and erosion.

**Additional Criteria to Improve or Maintain Food and/or Cover for Wildlife Species of Concern**

In goals and objectives of the grazing plan, specify the species of concern and the habitat component(s) to be managed.

Manage duration, frequency, and intensity of grazing to produce diverse plant communities with appropriate plant height, structure, and density for the desired wildlife habitat.

Provide deferment from grazing on key habitat during critical nesting/fawning periods.

Refer to Upland Wildlife Habitat Management (645) and Wetland Wildlife Habitat Management (644) standards for additional guidance on habitat management.

### **Additional Criteria to Promote Economic Stability through Grazing Land Sustainability.**

Evaluate the economics of the forage system and associated infrastructure.

Develop a grazing plan that provides for an adequate quantity and quality of forage for as much of the year as possible to minimize supplemental feed cost.

Develop a contingency plan (supplying supplemental feed, de-stocking, sacrifice areas, etc.) to ensure resource management and economic feasibility without resource degradation.

Plan grazing to reduce the loss of livestock from toxic and poisonous plants.

### **CONSIDERATIONS**

Grazing plans that include rotations between two or more management units provide flexibility in managing duration, frequency, and location of grazing. Management flexibility increases as the number of management units increase.

Utilization or stubble height target levels are tools that can be used while monitoring to help ensure that resource conservation and producer objectives are met.

Where practical, start the grazing sequence in a different management unit each growing season.

When weeds are a significant problem, prescribed grazing should be implemented in conjunction with pest management to protect desired plant communities.

Livestock feeding, handling, and watering facilities should be designed and installed in a manner to improve and/or maintain animal distribution. These facilities should also be designed and installed to minimize stress, the spread of disease, parasites, contact with harmful organisms and toxic plants.

Supplemental feed and/or mineral requirements should be balanced with the forage consumption to meet the desired nutritional level for the kind and class of grazing livestock. Forage and/or fecal testing from reputable laboratories are reliable tools to determine these requirements.

Prescribed grazing should consider the needs of other enterprises utilizing the same land, such as wildlife and recreational uses.

### **PLANS AND SPECIFICATIONS**

The prescribed grazing plan shall conform to all applicable federal, state, and local laws. Seek measures to avoid adverse affects to endangered, threatened, and candidate species and their habitats.

Prepare a prescribed grazing plan for all management units where grazing will occur according to state standards and specifications.

Guidelines for developing a prescribed grazing plan include:

1. Goals and Objectives clearly stated.
2. Resource Inventory (i.e. Resource condition, existing structures, facilities, soil).
3. Forage Inventory of the expected forage quality, quantity and species of forage in each management unit(s) during the grazing period.
4. Forage-Animal Balance developed as a sustainable grazing plan for the management unit(s), which insure forage produced or available meets forage demand of livestock and/or wildlife of concern.
5. Grazing Plan developed for livestock that identifies periods of grazing, deferment/rest, and other treatment activities for each management unit.
6. Contingency plan developed that details potential problems (i.e., severe drought, flooding) and serves as a guide for adjusting the grazing prescription to ensure resource management and economic feasibility without resource degradation.

7. Monitoring plan developed with appropriate records to assess whether the grazing strategy is meeting objectives. Identify the key areas and key plants that the manager should evaluate in making grazing management decisions.

## OPERATION AND MAINTENANCE

**Operation:** Prescribed Grazing will be applied on a continuing basis throughout the occupation period of any and all grazing units.

Adjustments will be made as needed to ensure that the goals and objectives of the prescribed grazing strategy are met.

**Maintenance:** All facilitating practices (i.e. Fence, Watering Facilities, Pest Management) that are needed to effect adequate grazing distribution as planned by this practice standard will be maintained in good working order.

## REFERENCES

-----1993. Managing Change. Livestock Grazing on Western Riparian Areas. EPA publication.

-----1997. Riparian Area Management. Grazing Management for Riparian-Wetland Areas. Technical Reference 1737-14. BLM and USDA publication.

-----1997. National Range and Pasture Handbook. USDA-NRCS, Grazing Lands Technology Institute.

Hanselka, C.W., B.J. Ragsdale, and B. Rector. 1995. Grazing Systems for Profitable Ranching. E-34, Texas Agricultural Extension Service.

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White, L.D., C.W. Hanselka, L. Clayton. 2000. Common Grazing Management Mistakes. E-112. Texas Agricultural Extension Service.

APPROVAL AND CERTIFICATION

PRESCRIBED GRAZING

(ACRE)

CODE 528

PRACTICE STANDARD

PRACTICE STANDARD APPROVED

          /s Homer Sanchez          

          May 23, 2003          

State Range Management Specialist

Date

This practice standard is needed in \_\_\_\_\_ Field Office.

\_\_\_\_\_  
Natural Resource Manager

\_\_\_\_\_  
Date

CERTIFICATION:

Reviewed and determined adequate without need of revision.

\_\_\_\_\_  
Zone Range Management Specialist

\_\_\_\_\_  
Date

**NRCS, TEXAS**

**October 2001**

**NATURAL RESOURCES CONSERVATION SERVICE  
PRESCRIBED GRAZING**

**Appendix 1  
(Acre)**

**CODE 528A**

**ACCEPTABLE GRAZING USE ON RANGELAND, NATIVE PASTURE, GRAZED  
FORESTLAND, GRAZED WILDLIFELAND, and PASTURELAND**

**DETERMINING UTILIZATION DEGREE  
OF USE ON RANGELAND, NATIVE  
PASTURE, GRAZED FORESTLAND,  
AND GRAZED WILDLIFELAND**

**Key grazing areas shall be selected  
using the following criteria:**

- They must be selected for each management unit or group of management units that have similar topography, soils, grazing duration, and season(s) of use.
- They will normally produce or have the potential to produce a significant percentage of the forage in a management unit.
- They will be on areas that are preferred by livestock or wildlife and may become overused before other areas in a management unit are grazed properly.
- Key grazing areas will be located and specified for each kind of grazing or browsing animal where their key grazing area is different.
- Areas in a management unit where seeding, brush management, prescribed burning, mowing, etc., have been completed, will become the key grazing area.

**Key grazing area using the following  
criteria:**

- Select the highest successional preferred plant comprising approximately 15 percent or more of the composition by weight as the key plant.
- If management objectives are to maintain a lower rangeland similarity index for a specific purpose, then the key plant will be the major perennial plant being managed for that purpose as long as the vegetative community is adequate to protect the soil from erosion.
- Normally, only one plant will be selected as the key plant, however, occasionally it may be desirable to designate different key plants for summer and winter use. More than one key species may be designated for a management unit when different kinds of livestock and wildlife are present.
- On areas where reseeding is to be carried out, the key plant will be selected after stand establishment and at the start of the first grazing season's use.
- The designated key plants on which degree of use is based will need to be changed as vegetative changes occur in the plant composition.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

**Degree of use will be based on the key species on the key area using the following guidance:**

- With less intensive grazing management during the growing season, degree of use on herbaceous plants shall be no more than 50 percent by weight of the current year's growth by the end of the grazing season.
- When grazing is limited to the dormant season, degree of use shall be no more than 60 percent by weight of the current year's growth.
- When a short duration type of prescribed grazing sequence is used which provides appropriate graze/rest periods for the key plants, the degree of use will be in accordance with the objectives specified for the individual situation. Degree of use may vary according to time, stage of growth, physiological condition, and climatic conditions prevalent during the grazing cycle. The overall degree of use will be such that long term range trend is upward for fair and poor condition ranges and upward or non-apparent for good and excellent condition ranges. The overall degree of use at the end of the grazing season will not exceed 60% of the total yearly production and will leave sufficient plant residues to favorably impact site hydrology.
- Degree of use on browse plants will be determined on the basis of current year's growth within reach of the animals.
- Degree of use of key species during the growing season will not exceed 50 percent by weight of the current year's growth of available twigs and leaves.
- Degree of use of key species during the dormant season will not exceed 65 percent by weight of the current year's growth of available twigs of deciduous species, or twigs and leaves of evergreen species.

- When the primary use of the land is for wildlife, less than 50 percent use by livestock may be specified to enhance wildlife habitat.
- On eroding or critical sites, on riparian areas or wetlands, or where rapid range recovery is needed, less than 50 percent use by livestock should be specified to promote vegetative cover. Protection by means of permanent or temporary fencing may be needed.
- Areas of excessive grazing use or concentrated livestock shall not exceed 10 percent of the management unit.

**Federal Endangered /Threatened Species**

When these species occur on the management unit, grazing should be planned to have no effect on the species. Grazing prescriptions that have any effect, either adverse or beneficial require consultation with and concurrence of U.S. Fish and Wildlife Service. Landowners must request in writing for NRCS to initiate consultation.

**DEGREE OF USE ON PASTURELAND**

**See Table I for Grazing Use Heights and Growth Cycles for Pastureland**

Refer to **Nutrient Management (590)** and **Pest Management (595)** Practice Standards for additional information on fertilizing and weed control. For irrigated pastureland, refer to **Irrigation Water Management (449)** Practice Standard for timing and amounts of water.

Use the **Minimum Heights For Rotational Use** listed in Table 1 to determine grazing use heights when warm season species are grazed during plant dormancy.

**When cool season legumes or small grains are over-seeded in a permanent sod, use the following guidance.**

- To allow for germination of the cool season species from mechanical seeding or natural reseeding, graze, mow or hay grass competition to a height of 3 inches at least 4 to 6 weeks prior to the first frost date.
- To decrease competition with the permanent sod, graze, mow or hay cool season annuals intensively as they begin to approach maturity, and the permanent species begin to grow.

**REFER TO MANAGEMENT CONSIDERATIONS ON GRAZED CROPLAND FOR INFORMATION RELATED TO LIVESTOCK GRAZING.**

**NATURAL RESOURCES CONSERVATION SERVICE**  
**PRESCRIBED GRAZING**  
**APPENDIX 2**  
**RESTING OR DEFERRING**  
**GRAZING LAND FOR A PRESCRIBED PERIOD**  
**(Acre)**  
**code 528A**

**GENERAL**

In general, rest implies non-grazing for a full year or longer while deferment implies non-grazing for less than a year.

All domestic livestock must be excluded when a management unit is being rested or deferred. All exotic animals must be excluded when management of such can be accomplished.

Grazing must be excluded for a long enough period during the growing season to adequately meet the objectives. On well established perennial warm and cool season grasses and legumes, deferment periods of 21 to 45 days during the growing season are usually adequate for plants to recover from grazing periods that do not exceed 7 to 10 days in length. The length of rest or deferment periods is governed by the kinds, growth habits, and growth stages of the forage plants concerned and seasonal climatic conditions.

The starting date for the rest or deferment periods should coincide with the beginning of a major growth period. Rest or deferment should continue until the plants to be favored have matured a seed crop or have reached a grazable height. See Appendix 1, Table 1 for minimum use heights.

**Perennial Warm Season Plants**

- To improve vigor and produce seed: Full season (April 1 – Nov. 15)
- For seed production or to improve vigor. Spring (April 1 – July 30) or Fall (Aug. 1 – Nov. 15)

**Perennial Cool Season Plants**

- To improve vigor and produce seed: Full season (Sept. 1 – June 1)
- For seed production only where vigor is good: Spring (Feb 15 – June 1)
- To improve vigor: Spring (Feb 15 – June 1) or Fall (Sept 1 – Dec 15)

**DEFERRING GRAZING ON RANGELAND TO IMPROVE RANGELAND SIMILARITY INDEX AND GRAZED FOREST AND NATIVE PASTURE TO IMPROVE FORAGE VALUE RATING.**

- A. Where the rangeland similarity index is 25 percent or less, or the forage value rating is low, use a full growing season deferment initially. Defer during a spring or fall period every 2 years thereafter until the rangeland similarity index is greater than 25 percent or the forage value rating is moderate. Successive deferment periods are needed when the vigor of the plants is very low and the climax plants on rangeland comprise less

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than 20 percent of the total composition.

- B. Rangeland similarity indexes of 26 to 50 percent or a forage value rating of moderate will receive a minimum of 90 consecutive days of deferment during the growing season every 3 years.
- C. Rangeland similarity indexes of 51 to 100 percent or a forage value rating of high will receive a minimum of 90 consecutive days of deferment during the growing season every 4 years.

A prescribed grazing sequence that provides adequate deferment periods each growing season may be used to accomplish A, B, and C above.

### **DIFFERENCES BETWEEN RANGE MANAGEMENT AND PASTURE MANAGEMENT**

Range is generally managed for many species of plants for multiple benefits. Pasture is the management of a few species for specific objectives.

Range is managed, maintained and improved through the use of tools such as prescribed fire, chemicals, mechanical means, and biological agents. The same principles are applied to pastureland but they are generally more intensive than to range. Pasture is generally a monoculture or a limited variety of exotic plants or culturally managed native single species. Cultural practices such as fertilizer, weed control, irrigation, routine seeding and renovation are needed to maintain pasture communities.

### **DEFERRED GRAZING FOLLOWING BRUSH MANAGEMENT**

#### **Chemical Control**

The area will be deferred for the time shown by the approved label of the herbicide used or longer as required by the following:

- A. Where the rangeland similarity index is 50 percent and less or the forage value rating is moderate or lower, the area will be deferred from the time of chemical application through the remainder of the growing season.
- B. Where the rangeland similarity index is 51 percent or greater or the forage value rating is high or greater, the area will be deferred for a minimum of 90 consecutive days during the growing season following treatment.
- C. When slow acting soil applied herbicides are used, the area will be deferred from the time of the first visual signs of chemical activity through the remainder of the first growing season. A deferment period during the second growing season will be based on the physiological needs of the plant community. It is highly probable that a deferment period will be needed the second growing season to allow vegetation to respond to reduced competition.
- D. When broom snakeweed is chemically treated during the Oct. through Dec. period, the treated area will be deferred the next full growing season.
- E. On land where non-native species are dominant and preferred, and are not being intensively managed, (no fertilizer or weed control), and the plant vigor is low but has adequate ground cover to prevent erosion, apply the same treatment as (A) above. Where the vigor is good, the area will be deferred for a minimum of 90 consecutive days during the growing season following treatment.
- F. Where chemical control is applied after August 15th, the area will

receive a deferment for the remainder of the growing season as well as 90 consecutive days during the spring of the succeeding year.

- G. A short duration type of grazing sequence may be used in place of A, B, C, D, E and F above. The released forage species are to be managed for improved vigor and an upward trend.
- H. Where chemical control is used on 10 percent or less brush canopy, a deferment period is desirable but will not be required unless required by the approved label of the herbicide used.

## **Mechanical Control**

### Rootplowing

The area will be deferred the remainder of the growing season starting when the seed is planted. If the stand is weak in vigor at the end of the first growing season, a deferment period during the second growing season will be required as needed to ensure a stand develops in the seeded area.

### Treedozing

When seeding is not applied and the rangeland similarity index is 50 percent or less or the forage value rating is moderate or lower, the area will receive a deferment the remainder of the growing season from the time of the start of mechanical control. If control is done after Aug. 15, the area will also receive a spring growing season deferment the next year.

Where the rangeland similarity index is 51 percent and greater or the forage value rating is high or greater, but the plant vigor is low, apply the same treatment as (A) above. Where the vigor is good, the area will be deferred for a minimum of 90 consecutive days during the growing season following treatment. If control is completed after Aug. 15, the

area will receive a spring growing season deferment the next year.

Where the land has been seeded to non-native species and is not being intensively managed, (no fertilizer or weed control), and the plant vigor is low, but has adequate ground cover to prevent erosion, apply the same treatment as (A) above. Where the vigor is good, the area will be deferred for a minimum of 90 consecutive days during the growing season following treatment. If control is completed after Aug. 15, the area will receive a spring growing season deferment the next year.

Where individual plant treatment techniques are used on 10 percent or less brush canopy, a deferment period is desirable but will not be required.

All Other Mechanical Methods - Apply the same treatment as (A) and (B) above.

## **SEEDED AREAS**

All seeded areas must be rested or deferred until the plants are well established. This will always be the first growing season following seeding and in many instances the second growing season. Further deferment periods during succeeding growing seasons may be necessary to establish or increase the stand. Light grazing may be possible during the first dormant season if plants are sufficiently established so that they will not be damaged.

## **WILDLIFE BENEFIT**

To favor middle and late summer forage plants, defer grazing from spring through late summer.

To favor late winter forage plants, defer grazing from early fall through winter or until the occurrence of spring rains and new growth.

When browse plants and perennial forbs are in low vigor, defer grazing for a full growing season and thereafter as needed.

For turkey and quail nesting areas, defer grazing through the Fall and Winter to leave the previous year's residual grass cover.

When pheasant and waterfowl are important, defer grazing in playa basins during Summer and Fall to favor seed producing grasses and forbs.

### **WEED INFESTED GRAZING LAND**

If controlled concentrated grazing and browsing is used for short periods during Winter and early Spring to control weeds, these use periods should be followed by a deferment period during the spring growing season or longer depending on the situation.

### **TO DEVELOP A FORAGE RESERVE** (Including a fine fuel load for Prescribed Burning)

Defer for 90 consecutive days in the spring or fall or for a full growing season in semi-arid and arid climates.

### **FOLLOWING WILDFIRES, INSECT DAMAGE, SEVERE DROUGHT OR SIMILAR DAMAGE**

Rest or defer until the vegetation has made adequate recovery during a period of favorable growing conditions.

### **FOLLOWING A PRESCRIBED BURN**

Grazing management must be designed to aid in accomplishing the objective. In general, rangeland with a similarity index of 50 percent or less or native pasture with a forage value rating of moderate or lower will have a full growing season

deferment immediately following the prescribed burn. Rangeland with a rangeland similarity index of 51 percent or greater and in good vigor or native pasture with a forage value rating of high or better and in good vigor will be deferred a minimum of 90 days immediately following the burn.

The deferment period must be during the growing season of the key plants. When the objective is to increase palatability for such species as weeping lovegrass, tobosa, little bluestem, bermudagrass, etc., grazing and deferment may be scheduled as needed to accomplish the planned objective.

### **GRAZED FORESTLAND**

Exclude livestock from all areas of desirable hardwood reproduction until trees have reached a size that cannot be significantly damaged by browsing animals.

Livestock must be excluded from pine and hardwood plantings for at least three years after planting or seeding or until the apical meristem is above the grazing height of the livestock species. Exclude goats and sheep from pine reproduction until trees are 8 feet tall.

### **PASTURELAND**

Perennial warm season grasses that are at minimum grazing use heights should be deferred 30 to 45 days prior to the first killing frost to replenish carbohydrate reserves to maintain plant vigor.

Perennial cool season grasses should not be grazed from about mid June until September, unless deferred from grazing at least 45 days during the active growth periods to maintain plant vigor.

### **ANNUAL COOL SEASON LEGUMES**

To allow clovers the best chance to provide seed for next year, they must be

deferred for 2 to 4 weeks toward the end of their production period. General deferral dates for some commonly planted clovers are as follows:

Arrowleaf clover 5/1 – 6/15

Crimson clover 4/1 – 5/15

Ball clover 4/15 – 5/15

Subterannean clover 4/1 – 5/15

Rose clover 5/1 – 6/15

Vetch 5/1 – 6/15

Singletary peas 5/1 – 6/15

three weeks and rest periods are more than four months.

5. Management Intensive Grazing - usually one herd of animals grazing 8 or more pastures with grazing periods one week or less, with rest periods no more than 60 days. This is also called short duration, high density, rapid rotation and cell grazing.
6. Season Long - grazing animals from green-up until early fall or frost.
7. Dormant Season - grazing animals during the plants' dormant or non-growth period.

**See Exhibits for examples of various prescribed grazing sequences**

## **TYPES OF PRESCRIBED GRAZING**

There are several general types of grazing management methods. These include:

1. Decision Deferment - no planned sequence, rested when the manager determines need.
2. Intensive Early Stocking (IES) - begin grazing near green-up and continue until green-up and continue until about July 15 with stockers. Twice the numbers may be carried for the first part of the growing season and adjustments must be planned for when dry conditions persist.
3. Non-intensive - one, two, or three herds rotated through four pastures or less. Generally, grazing periods are longer than rest periods. However, these can be successfully done with rest periods longer than graze periods as a one-herd system.
4. High Intensity Low Frequency - one herd, grazing five or more pastures where grazing periods are longer than

**TABLE 1 – GRAZING USE HEIGHTS AND GROWTH CYCLES**

Species	Minimum Heights Prior To Grazing Inches	Minimum Use Heights For Season Long Grazing Inches	Minimum Use Heights For Rotational Grazing Inches	Growth Cycles for Forage Recovery <sup>1</sup> Days	
				Fast Growth	Slow Growth
<b>Sod-forming</b>				April-June	July-Sept.
Bermudagrass: Common	6	4	3	14-28	28-42
Bermudagrass: Hybrid	6	4	3	14-28	28-42
Bahiagrass	6	4	3	14-28	28-42
Dallisgrass	6	4	3	14-28	28-42
<b>Short Height – Warm Season</b>				April-June	July-Sept.
Sideoats grama	6	4	4	21-28	28-60
<b>Short Height – Cool Season</b>				Mar.-June	Nov.-Mar
Wheatgrass, Western	6	4	4	21-28	28-60
<b>Mid Height – Warm Season</b>				April-June	July-Sept.
Bluestems: Caucasian, Plains, Ganada, K.R., Old World T-587, B. Dahl	8	6	4	21-28	28-60
Kleingrass	8	6	4	21-28	28-60
Lovegrass: Weeping, Common, Morpa, Ermelo, Wilman	8	6	4	21-28	28-60
<b>Mid Height – Cool Season</b>				Mar.-June	Nov.-Mar.
Tall Fescue	6	6	4	21-28	28-60
Wheatgrass, Tall	8	6	4	21-28	28-60
Texas Wintergrass	6	6	4	21-28	28-60
Wildrye, Virginia and Canada	8	8	6	21-28	28-60

**TABLE 1 – GRAZING USE HEIGHTS AND GROWTH CYCLES**

Species	Minimum Heights Prior To Grazing Inches	Minimum Use Heights For Season Long Grazing Inches	Minimum Use Heights For Rotational Grazing Inches	Growth Cycles for Forage Recovery <sup>1</sup> Days	
				Fast Growth	Slow Growth
<b>Tall Height</b>				April-June	July-Sept.
Bluestems: Sand & Big, Little	12	8	6	21-28	28-60
Indiangrass: Cheyenne & Lometa	12	8	6	21-28	28-60
Switchgrass: Blackwell & Alamo	12	8	6	21-28	28-60
Eastern gamagrass	12	8	6	21-28	28-60
Johnsongrass	12	8	6	21-28	28-60
Sacaton: Alkali, Common, Saltalk	12	8	6	21-28	28-60
<b>Legumes – Warm Season</b>				April-June	July-Sept.
Alyceclover	12	8	6	21-28	28-60
Lespedeza	8	6	4	21-28	28-60
Bundleflower	6	6	4	21-28	28-60
Sweet Clover	8	6	4	21-28	28-60
<b>Legumes – Cool Season</b>				Mar.-May	Dec.-Feb
Clover: Ball, White, Berseem, Bur, Crimson, and Arrowleaf	6	4	3	14-21	21-42
Vetch	6	4	3	14-21	21-42

<sup>1</sup> Length of recovery period is influenced by the severity of grazing use, growing conditions (moisture and temperature), and growth habit of the forage species.

# 3 Pasture System 1 Herd

**First Year**

February - April		
A	B	C
G	R	R

May - July		
A	B	C
R	G	R

August - October		
A	B	C
R	R	G

November - January		
A	B	C
G	R	R

**Second Year**

February - April		
A	B	C
R	G	R

May - July		
A	B	C
R	R	G

August - October		
A	B	C
G	R	R

November - January		
A	B	C
R	G	R

**R = Rest**

**G = Graze**

	Year 1												Year 2											
Pasture	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
A	Graze			Rest						Graze			Rest						Graze			Rest		
B	Rest		Graze			Rest						Graze			Rest						Graze			
C	Rest			Graze						Rest						Graze			Rest					

	Year 3												Year 4											
Pasture	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
A	Graze			Rest						Graze			Rest						Graze			Rest		
B	Rest		Graze			Rest						Graze			Rest						Graze			
C	Rest			Graze						Rest						Graze			Rest					

# 2 Pasture System

## 3-6-3

**First Year**

February - April	
A	B
G	R

May - October	
A	B
R	G

November - January	
A	B
G	R

**Second Year**

February - April	
A	B
R	G

May - October	
A	B
G	R

November - January	
A	B
R	G

**R = Rest**

**G = Graze**

	Year 1												Year 2											
Pasture	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
A	Graze			Rest						Graze			Rest			Graze						Rest		
B	Rest			Graze						Rest			Graze			Rest						Graze		

	Year 3												Year 4											
Pasture	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
A	Graze			Rest						Graze			Rest			Graze						Rest		
B	Rest			Graze						Rest			Graze			Rest						Graze		

# 2 Pasture System

## 4-4-4

(2X4)

**First Year**

December - March			
A	B		
G	R		

April - July			
A	B		
R	G		

August - November			
A	B		
G	R		

**Second Year**

December - March			
A	B		
R	G		

April - July			
A	B		
G	R		

August - November			
A	B		
R	G		

**R = Rest**

**G = Graze**

	Year 1												Year 2												
Pasture	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	
A			Graze		Rest						Graze				Rest			Graze			Rest				
B			Rest			Graze			Rest						Graze			Rest						Graze	

	Year 3												Year 4												
Pasture	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	
A			Graze		Rest						Graze				Rest			Graze			Rest				
B			Rest			Graze			Rest						Graze			Rest						Graze	

# 3 Pasture System

## 1 Herd

(Graze 3 Months - Rest 6 Months)

<b>First Year</b>	February - April			May - July			August - October			November - January		
	A	B	C	A	B	C	A	B	C	A	B	C
	G	R	R	R	G	R	R	R	G	G	R	R
<b>Second Year</b>	February - April			May - July			August - October			November - January		
	A	B	C	A	B	C	A	B	C	A	B	C
	R	G	R	R	R	G	G	R	R	R	G	R

**R = Rest**

**G = Graze**

	Year 1												Year 2											
Pasture	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
A	Graze			Rest						Graze			Rest						Graze			Rest		
B	Rest			Graze			Rest						Graze			Rest						Graze		
C	Rest						Graze			Rest			Graze			Rest								

	Year 3												Year 4											
Pasture	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
A	Rest			Graze			Rest						Graze			Rest						Graze		
B	Rest						Graze			Rest			Graze			Rest								
C	Graze			Rest						Graze			Rest						Graze			Rest		

# 3 Pasture System

## 2 Herd

(Graze 6 Months - Rest 3 Months)

First Year

February - April		
A	B	C
G	G	R

May - July		
A	B	C
R	G	G

August - October		
A	B	C
G	R	G

November - January		
A	B	C
G	G	R

Second Year

February - April		
A	B	C
R	G	G

May - July		
A	B	C
G	R	G

August - October		
A	B	C
G	G	R

November - January		
A	B	C
R	G	G

R = Rest

G = Graze

	Year 1												Year 2											
Pasture	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
A		Graze		Rest				Graze					Rest				Graze							Rest
B			Graze				Rest				Graze					Rest				Graze				
C		Rest				Graze				Rest					Graze				Rest			Graze		

	Year 3												Year 4											
Pasture	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
A			Graze				Rest				Graze					Rest				Graze				
B		Rest				Graze				Rest					Graze				Rest			Graze		
C		Graze		Rest				Graze				Rest		Rest				Graze					Rest	

# 4 Pasture Merrill System

First Year

April - July			
A		B	
R		G	
D		C	
G		G	

August - November			
A		B	
G		R	
D		C	
G		G	

December - March			
A		B	
G		G	
D		C	
G		R	

Second Year

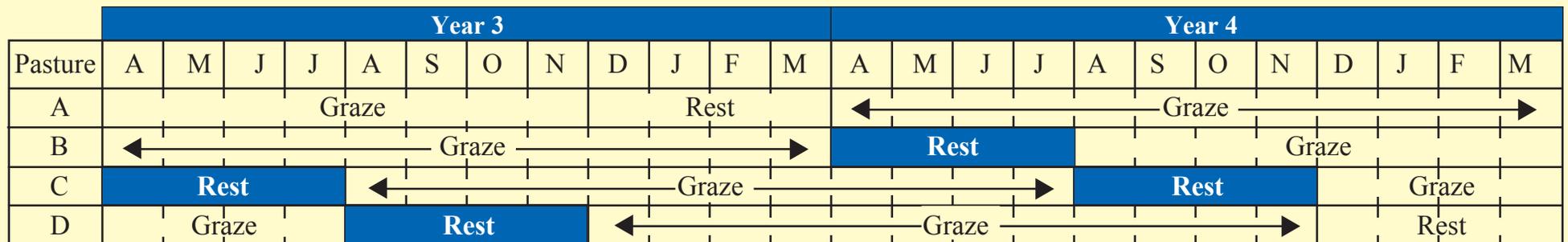
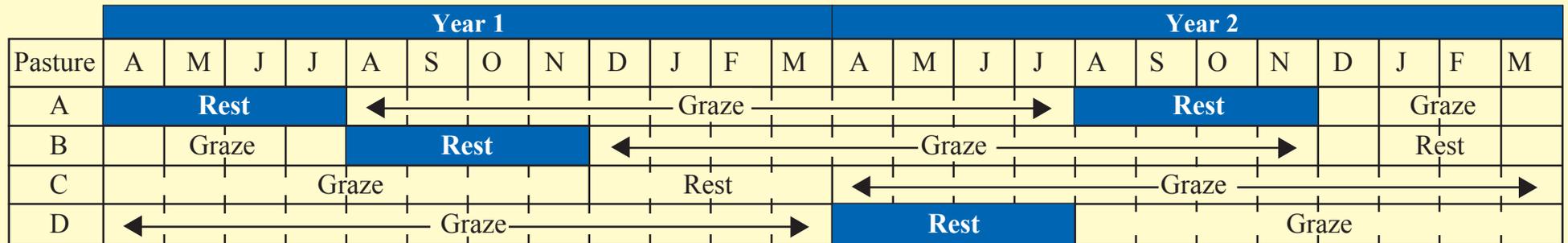
April - July			
A		B	
G		G	
D		C	
R		G	

August - November			
A		B	
R		G	
D		C	
G		G	

December - March			
A		B	
G		R	
D		C	
G		G	

R = Rest

G = Graze



# Short Duration Grazing System

1	2	3	4	5	6	7	8
Graze	Rest						

## Grazing Period

Pasture	Year 1												Year 2											
	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
1	G								G								G							
2		G								G														
3			G								G								G					
4				G							G									G				
5					G							G									G			
6						G								G								G		
7							G								G								G	
8								G								G								G

G = Graze

Livestock concentrate on most nutritional plants when first placed in a fresh pasture. When these plants are grazed, they then graze less nutritional plants, thus the nutritional level of their diet goes down. To overcome, speed up moves.