



Forage Harvest Management Fact Sheet

Applicable to conservation practice Forage Harvest Management - 511

USDA Natural Resources Conservation Service - North

April 2004



What is Forage Harvest Management:

Forage harvest management is the timely cutting and removal of forages from hay, green-chop and ensilage fields.

How Forage Harvest Management helps:

Managing the time and height of harvest will prolong life expectancy and maintain a desirable, healthy plant community.

To apply this practice: Consideration should be given to:

- ✓ *Stage of maturity:* harvest forage at the stage of maturity that provides desired quality and quantity.
- ✓ *Moisture content:* moisture content is the largest factor contributing to leaf loss. Hay baled above 15 percent moisture has much less leaf loss than hay baled below 15 percent moisture.
- ✓ *Length of cut:* optimum time to cut depends on species involved. See Table 1 – Forage Harvest Management for minimum stubble height.
- ✓ *Contaminants:* Forage shall not contain contaminant levels which may jeopardize livestock (class and type) health.

Other Considerations:

- ✓ When forage production exceeds livestock demand, consider harvesting a portion of the pasture. Coordinate this with Prescribed Grazing (528).
- ✓ Well-fertilized plants withstand more intense harvesting and may produce a higher quantity and quality of forage. Coordinate this with Nutrient Management (590).

- ✓ Select adapted species suitable for the number of harvests, forage quality and quantity desired. Coordinate this with Pasture and Hayland Planting (512).
- ✓ Clean harvesting equipment after harvest and before storage to help control plant diseases, insects and weeds.
- ✓ Weed management should be applied when infestations exceed the economic threshold. See Pest Management (595).
- ✓ Consideration should be given to wildlife species.
 - Haying after July 15th allows for most species to fledge their young.
 - Choose species, i.e. warm seasons, that mature later to allow for harvesting after nests have fledged.
 - Avoid mowing around the field. Mow back and forth or from the inside to the outside of the field to offer wildlife better escape opportunities.
- ✓ Rangeland may be harvested for hay when managed properly.
 - Normally, weed control and fertilizer are not needed.
 - On sites where moisture is present throughout a major portion of the growing season, hay may be harvested once a year.
 - On sites that do not have a water table or do not receive additional moisture, haying should be limited to one harvest every two years.
 - Grazing should not be considered following harvest until after complete dormancy in the fall.

Maintenance:

- ✓ Before harvest, clear fields of debris that could damage machinery or harm livestock, if ingested.
- ✓ Monitor weather conditions annually to adjust the timing of harvest.
- ✓ Inspect and repair equipment
 - All shields should be in place during operation.
 - Shut off harvesting equipment before cleaning or attempting to unclog moving parts.

Where to get help: For more information or site specific assistance on forage harvest management and/or other technical assistance, please contact you local Natural Resources Conservation Service Field Office, Soil Conservation District Office, or your local County Extension Service.

Table 1 – Forage Harvest Management

SPECIES¹	WHEN TO CUT⁴	MINIMUM STUBBLE HEIGHT	OPTIMUM REGROWTH BEFORE KILLING FROST⁵
Creeping Foxtail Intermediate wheatgrass Kentucky bluegrass Meadow brome Pubescent wheatgrass Smooth brome Tall wheatgrass Western wheatgrass	1 st cutting - Medium to full head Later cuttings - when new basal sprouts appear or regrowth reaches appropriate cutting heights (12"-15")	3 inches	6 inches
Slender wheatgrass	Early head	3 inches	6 inches
Crested wheatgrass Green needlegrass	Boot to early heading or when regrowth is 14 to 20 inches	3 inches	6 inches
Reed Canarygrass	1 st cutting - early boot Later cuttings: when basal sprouts appear or regrowth reaches appropriate cutting heights (12"-15")	3 inches	6 inches
Prairie cordgrass	18 to 24 inch plant height	6 inches	10 inches
Big and Sand bluestem ² Indian grass ² Switchgrass ²	Early boot to boot stage	6 inches	10 inches
Alfalfa	1 st cutting - late bud early flower Later cuttings: 1/4 bloom	2 inches	8 inches
Clovers (alsike, ladino, red, White)	All cuttings: 1/4 bloom	4 inches	6 inches
Sainfoin	All cuttings: 1/2 to full bloom	4 inches	6 inches
Birdsfoot Trefoil	All cuttings: 1/10 bloom	3 inches	5 inches
Cicer milkvetch	All cuttings: 1/10 bloom	3 inches	5 inches

¹ For stand maintenance, no grazing until after complete dormancy in the fall should be practiced.

² On late maturing warm season grasses, harvest a minimum of 6 weeks prior to killing frost.

³ Do not cut alfalfa/clovers later than 4 weeks before average killing frost date.

⁴ Definition of grass growth stages:

- a. Boot - most heads in upper leaf sheath but prior to emergence
- b. Early head - tips of head emerging on not more than 10 percent of the stems.
- c. Medium head - about 50 percent of the heads emerged or emerging.
- d. Full head - most heads emerged but prior to any flowering.

⁵ A killing frost can be defined as when temperatures drop below 32 degrees F for an extended period of time (usually several hours) such that will kill vegetation. Temperature and duration will vary with plant species, as some plant species are more frost tolerant.