

Chesapeake Bay Program Quick Reference Guide for BMPs

A-8. Pasture and Grazing management practices

General Information

Many farmers allow horses, dairy cows and beef cattle to eat grass or other forage vegetation – i.e., graze – in pastures during non-winter months. Grazing, movement and manure deposition by the animals encourages growth of pasture vegetation. However, animals can overgraze a pasture if there is not enough area to graze for the number of animals, or if they are not moved to a fresh area frequently enough. Overgrazing can lead to a loss of vegetative cover, soil erosion and nutrient runoff. By rotating animals to other areas or pastures, the recently grazed vegetation has an opportunity to regrow. Farmers consider a number of factors specific to their operational needs and capacity, such as animal type, pasture soils and vegetation, when determining the most effective way to manage their herd. Related BMPs, such as buffers with exclusion fencing (see A-13) or off-stream watering (see A-19), are not discussed here.

CBP Definition(s)

Horse Pasture Management: maintaining a 50% pasture cover with managed species and managing high traffic areas.

Precision Intensive Rotational/Prescribed Grazing: This practice utilizes a range of pasture management and grazing techniques to improve the quality and quantity of the forages grown on pastures and reduce the impact of animal travel lanes, animal concentration areas or other degraded areas. PG can be applied to pastures intersected by streams or upland pastures outside of the degraded stream corridor (35 feet width from top of bank). Pastures under the PG systems need to have a vegetative cover of 60% or greater.

Specifications or Key Qualifying Conditions

Jurisdictions may have additional requirements for management of grazing and pasture areas, such as stocking rates (animals per acre). For CBP purposes the only requirement is the minimum vegetative cover. These BMPs can be applied with or without related BMPs such as stream exclusion fencing or off-stream watering systems.

Nitrogen, Phosphorus and Sediment Reductions

The horse pasture management BMP receives no nitrogen reduction. Its phosphorus and sediment efficiency values are the same for all hydrogeomorphic regions (HGMRs) in the watershed. The BMP for precision intensive rotational/prescribed grazing has two different nitrogen efficiency values based on the HGMR as seen in Table A-8-1; the phosphorus and sediment efficiency values are 24 percent and 30 percent, respectively, regardless of HGMR.



Figure A-8-1. Animals' diets may be supplemented in other ways by the farmer, but grazing time in a pasture allows animals to eat, drink, socialize, exercise or relax at their own pace. Photos: USDA NRCS (top); Chesapeake Bay Program (bottom)

Table A-8-1. Nitrogen, phosphorus and sediment efficiency values for horse pasture management and rotational grazing BMPs

BMP	Hydrogeomorphic region (HGMR)	Nitrogen	Phosphorus	Sediment
Horse Pasture Management	All	0%	20%	40%
Precision Intensive Rotational/Prescribed Grazing	Appalachian Plateau Carbonate; Coastal Plain Dissected Uplands; Piedmont Carbonate; Valley and Ridge Carbonate; all Coastal Plain HGMRs	9%	24%	30%
Precision Intensive Rotational/Prescribed Grazing	Valley and Ridge Siliciclastic; Appalachian Plateau Siliciclastic; Mesozoic Lowlands; Blue Ridge; Piedmont Crystalline	11%	24%	30%

Specific Reporting and Modeling Information

Applicable Land Use Types (or other load sources) Treated by the BMP:

- Pasture

Brief Description of BMP Simulation in the Model

The grazing and pasture management BMPs described here are *Efficiency Value BMPs*. One acre of pasture is treated for each acre reported under the BMPs, using the efficiency values in Table A-8-1.

Annual or Cumulative? Cumulative (10-year credit duration)

Can this practice be combined with other BMPs? Yes.

Key Elements for State BMP Reporting through NEIEN

- **BMP Name:**
 - Horse Pasture Management
 - Precision Intensive Rotational/Prescribed Grazing
- **Measurement unit:** Acres
- **Land Use:** Approved NEIEN agricultural land uses; if none are reported the default will be Pasture
- **Geographic location:** Approved NEIEN geographies: County; County (CBW only); Hydrologic Unit Code (HUC12, HUC10, HUC8, HUC6, HUC4); State (CBW only)
- **Date of implementation:** Year grazing plan/system was implemented.



Figure A-8-2. Grazing systems that maintain healthy, dense vegetative cover in a pasture throughout the year are beneficial to water quality. Photos: USDA NRCS

Table A-8-2. Synonymous BMP names for Watershed Model, NEIEN and other sources

CBP or Expert Panel term	NEIEN BMP name	Other common BMP names
Horse Pasture Management	Horse Pasture Management	Prescribed grazing (NRCS 528 or 528A)
Precision Intensive Rotational/Prescribed Grazing	Grazing land protection; Prescribed grazing; Rotational grazing RI (RI-15)	Managed intensive grazing; Prescribed grazing (NRCS 528 or 528A)

Additional Information

Chesapeake Bay Program. 2015. [Video]. Restoration Spotlight: The Grass Whisperer gets to the root of grazing. <https://vimeo.com/144890052>

USDA NRCS. Pasture resources.

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/rangepasture/pasture/>

University of Maryland Extension. Publications: [Horse] Pasture Management:

<https://extension.umd.edu/horses/resources/publications>

Version and History Statement

This info sheet was first published on August 10, 2018 and reflects the BMP definition and benefits that were reviewed and approved by the Agriculture Workgroup and WQGIT in 2010.

All BMP effectiveness estimates are subject to potential future reviews according to the availability of new scientific information and CBP partnership needs, as defined in the [BMP Review Protocol](#).