

Background:

This practice was developed in cooperation with the Soil Health Coalition and incorporates initiatives from partners (Virginia Cooperative Extension and Natural Resources Conservation Services). As developed, the implementation of this practice will be a venture between the Virginia Department of Conservation and Recreation, Soil and Water Conservation Districts, Virginia Cooperative Extension and the Virginia Soil Health Coalition.

This pilot practice is anticipated to be implemented in two Soil and Water Conservation Districts (Districts). Each District will be able to utilize up to \$500,000 of FY2023 Virginia Agricultural Best Management Cost-Share (VACS) Program funds to incentivize the implementation of the practice.

This practice builds on the existing SL-10 practice (Grazing land management) to improve both water quality and soil health. This practice focuses on management techniques that a producer implements, rather than a structural technique. Enhanced management techniques include rotational bale grazing, soil sampling, improved hay feeding, improved nutrient cycling and placement, and reducing the impact of winter-feeding areas. Utilizing the Graze 300 program, sponsored by Virginia Cooperative Extension, will help increase number of days grazed and further reduce impacts of winter hay feeding. Well-managed pastures have improved soil health and may lead to a reduced need for nitrogen applications for stockpiled forages.

Additionally, field days will be conducted to share information, including the benefits of the practice, with neighboring agricultural producers.

Name of Practice: GRAZING LAND MANAGEMENT
DCR Specification for No. SL-10 E
(SL-10 Enhanced)

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Grazing Land Management best management practice which are applicable to all contracts entered into with respect to this practice.

A. Description and Purpose

This practice provides a grazing management system that will provide and ensure adequate surface cover protection to minimize soil erosion. The system will reduce sediment, nutrients, and pathogen loads in runoff. Grazing days will be increased to reduce water quality impacts from winter feeding areas and help improve Soil Health.

This practice will improve the quantity, quality and utilization of forage for livestock and will reduce the risk of surface and groundwater contamination from non-point source pollution from pastures by assuring that an adequate stand of forage is available to absorb runoff and reduce pollutants.

For purposes of this practice, pastures are represented by those lands that have been seeded, usually with introduced species (*i.e.*, tall fescue, legumes) or in some cases native plants (e.g. switchgrass or other native warm-season grasses), and which are managed using agronomic practices for livestock.

B. Policies and Specifications

1. All fields that receive cost-share under this practice must be perennial pasture and have had all livestock previously excluded from all surface waters and sink-holes. Any field that is part of a rotational grazing system is eligible. Pasture lands previously enrolled in the SL-10 and are now out of lifespan are eligible. In addition, pasture lands currently enrolled in the SL-10 may be eligible for the additional incentive of \$15 per acre to graze 300 days per year or \$25 per acre to graze 330 days per year; as well as \$5 for strategically fed hay so that nutrients in the hay match nutrient needs based upon zone or grid samples.
2. In order to be eligible for cost-share, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the fields on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

3. A written Grazing Management Plan and Operation and Maintenance Plan that includes all acres in the grazing system must be prepared and followed in accordance with NRCS Standard 528 Prescribed Grazing.
4. The system developed with this practice must maintain adequate nutrient and pH levels to improve or maintain desired forage species composition, plant vigor, and persistence in accordance with soil test recommendations.
5. Locate infrastructure to facilitate grazing management and manure distribution:
 - i. Manage the type and number of livestock and the length of grazing period based on available forage and allowable utilization targets. Manage livestock rotation to new paddock subdivisions to maintain minimum grazing height recommendations and sufficient rest periods for plant recovery according to NRCS Grazing Heights and Rest Guidelines by Forage Table 1 (attached). Size pasture and subdivisions and manage animal stock densities to minimize grazing periods and maximize manure and urine distribution throughout the pasture.
 - ii. Maintain adequate plant cover of at least 60% pasture stand density year round to increase rainfall infiltration and decrease runoff from pasturelands for the lifespan of the practice.
 - iii. Locate feeding areas away from sensitive areas such as wetlands, sink holes, streams/creeks and adjacent drainage swales etc.
 - iv. Manage distribution of nutrients and minimize soil disturbance at hay feeding sites by unrolling hay across the upland landscape throughout the pasture system when soils are well drained or move hay rings periodically.
 - v. A sacrifice lot must be used during times of drought or during excessively wet soil conditions over the winter feeding season as a place to feed hay and supplements to livestock until pasture conditions are suitable for grazing or feeding without damaging the soil quality or reducing plant cover. A sacrifice lot/paddock should not drain directly into ponds, creeks or other sensitive areas and should not be more than 10% of the total pasture acreage.
6. Pastures must be mowed as needed in order to control woody vegetation and encourage regrowth; however, the pastures will not be mowed any lower than indicated in NRCS Table 1, Guidelines for Grazing Heights and Rest Periods. Consider wildlife nesting concerns and time accordingly.
7. Pastures not meeting minimum 60% year round cover criteria should be replanted in accordance with NRCS Standard 512 Pasture and Hay Planting. Replanting will be at the participant's expense.
8. Drag pastures at least twice a year to break-up manure piles after livestock are removed from a field to uniformly spread the manure load or manage manure

distribution through rotational grazing where livestock are moved to uniformly distribute manure and maximize forage.

9. The NRCS Pasture Condition Score will be used to establish a benchmark for pasture evaluation and to document pasture condition and progress. This score will be tabulated annually at the same time of the year (during the growing season) as the initial scoring. The pasture condition score should increase each year as better pasture management techniques allow for better forage management and increased utilization.
10. State cost share will be provided only one time per field.
11. This practice is subject to the requirements of NRCS Standards, 382 Fence, 314 Brush Management, 512 Pasture and Hay Planting, 516 Pipeline, 528 Prescribed Grazing, 561 Heavy Use Area Protection and 614 Watering Facilities, and 595 Pest Management.
12. Payment will be made after soil test recommendations, the required grazing plan, and nutrient management plan are on file with the District. By accepting payment for this practice, the recipient agrees to maintain the practice for the three-year lifespan beginning Jan. 1 of the calendar year following the calendar year of certification of completion. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost-share funds.
13. An added incentive will be available to comply with Graze 300 program (grazing 300 days per year) and an additional enhancement to graze 330 days per year.
14. Portable fencing systems may need to be installed to enhance year-round grazing systems, strip grazing of winter stockpiled forages and strategic bale feeding.
15. Strategic bale feeding and well-managed pastures enhance nutrient cycling in grazing systems. Recommendations in nutrient management plans can strategically track nutrients from hay feeding and measure nitrogen cycling in pastures that may impact appropriate nitrogen rates.

C. Rate(s)

For participants who are not receiving payments for prescribed grazing from another source on the same acreage, a cost-share incentive payment of \$75 per acre for this practice is available. This is a one-time payment. Acres currently enrolled in the SL-10 are not eligible for this incentive.

An additional incentive of \$15 per acre to graze 300 days per year or \$25 per acre to graze 330 days per year is available for acres currently enrolled in the SL-10.

Portable fencing systems to strip graze winter forages and enhance strategic bale grazing is an allowable expense. Acres currently enrolled in the SL-10 are eligible for this incentive if they have not received funding for portable fencing through VACS or another funding source. The state cost-share payment for portable fencing associated with this practice will not exceed 75% of the total eligible costs, not to exceed \$750.00, for effective use of the portable fencing system in the least cost, technically feasible manner of design.

Per B16, above, added incentive of \$5 per acre for strategic bale feeding to impact placement and rate of nutrients. Strategic bale feeding should be determined by nutrient management plans that zone or grid soil sample individual fields and measured nutrient content of imported hay. Hay will be strategically fed so that nutrients in hay match nutrient needs based upon zone or grid samples. Acres currently enrolled in the SL-10 are eligible for this incentive.

Soil-test biological activity (STBA) can be a good indicator of whether additional N fertilizer is needed on stockpiled forages (<http://gwccarc.org/wp-content/uploads/2019/01/OFR-2018-04-STBA-Relevance-and-Guidance-Documents-for-TF-v1.pdf>) *Note: STBA is not currently recognized by Virginia Tech as a viable tool even though peer reviewed research on over 90 field trials has been conducted. Therefore, demonstration trials at the farm level to look at yield with and without N may be necessary. Cost of STBA analysis and collection of a soil sample will be covered up to \$250 per field, not to exceed a total of \$1,000, for participating farmers to conduct a field demonstration with and without N fertilizer application.

D. Technical Responsibility

Technical and administrative responsibility is assigned to qualified technical DCR and District staff in consultation, where appropriate and based on the controlling standard, with DCR, Virginia Cooperative Extension and NRCS. Individuals certifying technical need and technical practice installation shall have appropriate certifications as identified above and/or Engineering Job Approval Authority (EJAA) for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.

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TABLE 1



Grazing Height and Rest Guidelines by Forage

Appropriate grazing and recovery periods allow forages to renew energy reserves, improve plant vigor, maintain or improve plant diversity, and provide long-term persistence of a productive forage stand.

The grazing period should be adjusted based on stage of growth or forage height. Rest period between grazing events will vary in length depending on growing conditions and forage recovery.

Table 1. Guidelines for Grazing Heights and Rest Periods

Forage Species	Height to Begin Grazing (inches)	Height to End Grazing (inches)	Recovery Time (days) ¹
Tall Fescue	6-8	3-4	14-45
Orchardgrass	8-10	4-5	14-45
Bluegrass	4-6	2	14-45
Reed Canarygrass	10	3-4	14-45
Small Grains (Wheat, Rye, Oats, etc.)	8	2-3	7-15
Annual Ryegrass	6-8	3-4	7-15
Alfalfa	10-16	3-4	14-30 ²
Sericea lespedeza	8-10	4-6	14-45
Caucasian Bluestem	8-10	3-4	14-45
Bermudagrass	6	2	7-15
Switchgrass	18-24	9-12	30-45
Eastern Gamagrass	18-24	9-12	30-45
Crabgrass	6-8	2-3	14-21
Pearl Millet	18-20	8-12	10-20
Forage Sorghum	20-30	5-7	10-20
Sorghum Sudan Hybrids	20-24	5-7	10-20
Sudangrass	20-24	5-7	10-20

¹Recovery times are best based on regrowth. If pastures have not regrown, feed hay to animals in a sacrifice area.

²Grazing types of alfalfa can sustain with shorter recovery times under optimum growth conditions compared to hay types of alfalfa.

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