# Advanced Grazing Management

***Conservation Practice – Guidance Document*** ***NH-528***

## Description

In the Conservation Stewardship Program (CSP), Advanced Grazing Management (AGM) incentivizes producers to improve upon their existing intensive rotational management through an increased payment rate. It is for producers who are ***already****:*

- moving at least twice a week,
- not overstocked
- allowing adequate recovery
- managing sensitive areas appropriately (exclusion or flash grazing under the right conditions).

**Goals:** Increase soil health, production per acre and forage quality. Advanced Grazing Management will be planned around specific problems that are limiting production. Then the grazing and pasture management methods described in the options below will be selected for each field to meet the producer's goals.

## Criteria

- Planner will verify that the operation currently meets or will adopt a 3 day or less rotation.
- Applicants will have or develop a grazing management plan to match the forage quantity and quality produced with the animal demand (criteria listed directly below). If a plan already exists, an addendum can be added to an existing plan to incorporate the specific criteria in the following pages.
    - Removal of forage will be in accordance with site production limitations, rate of plant growth, the physiological needs of plants, allowable utilization, and the nutritional needs of the animals.
    - Adjust intensity, frequency, timing, and duration of grazing and/or browsing animals. Providing sufficient recovery time to meet written objectives for the plant communities and associated resources.
    - Manage animals grazing or bale grazing to maintain adequate cover on or protect sensitive areas (e.g., riparian areas, wetlands, habitats of concern etc.).
    - Develop and follow contingency/emergency plans to address episodic disturbance events.

- Supplemental feed and/or minerals will be provided as needed to meet the nutritional requirements of the kind and class of grazing and/or browsing livestock.
- ***Develop a monitoring plan as part of the grazing management plan***

- **Applicant will select *<u>at least</u>* one of the following four options and can vary across the operation depending on producer goals. Identify which selection is being applied to which pastures.**
    1. ***Improved Management for Low Fertility Pastures Based on Soil Tests (Pg 3)***
    2. ***Implementing Bale Grazing to Increase Organic Matter and Reduce Nutrients in Surface Water (Pg 5)***
    3. ***Management Intensive Rotational Grazing (Pg 7)***
    4. ***Soil Health Improvements on Pasture (Pg 9)***

## Documentation & Implementation Requirements

Participant will:

- Follow the documentation and implementation requirements outlined below.
- Prior to implementation, list what option is planned on which fields in the space below. After implementation, document the applied amount and the year.

## Additional Comments/Selection of Management Options

# Improved Management for Low Fertility Pastures Based on Soil Tests

## Description:

**Goal:** Increase pasture productivity and health through management changes.

Use the Pasture Condition Score (PCS) indicators to identify areas of low *plant productivity and health*. Identified areas will be soil sampled. Adjust management of grazing animals, fertilizer and/or soil amendments according to the soil test to increase the plant productivity and health.

## Criteria:

In addition to the grazing management plan requirements on pg. 1-2:

- Conduct assessments on each pasture using the Pasture Condition Scoring tool. Plant productivity and health will be determined by the PCS:
    - Percent desirable plants indicator, dormant plant cover Indicator, and plant vigor element are all greater than or equal to 4.
    - Plants are adapted to the site, meet production goals and do not negatively impact other resources.
- Sample soils in problem areas identified by the PCS
- Develop a written amendment and grazing recommendation and add it to the grazing management plan.
- Apply fertilizer and/or soil amendments according to a current soil test to improve plant productivity and health.
- Manage animals to allow adequate recovery for the desirable plants after nutrient amendments to increase the plant health.
- Develop monitoring plan for plant productivity and health on treated fields to assess the effect of the management change. Adjust forage animal balance accordingly.

## Documentation and Implementation Requirements:

### Participant will:

<u>During implementation:</u>

- Maintain grazing records to show management adjustments and nutrient application records per the grazing management plan on all previously measured management units.

**After implementation provide the following for review by NRCS:**

- Pasture Condition Score Sheets with all field notes and locations.
- Soil test analysis.
- Fertilizer application rates.
- Grazing monitoring records.
- Written modifications to the grazing management and monitoring plan which address the resource concerns identified from the PCS assessment (Plant productivity and health).

**NRCS will:**

Provide technical assistance, as requested.

Prior to implementation:

- Provide soils information and/or Forage Suitability Groups.
- Review soil test analysis, if requested.

After implementation NRCS will review:

- Pasture Condition Score sheets and written recommendations.
- Verify implementation of the grazing management plan by reviewing the monitoring plan, animal/forage balance records, and changes made to the plan to address resource concerns identified during the Pasture Condition Scoring assessments.

# Implementing Bale Grazing to Increase Organic Matter and Reduce Nutrients in Surface Water

## Description:

**Goal:** Increase organic matter and soil health in pastures and/or distribute winter feeding areas to reduce concentrated feeding areas.

Forages will be placed evenly throughout the field but can be concentrated in areas where concerns need to be remedied (e.g., low soil fertility or bare ground). Decisions of forage placement must consider areas that would be sensitive to bale grazing (e.g., protecting surface waters from nutrients or steep slopes from erosion). Bale grazing forages in this manner will help to incorporate organic matter, feed and diversify the soil microbiome, build aggregation, and increase soil health and critical functions (e.g., infiltration, nutrient cycling, and weather resilience).

## Criteria:

In addition to the grazing management plan requirements on page 1-2 above:

- A written/updated 4-seasons grazing management plan that matches the forage quantity and quality produced with the grazing and/or browsing demand will be followed.
- Use the 827 NH IR Strategic Harvested Forage Management 2024 to design the bale grazing layout.
- Bale graze to incorporate organic matter into the soil and optimize delivery of nutrients to the animals by incorporating the intensity, frequency, timing and duration of grazing and/or browsing animals.
- Bale grazing should be designed to meet the objective of the identified resource concern(s) of the field and may be concentrated in areas where concerns such as low fertility or bare ground need to be remedied.
- Bale grazing will be managed to protect sensitive areas (e.g., riparian areas, wetlands, habitats of concern, etc.).
- Off-field forages used should not contain noxious or invasive weeds.
- Test soil to monitor build-up of excessive nutrient levels. Select sites with low to moderate soils test to supplement organic matter and provide nutrients. Avoid sites with already high nutrient levels.
- Consider soil texture constraints for bale locations.
- All non-degradable bale material must be removed from the field when bales are gone.
- Use electric fencing or separate paddocks to control livestock access to bales to ensure forages are used efficiently.

## Documentation and Implementation Requirements:

### Participant will:

Prior to implementation:

- Acquire/update a 4-Seasons Grazing Management Plan.
- Identify location(s) where bale grazing can occur. Proximity to sensitive areas such as surface water and soil and drainage limitations will be considered and a management plan will be developed.
- Provide current soil test results (no older than 2 years) to NRCS for identified areas where bales are planned.

During implementation review the following:

- Record location(s) of bale placement.
- Records of livestock movement through bale areas.
- Monitor livestock condition and feed quality.

After implementation review the following:

- A map showing bale grazing areas.
- Forage-animal balance worksheet(s).
- Records of livestock movement through bale areas.
- Written modifications to grazing management plan based on results of prior bale grazing season and soil test results.

### NRCS will:

Prior to implementation review the following:

- The 4-Season grazing management plan with participant.
- Bale spacing recommendations and calculations for determining number of bales rows needed.
- Soils test results on bale grazing areas

After implementation review the following:

- Map and locations of bale grazing areas.
- Records of livestock movement through bale grazing areas.
- Forage-animal balance sheet.
- Modifications made to the grazing management plan.

# Management Intensive Rotational Grazing

## Description

**Goals:** Reduce selectivity with daily moves, maximize forage quality, adapt to seasonal changes, allow variable rest periods, address weed issues.

Management intensive, multi-paddock grazing system where livestock are regularly and systematically moved to fresh forage to optimize quantity and quality of forage growth, improve manure distribution, improve wildlife cover, and improve soil health. Management-intensive rotational grazing increases harvest efficiency of vegetation with grazing and/or browsing animals through smaller paddock sizes, higher stock density while maintaining plant residue with enough energy reserves to recover quickly when adequate soil moisture is available for regrowth.

*Photo Credit: Bill Fosher used with permission*

## Criteria

In addition to the grazing management plan requirements above:

- Must develop and implement a written grazing plan that:
    - increases stock density
    - shorten grazing periods to daily moves or more frequent (Note: occasional residency times longer than daily are possible to address specific issues such as weeds)
    - enhances plant recovery
- Implement and maintain a rotational grazing system using a combination of permanent or temporary division fences and water facilities to serve the management needs of operation.

## Documentation and Implementation Requirements

### Participant will:

<u>Prior to implementing</u>

- Obtain a grazing plan map delineating the existing paddock system, along with a livestock inventory (type, class, average weight, and number) to document the current stocking density and current stocking rate.
- Update their grazing management plan to document the increased stock density, shortened grazing periods, and monitoring plan to document plant recovery.

<u>After implementation review the following:</u>

- Grazing management plan with maps showing fencing and water layout and managed stock densities for each herd.
- Monitoring documentation.
- Photos of paddock(s) condition and improved forage utilization, and photos of high stock density grazing.
- Changes made to the grazing management plan.

**NRCS will:**

Provide technical assistance, as requested.

Prior to implementation review the following:

- Grazing management plan with participant.
- Plan maps and livestock inventory provided by the participant.
- Fencing and watering layout, associated maps, and stock density numbers for each herd.

After implementation review the following:

- Written grazing plan with maps showing fencing and water layout and managed stock densities for each herd.
- Monitoring documentation.
- Photos of paddock(s) condition and improved forage utilization and photos of high stock density grazing.
- Changes made to the grazing management plan.

# Soil Health Improvements on Pasture

## Description

**Goals:** Increase soil health in pastures to enhance the regenerative benefits of grazing.

Use of laboratory soil health testing to evaluate the impact of planned grazing in addressing organic matter depletion, soil organism habitat and aggregate instability. Laboratory soil health tests will be completed in year 1 and the last year of the contract. Planned modifications to the pasture forages and/or management system will be made to grazing system to address concerns from the assessments. During the soil sample collection, also complete the Pasture Condition Score (PCS) assessment. Soil samples and PCS will be collected within the same pastures.

*Plan CEMA 216 sampling on PLUs with Advanced Grazing Management.*

## Criteria

In addition to the grazing management plan requirements above:

- A primary assessment will be completed in year 1 that includes completing the PCS paired with a soil health test. Record weather factors and the most recent grazing event on the PCS.
- Soil sample collection and PCS will be completed on the same day and in the same pastures.
- During the last year of the contract, a follow-up assessment will be completed using the same methods that were utilized in year 1 in the same management units.

## Documentation and Implementation Requirements

### Participant will:

<u>Prior to implementation:</u>

- Provide NRCS existing grazing sysetm information.
- Develop/update a grazing management plan.
- Select the laboratory soil health test and provider based on your soil health objectives.

<u>During implementation:</u>

- Complete PCS or work with someone qualified to complete the assessment when soil samples are collected.

- Make changes to the grazing management plan based on results of PCS and soil health test to benefit organic matter, soil organism habitat, and/or aggregate instability.

After implementation provide the following items for review by NRCS:

- PCS score sheets with all field notes and locations.
- Soil health laboratory test results (both year 1 and the end of the contract).
- Changes made to the grazing management plan, management changes for at least one indicator should be documented.

**NRCS will:**

Provide technical assistance, as requested.

Prior to implementation:

- Review the grazing management plan with participant.

During implementation:

- Assist producer in selecting management units to collect PCS data and soil sample locations.

After implementation:

- Review PCS and soil health laboratory test results.
- Verify implementation of changes made to the grazing management plan to improve soil health on pasture.