United States Department of Agriculture

CONSERVATION ENHANCEMENT ACTIVITY

E528R

CONSERVATION STEWARDSHIP PROGRAM

Management Intensive Rotational Grazing

Conservation Practice 528: Prescribed Grazing

APPLICABLE LAND USE: Pasture, Range

RESOURCE CONCERN ADDRESSED: PLANTS

ENHANCEMENT LIFE SPAN: 1 Year

Enhancement Description

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.

Criteria

- 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.
- Must develop and implement a written grazing plan that:
  - increases stock density
  - shortens grazing periods
  - enhances plant recovery
  - matches the forage quantity and quality produced with the grazing and / or browsing animal, and

  - increases harvest efficiency and manure distribution by significantly increasing the existing stock density per herd.

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

- Deferment (non-grazing period less than one year) and / or rest (non-grazing period equal to or greater than one year) will be planned for critical periods of plant needs.

- Manage livestock rotation based on rate of plant growth, available forage, and allowable utilization target.

- Manage livestock rotation to provide adequate ground cover and plant density to decrease soil erosion, reduce runoff and improve infiltration and water holding capacity.

- Minimize concentrated livestock areas to enhance nutrient distribution and improve or maintain ground cover.

- Utilize higher stock density and shorter grazing periods in riparian areas to minimize impact to stream bank or shoreline stability and ensure other sensitive areas such as wetlands, habitats of concern, karst areas do not become degraded.

- 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.

- Develop and follow contingency plans to deal with drought or flooding or other episodic disturbance events.

Develop and implement a monitoring plan that at a minimum evaluates livestock performance, plant community composition and density, and soil function components such as ground cover, infiltration and aggregate stability.

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Documentation and Implementation Requirements

Participant will:

□ Prior to implementing, 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.

□ Prior to implementation, acquire a prescribed grazing plan, with a plan narrative delineating the following:

- The goals and objectives of the plan
- Map showing the number of paddock subdivisions with water sources, proposed stock densities per paddock associated with different herds in the system.
- Forage Inventory
- Forage / Animal Balance
- A grazing plan narrative describing the basis for when livestock movement or rotation will occur
- A contingency plan
- A monitoring plan

□ During implementation, keep pasture/ herd in/out records, stock density records and photos of paddock condition and photos of high stock density grazing implementation.

□ After implementation, provide the following items for review by NRCS:

- Written grazing plan with maps showing fencing and water layout and managed stock densities for each herd.
- Paddock / herd in / out records with actual stock densities 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:

- □ As needed, provide technical assistance to participant as requested.
- □ Prior to implementation, provide and explain NRCS Conservation Practice Standard Prescribed Grazing (Code 528) and supporting documents that are needed to implement this enhancement, such as forage-animal balance forms.
- □ Prior to implementation, review the existing grazing plan, maps and livestock inventory provided by the participant.
- □ Review the newly proposed grazing plan 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.
  - Paddock / herd in / out records with actual stock densities 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 Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

_____ _____

NRCS Technical Adequacy Signature Date

WASHINGTON SUPPLEMENT TO

CONSERVATION ENHANCEMENT ACTIVITY

CONSERVATION STEWARDSHIP PROGRAM

Management-intensive grazing (MIG) involves more intensive management than rotational grazing in that it utilizes multiple paddocks (14+ is not uncommon) per herd and emphasizes short grazing periods in the range of 1 to 14 days, followed by a grass recovery period of approximately 20 to100 days. In WA this management is only appropriate for western WA and irrigated pastures. MIG requires careful monitoring and higher startup costs (e.g. fences, water developments) than does regular rotational grazing.

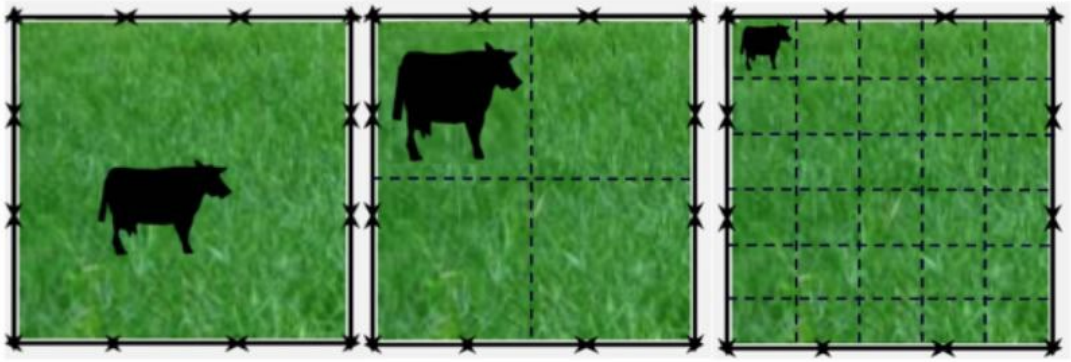

Figure 2. Illustration of grazing management: continuous grazing (left), extensive rotational grazing (middle) and management intensive rotational grazing (right). (Courtesy of iGrow.org)

- **Management-intensive Grazing in Indiana AY-328**, Purdue University Extension. https://www.extension.purdue.edu/extmedia/ay/ay-328.pdf

  Management-intensive Grazing (MIG) on Irrigated Pasture – 1.635, Colorado State University Extension. Management-intensive Grazing (MiG) on Irrigated Pasture - 1.635 - Extension (colostate.edu)

- **NRCS Prescribed Grazing Conservation Practice Standard 528** can be found in FOTG Section 4, Practice Standards and Supporting Documents/Prescribed Grazing (AC) (528) folder, https://efotg.sc.egov.usda.gov/#/state/WA/documents

  National Range and Pasture Handbook. Location: eDirectives,Handbooks,Title 190 – Ecological Sciences,Part 645 National Range and Pasture Handbook.

- **Pasture Condition Scoring** documents can be found in **NRCS Field Office Technical Guide:** in Section 1/Reference Lists/Technical Notes by Discipline/Pasture folder. https://efotg.sc.egov.usda.gov/#/state/WA/documents The accompanying Pasture Condition Scoresheet is located in the same folder.

- **Prescribed Grazing (528) Western WA Feed Forage Balance** Worksheet (other 528 worksheets included) can be found in the NRCS Field Office Technical Guide, Section 4, Practice Standards and Supporting Documents/Prescribed Grazing (AC) (528) folder, https://efotg.sc.egov.usda.gov/#/state/WA/documents

- Pasture Technical Note No. 105. **The Western Oregon and Washington Pasture Calendar,** A Pacific Northwest Extension Publication PNW 699. Oregon State University, University of Idaho, Washington State University. https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw699.pdf

- Washington State's Wildlife Habitat Evaluation Guide (WHEG) is **Biology Technical Note 14 Wildlife Habitat Evaluation Guide (WHEG)**. It can be found in the NRCS Field Office Technical Guide in Section 1/References Lists/Technical Notes by Discipline/Biology folder. https://efotg.sc.egov.usda.gov/#/state/WA/documents

- **EB1870 Pasture and Hayland Renovation for Western Washington and Oregon.** Washington State Unversity Extension. https://pubs.extension.wsu.edu/pasture-and-hayland-renovation-for-western-washington-and-oregon

- **Idaho Forage Handbook BUL 547 Third Edition.** H a y and pasture management. https://www.extension.uidaho.edu/detail.aspx?IDnum=1274&category1=Search&category2=NULL

- **Pasture and Grazing Management in the Northwest PNW 614**. 2010. Glenn E. Shewmaker, Mylen Bohle. https://catalog.extension.oregonstate.edu/pnw614

- A list of **Certified Range Management Consultants** can be found on the Society for Range Management's website under the Education Tab. http://rangelands.org/

- **Ecological Site Descriptions** and **Forage Suitability Groups** can be found in the **NRCS Field Office Technical Guide** https://efotg.sc.egov.usda.gov/#/state/WA/documents in Section 2. For planning unit ecological sites and forage suitability groups see bullet below.

- **Soils, Ecological Sites** and **Forage Suitability Groups** for planning unit can be found by using the **Web Soil Survey** https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm