Plant Enhancement Activity – PLT16 – Intensive management of rotational grazing

Enhancement Description
This enhancement is for the harvest efficiency of grazing livestock to increase forage harvest, and to improve forage quality and livestock health. The grazing system is managed to produce high quality, nutritious forage and maintain plants with sufficient energy reserves to recover quickly when adequate soil moisture is available for regrowth. Generally, livestock are rotated through pastures in the grazing system based on the physiological growth and nutritional stage of the forage plants and the daily dry matter intake and nutritional requirements of the animal. This enhancement is for: rotational grazing systems with increased numbers of pastures or paddocks, the accompanying required infrastructure, shorter grazing periods, and increased stock density. Selection of this enhancement requires the activity to be planned concurrently on all eligible land use acres.

Land Use Applicability
Pastureland, Rangeland, Forestland

Benefits
The main benefits of Intensive Management of Rotational Grazing are efficient resource use with increased forage utilization, improved manure distribution, and nutrient cycling throughout the grazing acreage, and increased carbon sequestration resulting from greater forage harvest. Optimal environmental conditions are achieved by maintaining healthy, actively growing forage plants that improve the quantity and quality of cover available for wildlife and protect the soil surface from erosion, thereby reducing risks to ground or surface water quality.

Conditions Where Enhancement Applies
This enhancement applies to all grazed acres designed as pasture, range or forest land use acres on the entire operation.

Note: the grazing acres of the operation must have a defined rotation before selecting this enhancement. A single grazed field/pasture does not constitute a rotation. The minimum number of grazed fields/pastures shall be determined by each state.

Criteria
A prescribed grazing plan is developed that increases harvest efficiency by utilizing a 75% increase in the number of pastures/paddocks per movement group (herd). See the attached "Supplement" for specifics on harvest efficiency.

Adoption Requirements

This enhancement is considered adopted when a prescribed grazing plan is complete, and implementation of the plan has begun, that incorporates a 75% increase in the number of pastures/paddocks, including the necessary infrastructure (fences/water/etc.)

Documentation Requirements

1. Copy of signed "National Supplement to Plant Enhancement Activity – PLT 16 – Intensive management of rotational grazing" certifying that a grazing plan has been implemented with a 75% increase in the number of paddocks/pastures for the herd (movement group) increasing the harvest efficiency resulting from greater stock density and reduced grazing time per pasture/paddock .

2. A map or aerial photo showing the pastures/paddocks making up the rotational grazing system. The layout of the pastures/paddocks both before implementation and after implementation shall be delineated on the map or photo.

References

Bertelsen, B.S., D.B. Faulkner, D. . Buskirk and J.W. Castree. 1993. Beef Cattle Performance and Forage Characteristics of Continuous, 6-paddock, and 11-paddock Grazing Systems. Journal of Animal Science 71:1381-1389.

Jacobo, E.J., A.M. Rodríguez, N. Bartoloni and V.A. Deregibus. 2006. Rotational Grazing Effects on Rangeland Vegetation at a Farm Scale. Rangeland Ecology & Management 59(3): 249-257.

McKown, C.D., J.W. Walker, J.W. Stuth and R.K. Heitschmidt. 1991. Nutrient intake of Cattle on Rotational and Continuous Grazing Treatments. Journal of Range Management 44(6).

Rayburn, E.B. (editor). 2007. Forage Utilization for Pasture Based Livestock Production. NRAES – Book 173. PALS Publishing, Ithaca, New York.

Smart, A.J., J.D. Derner, J.R. Hendrickson, R.L. Gillen, B.H. Dunn, E.M. Mousel, P.S. Johnson, R.N. Gates, K.K. Sedivec, K.R. Harmoney, J.D. Volesky and K.C. Olson. 2010.
Effects of Grazing Pressure on Efficiency of Grazing on North American Great Plains Rangelands. Rangeland Ecology and Management 63(4): 397-406.

Teague, W.R. and S.L. Dowhower. 2003. Patch Dynamics under Rotational and Continuous Grazing Management in Large, Heterogeneous Paddocks. Journal of Arid Ecology 55: 211-229.

USDA-NRCS. 2010. Conservation Practice Standard: Prescribed Grazing-Code 528.

National Supplement to Plant Enhancement Activity – PLT 16 – Intensive management of rotational grazing

State: _____ **Participant:** _____

Increase harvest efficiency resulting from greater stock density and reduced grazing time per pasture/paddock

Change the current grazing system to allow for an increased number of pastures or paddocks, including the necessary infrastructure (fences/water/etc.), shorter grazing periods, and increased stock density. The grazing plan should document the planned length of grazing periods in pastures and length of time between grazing periods for an overall reduction in total grazing activity per pasture and an increased harvest efficiency resulting from greater stock density and reduced grazing time per pasture/paddock because of the 75% increase in the number of paddocks/pastures for the herd (movement group).

Criteria: Use the following formula for documentation, and attach a plan map showing the location of the grazing system design. The following example is provided.

EXAMPLE:

A. Current # of Pastures/Paddocks 6
B. Planned # of Pastures/Paddocks 11
C. % Increase= ((B/A)-1)100% ((11/6)-1)100 = ((1.83)-1)100 = (.83)100% = **83%**

Grazing Plan:

A. Current # of Pastures/Paddocks _____
B. Planned # of Pasture/Paddocks _____
C. % Increase= ((B/A)-1)100 _____

Operation and Maintenance:
Operation: Livestock grazing plans should accommodate increased rest of grazing units, particularly during the active growing season of desirable rangeland and pasture species. Planned grazing use should not exceed 60% of annual production. Additional practices and inputs such as cross fences and water facility development may be required to facilitate adequate rest periods and increased harvest efficiency.

Maintenance: Grazing unit rotation of livestock should be accomplished annually, alternating the planned rotation sequence of grazing units each subsequent year, or specifically providing growing-season rest periods based on individual pasture condition.

Certification:
I certify that I have applied the grazing management system as explained in the narrative in the field(s) and listed in the table above.

Name: _____Date:_____

Plant Enhancement Activity – PLT16 – *Intensive Management of Rotational Grazing*

Reference:

- ***528 – Prescribed Grazing***

Harvest Efficiency

Intensively managed rotational grazing systems require more management than typical rotational grazing systems. These systems are used when livestock production is the main goal of the producer, but they can also enhance forage production, plant vigor and utilization of forages by livestock. This enhancement would usually apply to a producer who currently has a rotational grazing system that meets or is similar to the MN NRCS Prescribed Grazing Practice Standard (528) in place, but would like to manage it more intensively.

Residual stubble heights will be maintained for the key species of forage(s), the species of forage(s) that the planner and the producer identify as those that will be managed. Key species will meet the nutritional needs of the kind and class of livestock to be managed and be adapted to the site. Residual stubble heights for key species may be found in the ***GSPG or in MN Practice Standard 528.*** Residual stubble heights are measured in areas that the livestock have grazed and not rejected.

Water will be readily available to livestock and travel distances will be limited to less than 800 feet from any part of the pasture. Water will be delivered in sufficient quantities and rates for the number, weight and class of livestock managed. Refer to ***GSPG or FOTG*** for the quantity of water to be delivered. Water used by livestock will not contain harmful levels of suspended solids, salts, toxins, and deleterious biological agents.