**NATURAL RESOURCES CONSERVATION SERVICE**

**CONSERVATION PRACTICE STANDARD**

**NEW JERSEY**

# GRAZING LAND MECHANICAL TREATMENT

**(Ac.)**

**CODE 548**

## DEFINITION

Modifying physical soil and/or plant conditions with mechanical tools by treatments such as pitting, contour furrowing, and chiseling, ripping or subsoiling.

## PURPOSE

- Fracture compacted soil layers and improve soil permeability
- Reduction in water runoff and increased infiltration
- Break up root-bound conditions and thatch to increase plant vigor
- Renovation and stimulation of plant community for greater productivity and yield

## CONDITIONS WHERE PRACTICE APPLIES

This standard may be applied on pastureland, rangeland, grazed forest, and native pastures where the slopes are less than 30 percent.

## CRITERIA

**General Criteria Applicable to All Purposes**

Mechanical treatments such as contour furrowing, pitting, chiseling, ripping, or subsoiling shall be designed and applied in a manner to accomplish the desired objectives and address the natural resource concerns. These treatments shall be limited to soils and slopes where surface disturbances will not result in unacceptable levels of soil erosion and/or sedimentation. Prescribed grazing (528) will follow any grazing land mechanical treatment application.

On steeply sloping ground, measures shall be taken to ensure no impact on surface water features.

Areas to be treated shall be relatively free of undesirable or noxious plants that are likely to increase because of surface disturbance.

If natural plant community is desired, desirable plant species shall be of sufficient quantity and have a distribution pattern that allows the plants to take advantage of the improved moisture and to spread into disturbed areas.

A minimum of 15 days rest from grazing shall be applied to ensure desired plant responses from this treatment.

All treatments should be planned on the contour when conditions warrant.

Assure soil is not too wet prior to treatment.

All work performed under this standard shall comply with State, federal, and local laws and regulations.

## CONSIDERATIONS

Conservation practice standards Forage and Biomass Planting (512), Prescribed Grazing (528), Pest Management (595), Filter Strip 393, and Nutrient Management (590) should be used in conjunction with Grazing Land Mechanical Treatment as applicable.

Increase in noxious or invasive plants may occur following treatment.

Increased surface roughness may make the treated area undesirable for some uses.

Investigate for compacted layers with a probe or other appropriate tool prior to treatment.

Investigate for tile drainage systems, pipelines and other buried structures prior to work.

Consider animal's ability to navigate terrain following treatment.

Consider cultural resources when planning this practice. If the selected mechanical treatment will exceed the depth of prior ground disturbance, this activity could affect buried cultural resources.

**PLANS AND SPECIFICATIONS**

Specifications for installation of Grazing Land Mechanical Treatment shall be prepared for each site or planning unit according to the criteria. Specifications shall be recorded using State-developed specification sheets, job sheets, narrative statements in conservation plans, or other acceptable documents.

**OPERATION AND MAINTENANCE**

Implementation of a prescribed grazing plan according to the 528 standard is essential for the long-term operation of this practice. Heavy equipment use that will compact the soil in treated areas shall be deferred until autogenic repair processes have been restored. If the desired effects of grazing land mechanical treatment are lost over time, the practice may need to be repeated.

**REFERENCES**

Griffith, L.W., G.E. Schuman, F. Rauzi, and R.E. Baumgartner. 1985. Mechanical Renovation of Shortgrass Prairie for Increased Herbage Production. J. Range Manage. 38:7-10.

Vallentine, J.F. 1977. Range Development and Improvements. Brigham Young University Press, Provo, Utah.

Whisenant, S.G. 1999. Repairing Damaged Wildlands. Cambridge University Press, United Kingdom.