

STANDARDS AND SPECIFICATIONS

GRAZING LAND MECHANICAL TREATMENT (acre) 548

Standard

Definition

Renovating, contour furrowing, pitting, or chiseling native grazing land by mechanical means.

Purpose

To improve existing plant cover and water quality by aerating the soil, increasing insoak and available moisture, reducing erosion, and protecting low lying land or structures from siltation.

Conditions where practice applies

(1) On native grazing land where perennial plants must be increased; (2) where soil and slope are suitable for each method and type of equipment used; (3) as emergency treatment after wildfire and other abnormal disturbances; (4) where grazing is managed to allow plants to respond to this treatment.

Mechanical treatment may not be desirable on areas to be used for recreation.

Planning considerations

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

2. Desirable forage 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.
3. Mechanical treatment shall be limited to soils and slopes where surface disturbances will not result to unacceptable levels of erosion and sedimentation.
4. Mechanical treatments shall not interfere with trafficability and the visual quality of the area.
5. Treated areas shall be deferred to allow desirable forage plants to increase.
6. Very stony or rocky soils are not suitable for contour furrowing, chiseling, disking or pitting.

Specifications

1. Grazing land mechanical treatment shall be applied only to range sites listed below:

Saline Overflow	Overflow	Loamy Park
Loamy Plains	Loamy Foothill	Deep Clay Loam
Loamy Slopes	Sandy Plains*	Mountain Clay Loam
Clayey Plains	Deep Loam	Subalpine Loam
Alkaline Plains	Clay Pan	Loamy Salt-desert
Shaly Plains	Rolling Loam	Clayey Salt-desert
Salt Flat	Mountain Loam	
Salt Meadow	Dry Mountain Loam	

* On soils formed for Dawson arkose.

2. All grazing land mechanical treatment shall be followed by deferment of livestock grazing. The area treated shall receive a minimum of one full deferment period during the first full plant growth season after the treatment. Resting or deferring the treatment. Resting or deferring the treated range is to comply with the specification for the Deferred Grazing practice (352).
3. Degree of use of the treated area shall be limited to 40 percent removal of the current year's growth of the key species for two years following deferment.
4. Operations shall be applied as nearly as practicable on the contour.
5. Range Conditions-Treatment is applicable to fair and poor range conditions. Range seeding on poor condition areas is necessary if there is not at least 15 to 20% desirable plants present. Use Range Seeding Practice (550).

Contour furrowing

1. Contour furrowing is limited to those sites where slopes do not exceed 20 percent.
2. Guidelines for design and layout of contour furrowing shall result in the application of furrows having a minimum cross section of 48 square inches spaced no farther than 10 feet apart horizontally or 0.75 foot vertically.
3. Contour furrowing will not be done when the soil is wet, frozen, or when covered with snow.

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4. Frequent interruptions of the furrows shall be made on slopes steeper than 10%, or highly erodible soils.
5. The soil will be spilled to the low side and constructed on the approximate contour.

Chiseling

1. Chiseling is limited to those sites where the slope does not exceed 20 percent.
2. Use chisels, rippers, subsoilers or other types of equipment which will penetrate the soil at least twelve inches and shall be spaced no farther apart than three feet.

Pitting

1. Pitting is limited to those sites where the slope does not exceed 10 percent.
2. All pitting operations shall cover the area treated solidly, rather than by strips which leave intervals which are untreated.
3. Pits made by disc-type pitters may not be over 5 feet apart, nor less than 4 inches deep, nor less than 6 inches wide. Pits should be at least 3 feet in length.