

Deep Tillage

Conservation Practice Job Sheet

324

Natural Resources Conservation Service Alaska

July 2009

Client:



Photo courtesy of NRCS

DEFINITION

Performing tillage operations below the normal tillage depth to modify the physical or chemical properties of a soil.

PURPOSE

Deep tillage can be designed to accomplish one or more of the following conservation purposes:

- Fracture restrictive soil layers.
- Bury or mix soil deposits from wind or water erosion or flood over wash.
- Reduce concentration of soil contaminants, which inhibit plant growth.

WHERE USED

This practice applies to land having adverse soil conditions which inhibit plant growth, such as

- compacted layers formed by field operations,
- restrictive layers such as cemented hardpans, over wash or deposits from wind and water erosion or flooding
- contaminants in the root zone.

This standard includes tillage operations commonly referred to as deep plowing, subsoiling, ripping or row-till, performed from time to time below the normal tillage depth.

RESOURCE MANAGEMENT SYSTEM

Deep tillage is normally used concurrently with other conservation practices as part of a resource management system. These practices may include conservation crop rotation, residue management, nutrient and pest management and pasture and hay land planting.

SPECIFICATIONS

Site-specific requirements for deep tillage are listed on the 324 Specification Sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide and are designed to meet the resource needs and the producer's objectives.

OPERATION AND MAINTENANCE

Deep tillage for reduction of soil compaction shall be performed whenever compaction reoccurs. When deep tillage has been performed to reduce the concentration of soil contaminants, the contaminate levels in the root zone shall be monitored to assist with determining when or if treatment will be reapplied.

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DEEP TILLAGE SPECIFICATION SHEET

Client:

Date:

<u>Purpose (check all that apply)</u>	
<input type="checkbox"/> To fracture restrictive layers	<input type="checkbox"/> To reduce concentration of soil contaminants
<input type="checkbox"/> To bury or mix soil deposits from wind; water or flood overwash	<input type="checkbox"/> Other, describe:

<u>Site Information</u>			
	Fields:	Fields:	Fields:
Measured Acres:			
Soil Texture:			
Map Unit Slope (%):			
Soil Moisture (% field capacity)			
Depth/Restrictive Layer:			
Depth of Soil Deposit			
Contaminant (ID & Unit)			

<u>Tillage Information</u>			
	Field 1	Field 2	Field 3
Equipment to be Used:			
Depth of Tillage:			
Chisel Point Spacing (in)			
Date/Timing of Tillage:			

DEEP TILLAGE SPECIFICATION SHEET

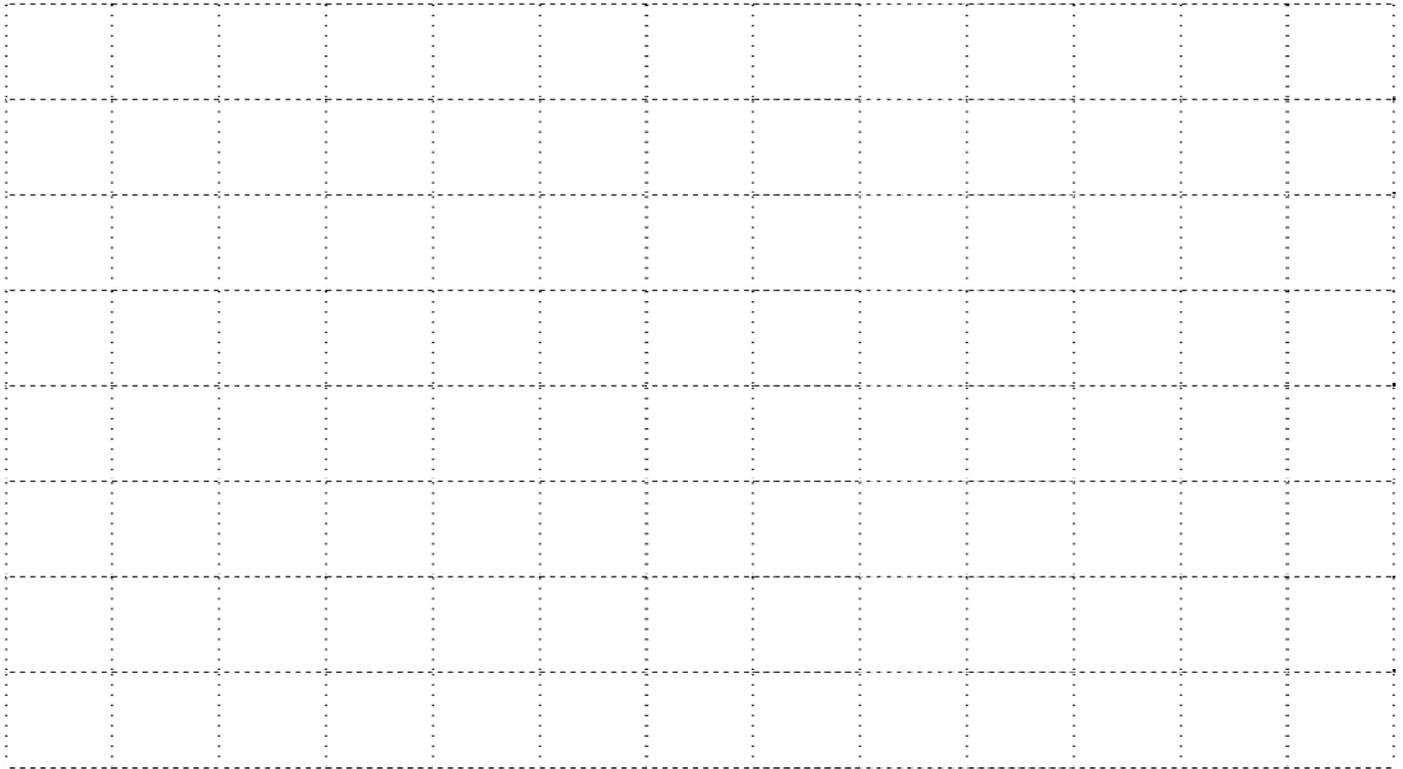
Site Preparation and Additional Installation Information

Additional requirements:

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

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DEEP TILLAGE SPECIFICATION SHEET

Scale 1"= _ _ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



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