

Soil Management Enhancements



Natural Resources Conservation Service
United States Department of Agriculture

Minnesota, 2006

Using GPS or other similar guided measure technology, reduce soil compaction by controlling areas of traffic that result in STIR between 31 and 60; between 16 and 30; or 15 or less.

Definition

Soil compaction occurs when soil particles are pressed together, reducing the pore space between them. This increases the weight of solids per unit volume of soil (bulk density). Soil compaction occurs in response to pressure exerted by field machinery or animals. The risk of compaction is greatest when soils are wet. STIR (Soil Tillage Intensity Rating) is a calculation based on the location of cropland and the Crop Management System (tillage) that is used by the producer on that land. It is an index used to evaluate the kind, severity and number of ground disturbing tillage passes on soil quality.

Purpose

This enhancement will help to reduce the amount of soil compaction by reducing the number of trips across the area, and by avoiding tillage trips when the soil is wet. Controlling the areas of traffic in the field will also help to reduce compaction. Reducing compaction has many benefits for soil quality.

Where Used

This enhancement can be used on all cropland fields.

Documentation Required

The STIR ratings from RUSLE2 for each field.

Payment Rate

The payment rate is an annual payment per acre for a STIR between 31 and 60; per acre for a STIR between 16 and 30; and for a STIR of 15 or less.

I certify that, to the best of my knowledge, the above information is correct and that, if requested, I will provide additional documentation to support the above information.

Signature: _____ **Date:** _____