

Residue Management, Mulch Till...the management of the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops where the entire field surface is tilled prior to planting.



A mulch-till field being prepared for planting, photo courtesy USDA – Natural Resources Conservation Service

Purposes

This practice can achieve the following purposes:

- To reduce sheet and rill erosion
- To reduce wind erosion
- To maintain or improve soil organic matter content and tilth
- To conserve soil moisture
- To manage snow to increase plant available moisture
- To provide food and escape cover for wildlife

Benefits

As part of a conservation management system, mulch tillage can help maintain the productivity and condition of the soil. Mulch tillage can also improve water quality by reducing soil erosion from cropland. As a result, sedimentation in nearby waterways can be reduced.

Applications

This practice applies to all cropland and other land where crops are grown.

Design and Installation

In mulch tillage, full-width tillage equipment is used to till the entire soil surface, partially incorporating residue while leaving some residue on the surface. A minimum of 30 percent of the soil surface should be covered by plant residue immediately following crop planting. Consult with an NRCS conservationist to determine if additional crop residue is needed.

The tools used in mulch tillage include chisels, sweeps, field cultivators, or similar implements that do not result in complete inversion of the soil. The number, sequence, and timing of tillage operations should be planned to achieve the prescribed amount of surface residue needed to accomplish the objectives of the practice. Production of adequate amounts of crop residue can also be enhanced with the selection of high residue producing crops in the rotation, the use of cover crops, and the adjustment of plant populations and row spacing.

Maintenance

Since this is an annual practice, no maintenance considerations are available.

Relative Cost

Installation low ● ○ ○ ○ ○ high

Maintenance n / a

For Additional Information...

Visit the Indiana NRCS office online at <http://www.in.nrcs.usda.gov/>, see the Indiana Job Sheet or the Field Office Technical Guide (FOTG) standard for (329B) Residue Management, Mulch-till, or contact your local USDA-NRCS office

Local USDA-NRCS contact information