

CONSERVATION TILLAGE



DESCRIPTION

Conservation tillage has been shown to decrease runoff and erosion which therefore reduces agricultural contamination of water supplies. Conservation tillage refers to tillage and planting systems that maintains at least 30% of residue on the soil surface.

The use of conventional (or "clean") tillage often results in over-tilled soils, which causes the loss of organic matter and the breakdown of soil structure. Clean tillage can also promote soil erosion, create soil compaction, increase soil moisture loss, as well as increase labor and production costs.

For additional information:

<http://www.conservatontillage.colostate.edu/index.shtml>

BEST MANAGEMENT PRACTICES

- Conservation tillage is designed to minimize soil disturbance, reduce soil compaction, maintain previous crop residue on or near the soil surface and minimize the number of field operations.
- Crop residue on or near the soil surface has been shown to protect soil from the erosive energy of irrigation water.
- Protects water quality by reducing the amount of sediment carried downstream to lakes and waterways.
- Conserves water by reducing evaporation at the soil surface.
- Reduces production costs such as fuel, labor and equipment maintenance

IMPLEMENTATION REQUIREMENTS

Cost= HIGH

Operation and Maintenance= MED

Training= MED

POLLUTANT REMOVAL

Conservation tillage can reduce nutrient and sediment loading from 0 – 70% depending upon residue levels, management practices and field characteristics. Increased concentration of soluble forms of N and P can result if fertilizer is not placed below the soil surface.