Maine
Jan 2012

RESIDUE AND TILLAGE MANAGEMENT, NO-TILL/STRIP TILL/DIRECT SEED

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 329

RESIDUE MANAGEMENT, NO-TILL AND STRIP-TILL

This practice is managing the amount, orientation and distribution of crop and other plant residue on the soil surface year-round. Crops are planted and grown in narrow slots or tilled strips established in the untilled seedbed of the previous crop.

PRACTICE INFORMATION

The objective of this practice is to maintain most of the crop residue on the soil surface throughout the year. The practice may be referred to as no-till, zero-till, slot plant, row-till, strip-till or just the generic term conservation tillage. The common characteristic of this practice is that the only tillage performed is a very narrow strip prepared by coulters, sweeps, or similar devices attached to the front of the planter.

Weeds and other pests are generally managed by using agriculture chemicals. The chemicals used are approximately the same as those used with a tillage based system, but a "no-till" residue management system requires a higher level of technology and management than a more conventional tillage system. The fields must be scouted on a regular basis and the farm operator must be very familiar with the pests and understand the concept of threshold populations and other Integrated Pest Management technologies.

The benefits of this practice are significant. Erosion is usually reduced to an acceptable level due to the protective residue left o the surface. Soil organic matter increases and soil organisms such as earth worms increase progressively. The soil tilth improves, and productivity increases as the constant supply of organic material left on the surface is decomposed by a healthy population of soil organisms. Energy use is reduced.

The following page identifies the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

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