Using a Winter Cover Crop of Rye and Hairy Vetch for Soil Conservation and Weed Control in a Mixed Vegetable System

Final Report for FNE02-442

Project Type: Farmer
Funds awarded in 2002: $2,096.00
Projected End Date: 12/31/2004
Region: Northeast
State: Pennsylvania
Project Leader:

Matt Steiman
Wilson College

Project Information

Summary:

Note to readers, attached is the complete final report for FNE02-442.

Soil conservation benefits of planting into roll-down cover crops.
One of the first differences between the roll-down and bare tilled plots that became clear was that there was significantly less spring field work involved in preparing the roll-down plots. The bare tilled fields required seven or more tractor passes with various tillage tools to get the fields ready for planting, as compared to only one pass to roll-kill the rye-vetch experimental plots.

This was especially relevant when it came to timing field operations with the weather. The spring of 2003 was exceedingly wet in Pennsylvania, with several heavy rains per week, and little opportunity for soil to dry out between rains. Consequently, we found ourselves "pushing it" in the control plots, often chiseling or disking when fields were more moist than we would have liked in order to have the ground ready for planting time. In fact, planting of all fields was delayed due to the stalled field operations from wet conditions. Compaction was evident throughout spring tillage, particularly in field 2B (bare tilled-tomatoes) which is a heavier clay soil.

Thus, while we were struggling to find a day day to prepare the ground in the control plots, and constantly were worried about compaction, the experimental plots were left to grow their rye/vetch cover crops unmolested. When it came time to roll down the experimental plots the manure crops helped to dry out the soil, and provided a spongy surface on which to drive, reducing compaction concerns.

- FNE02-442 Final Report

Cooperators

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Research

Participation Summary

Sustainable Agriculture Research & Education US Department of Agriculture

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