

NO-TILL ALTERNATIVE AVAILABLE TO NOVA SCOTIA PRODUCERS

Continuous cultivation of agricultural fields has resulted in decreased amounts of organic matter, or carbon (C) based material. This lost C accumulates in the atmosphere as carbon dioxide (CO₂), a greenhouse gas (GHG) linked to global warming.

Conservation tillage saves resources!

No-till (i.e. zero-till or direct seeding), is a beneficial management practice (BMP) utilized to establish a crop with minor soil disturbance. This technique gained popularity in the 1960's when herbicides became the common method to control weeds, rather than cultivation.

No-till helps to increase the organic matter content of soil by:

- improving soil structure
- reducing soil compaction
- limiting soil loss by wind or erosion
- increasing soil moisture
- enhancing biodiversity

Carbon sequestration means conserving C that is already in the soil or removing CO₂ from the atmosphere. It has been estimated that up to 1.3 tonnes of CO₂ per hectare per year (or 1200 lbs per acre) can be sequestered in soils by adopting no-till practices, helping to reduce GHG emissions.

HOW IS IT DONE?

A no-till production system seeds a crop directly into the ground, leaving the soil undisturbed and retaining plant residues to further increase the organic matter content. Generally, a no-till drill is used, such as the Tye™ No-Till Seeder pictured below. A narrow slit is made in the soil allowing for a seed to be deposited, and a wheel then packs soil around the seed. This technique can be used under a variety of weather conditions, soil types or crop covers.

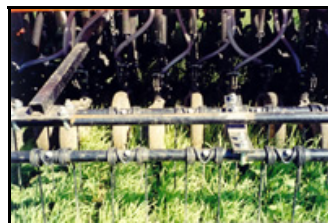
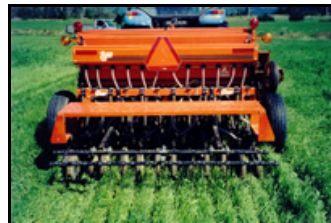
The benefits include:

- decreased fossil fuel consumption
- reduced labour
- time requirements are shorter
- equal or better yields

These translate into greater profits for the individual producer.

WHERE TO START?

The Soil & Crop Improvement Association of Nova Scotia (SCIANS), together with the Greenhouse Gas Mitigation Program for Canadian Agriculture (GHGMP), established several corn, grain and forage sites throughout the province to promote the adoption of no-till practices. A Tye™ No-Till Seeder was used for seeding the sites.



This seeder is available for rent to any Nova Scotia producer at low cost.

For rental information, please call the GHGMP Field Coordinator at (902) 896-7092.