No-Till Drill Annual Report

2012

The purpose of this project is to increase the number of farmers who use no-till grain drills to plant crops on heavy clay and highly erodible soils in the Lake Champlain watershed in Vermont. Soil erosion and nutrient runoff will be reduced as farmers adopt no-till methods to plant winter cover crops following corn silage or to renovate pastures and hay stands on highly erodible soils or flood plains. Farmers will benefit by decreasing soil erosion and Phosphorus runoff to surface water, improving soil health and saving fuel by reducing tillage.

No-Till drilling new seed mix into sod, preventing soil erosion by not tilling , and saving the farmer time and expense.

Champlain Valley Crops and Soils team members help load seed, grease, and calibrate drill.

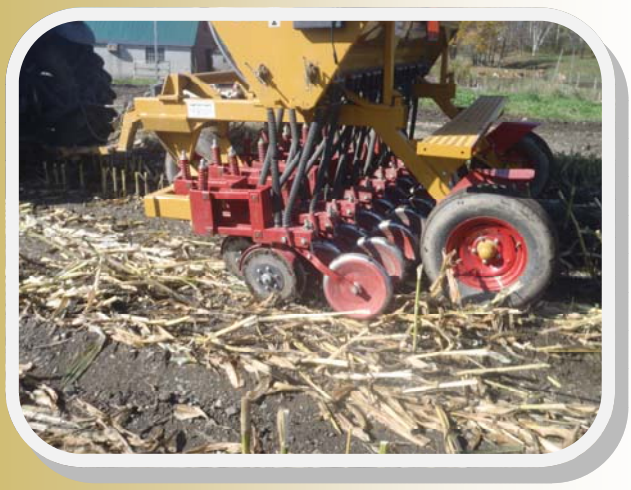
Jeff Carter helping a farmer calibrate the no-till drill.

Two Haybuster No-Till grain drills were purchased with a grant from the VT Department of Environmental Conservation Ecosystem Restoration Program and outfitted with FM-750 integrated GPS monitor and satellite receiver to demonstrate no-till planting and precision agriculture steering guidance. Agronomy Outreach staff were trained in proper grain drill use and maintenance, seed selection, seeding rate calibration and GPS steering guidance procedures so they could then instruct farmers interested to try this new technology. Local farmers were invited to participate with on-farm field demonstrations through farmer meetings, no-till factsheets, no-till poster exhibit at Field Days, electronic newsletter , YouTube posting and personal conversations with farmers and agribusiness people in the area. Seed was purchased for field demonstration of no-till plantings of hay land improvement, pasture renovation and winter cover crops. Clover seed, grass seed, BMR Sudan Grass, grazing mix seed, winter rye and grain triticale was purchased for farmers who agreed to plant test strips comparing seeding rates, timing and row spacing in fields with various soil types and crop conditions. A list of farmers was compiled and a schedule developed for use of the two drills. Farmers agreed to use reasonable care with the drills and assume all responsibility for crop results. The drills were transported to individual farms by Agronomy Outreach staff and all farmers were trained in proper grain drill use and maintenance, seed selection, seeding rate calibration and GPS steering guidance procedures prior to using the grain drill at their farm.

FM-750 GPS display for precision agriculture steering guidance.

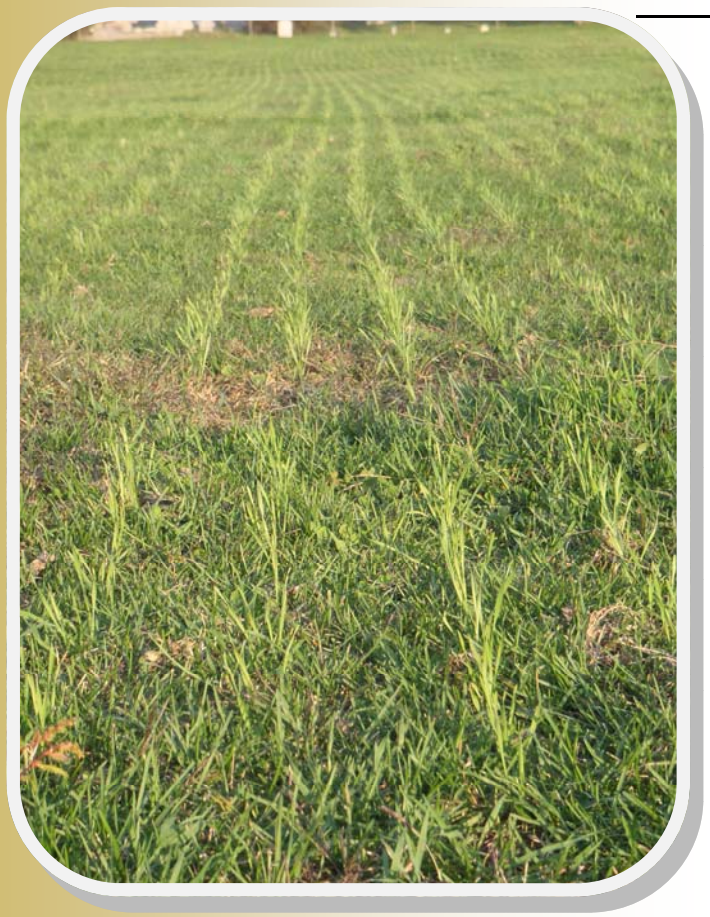
Checking seed placement to ensure proper germination.

In 2012, agronomists in the central and south end of the watershed, including Jeff Carter, Rico Balzano, Kirsten Workman, Cheryl Cesario and Jennifer Alexander, assisted 49 farmers who used the no-till drills to plant 1,672 acres. Farmers no-till planted 560 acres of pasture on 19 farms, 802 acres of hayland on 20 farms and 310 acres of winter grain cover crops on 13 farms. Farmers are already calling to get on the schedule for next spring to plant legumes and grasses for pasture and hayland improvement, spring cereal grains, and BMR Soghum/Sudan to increase forage crop production without plowing their soil. A replicated field research trial was established in the south end of the Lake Champlain to demonstrate to farmers an innovative systems approach for no-till crop production in fine-textured clay/silt soils.



No-Tilling winter cover crops into corn ground after harvest is accomplished in one pass, saving energy by

Winter Rye emerging in corn stubble after silage harvest to prevent soil erosion and absorb excess nutrients.



Winter triticale drilled into pasture will provide extra forage in the spring.

In the northern Franklin county area, no-till corn planting, no-till cover crops and no-till double crop systems are also increasing in acreage with assistance from Jeff Sanders and Heather Darby's agronomy outreach efforts. This past summer, five additional farmers were assisted with no-till pasture renovation and cover crop plantings on 870 acres using a Sunflower no-till grain drill.

Rico Balzano and Justin Brouillard making adjustments in the field.

UVM Extension helps individuals and communities put research-based knowledge to work.

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CULTIVATING HEALTHY COMMUNITIES

Champlain Valley Crop, Soil & Pasture Team

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Vermont Agency of Natural Resources

Where to Find Us

Would you like to learn more about the assistance we provide, read one of our newsletters or find us on Facebook, call one of our team members, or stop by our office??

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