



2012
By the Numbers

- **5 Team Members**
- **2 No-Till Drills**
- **3 Aerators**
- **130 Farms**
- **\$475,000 in cost share to farmers**
- **5 miles of fence to exclude livestock**
- **1,200 acres of Cover Crop planted**
- **3,400 acres of grazing assistance**
- **1,600 acres of No-Till Drill**
- **4,500 acres of Nutrient Management Planning**
- **11,000 acres of manure incorporation**

University of Vermont Extension
Champlain Valley Crop, Soil & Pasture Team
2012 Annual Report

I think this has been the best year I have had during my 27 years with Extension and I'd like to tell you why. Good fortune came to us, and with the help of many people with new ideas and grant funds, we have brought together the Champlain Valley Crop, Soil & Pasture Team in Middlebury. The photos show a team that works together, the wonderful comments from farmers we work with validate why we put so much effort into our work. We think our education and direct assistance to farmers will create lasting improvements in Vermont farmers' lives and in the water quality health of Lake Champlain. Inside this Report are samples of projects we worked on in 2012. Over 130 farmers implemented new conservation practices on 23,000 acres with the education and technical assistance provided by this UVM Extension agronomy outreach effort.

We are, We are, as they say: Jeff Carter, UVM Extension Agronomy Specialist and "Team Leader"; Rico Balzano, ACAP agronomy outreach; Kirsten Workman, SWAT agronomy outreach; Cheryl Cesario, SWAT grazing outreach and Justin Brouillard, VTC student and summer field technician. Together, we provide farmers assistance with nutrient management planning and implementation, participation in state and federal conservation programs and adopting field practices like reduced tillage, winter cover crops, improved grazing management and livestock exclusion from streams.

Special thanks go to the Lake Champlain Basin Program for their support of the Agronomy & Conservation Assistance Program (ACAP) that placed three Outreach Agronomists throughout the Lake Champlain Watershed. Key advocates who brought this program to life included: Tom Berry with Senator Leahy's office, Bill Howland with LCBP, Julie Moore with ANR Clean and Clear Program, Marli Rupe with PMNRCD, Heather Darby with UVM Extension, and Laura DiPietro with VT Agency of Agriculture, Food & Markets.

The USDA Natural Resources Conservation Service has been a key supporter and provides funds for Strategic Watershed Action Team (SWAT) agronomy and grazing outreach professionals for planning and implementation of EQIP conservation practices. Vicky Drew and Jim Wood are notable supporters of outreach programs. A Conservation Innovation Grant from VT NRCS has also helped us start the Champlain Valley Farmer Coalition, a non-profit farmer organization to address agriculture water quality and farm economic resiliency in the central and south Lake Champlain watershed.

The staff who work with the VT ANR Ecosystem Restoration program, the VT Agency of Agriculture Farm Agronomic Practices program, Conservation Districts all are great partners to work with.

I just hope next year is even better. I have to think that this young, energetic team of Extension Agronomy and Grazing Outreach Professionals are really helping move Vermont agriculture in the right direction for a more vibrant farm economy and increased land stewardship for clean water for everyone.

- Jeff

Meet the Team

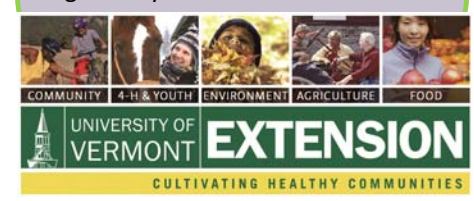
Jeff Carter
Extension Agronomy Specialist
Field Crops, Nutrient Management
jeff.carter@uvm.edu

Rico Balzano
Agronomy Outreach Professional
Agronomy & Conservation Assistance Program
rico.balzano@uvm.edu

Kirsten Workman
Agronomy Outreach Professional
Strategic Watershed Action Team
kirsten.workman@uvm.edu

Cheryl Cesario
Grazing Outreach Professional
Strategic Watershed Action Team
cheryl.cesario@uvm.edu

Justin Brouillard
Agronomy Technician



No-Till Drills: Tools to Enhance Conservation

In 2012, 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 monitors and satellite receivers 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 instruct farmers interested to try this new technology.

Soil erosion and nutrient runoff is reduced as farmers adopt no-till methods to plant cover crops following corn silage or to renovate pastures and hay stands on heavy clay, 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.

In 2012, the CV Crops Team assisted

- **49 farmers used the no-till drills to plant**
- **1,672 ac. of pasture, hayland, & winter cover crops, eliminating plowing & reducing soil erosion**

-Rico

Aerway Aerators: A Better Way to Utilize Manure

The Champlain Valley Crop, Soil and Pasture Team, working with the Farmers Watershed Alliance & the Otter Creek NRCD, provide three aerator machines for rent to local farmers. The purpose of this project is to **reduce phosphorus runoff by increasing the amount of incorporated manure & reducing surface applied manure susceptible to runoff**. When the aerator machines are used in conjunction with manure spreading, the manure penetrates the surface more efficiently, thereby reducing potential phosphorus loss by as much as 30%. Many of these farmers participated in NRCS and State programs as part of the overall conservation plan on their farm. After Hurricane Irene, UVM Extension, Farmer's Watershed Alliance & White River Conservation District coordinated to bring the 20' Aerway unit to Rochester, to be used by two farms to rehabilitate fields after flooding.

- **22 farmers have covered 5,200 acres in Addison, Chittenden & Rutland Counties.**

-Rico

Grazing Assistance Helps Farmers Plan for Success

Well-managed pastures provide numerous benefits to both the farm and the surrounding landscape. Animals grazing on lush pasture contribute to the working landscape of the state, while providing numerous environmental and economic benefits to the farm and farmer. A high quality pasture consists of a variety of grass and legume species, which in turn provide protein and energy to the animal – **turning solar energy into meat and milk**. Farmers practicing rotational or management intensive grazing, move animals frequently through the grazing system. This, along with adequate rest periods, allows the pastures to remain productive throughout the season.

The practice of rotational grazing is an art as well as a science, and when done well offers tremendous benefits to both animal and soil health. *Grazing Specialist Cheryl Cesario provided on-farm assistance with both planning and implementation for farmers in 2012:*

- **31 farmers increased forage quality & yield on 3,400 ac. of pasture**
- **2,000 dairy and beef animals benefited from improved pasture.**

-Cheryl

Farmers Stand Up for Water Quality

Can water quality and agriculture co-exist in Vermont? A group of farmers from Addison, Chittenden and Rutland county weren't willing to sit around and find out. They wanted to **make sure that both water quality and farming could not only co-exist in Vermont, but help each other thrive.** With the help of UVM Extension Agronomist, Jeff Carter and funding from a Vermont NRCS Conservation Innovation Grant, the **Champlain Valley Farmers Coalition Inc.** was born! This non-profit, farmer-based corporation is organized for the purpose of assisting farmers in adopting and implementing good agricultural practices to improve local farm economic resiliency and environmental stewardship with the goal of improving and maintaining the ecological integrity of Lake Champlain and its tributaries. *The corporation will accomplish this through:*

- **Targeted education & outreach**
- **Assistance with project funding**
- **Facilitating communication between farmers, agencies & non-governmental organizations**
- **Working in collaboration to achieve common goals**

-Kirsten



Cover Crops Prevent Erosion and Retain Nutrients

2012 proved to be a successful year for increasing the use of cover crops to **prevent soil erosion, and thereby reduce the amount of phosphorus in Lake Champlain.** By planting a crop after the corn crop to cover soil during the most risky time of year (winter & spring), farmers are improving water quality and soil health.

This year, a new and innovative practice was used to establish cover crops even earlier, increasing the successful establishment and nutrient retention of their winter rye. Several farmers in the watershed participated in an **Aerial Seeding Pilot Project** to seed winter rye cover crop into standing corn in August and September, much earlier than if they had waited to harvest their corn before seeding.

Agronomy Outreach Professional, Kirsten Workman, provided technical assistance to:

- **16 farms seeded 1,200 acres of cover crops this fall**
- **Approximately 36,000 lbs of Nitrogen, 12,000 lbs of Phosphorus & 60,000 lbs of Potassium were conserved**
- **Almost 1,000 tons of soil erosion prevented**

-Kirsten



Excluding Livestock Protects Streams & Animal Health

Did you know unrestricted livestock access to streams is associated with harmful pathogens, elevated water temperatures and increased nutrients and sediments in streams? Excluding livestock from the streams and providing alternative water **improves drinking water quality for animals, animal health and productivity, stabilizes streambanks, and quality of fish and wildlife habitat.** The Livestock exclusion program of the CV Crops Team provides incentive payments to farmers to install permanent fencing appropriate for the livestock species along "blue-line" streams, improved stream crossing where required and development of water source and distribution lines where clean water is not readily available. *As a result of on-farm technical assistance in 2012 by the CV Crops Team,*

- **\$96,300 incentive payments to farmers have been committed.**
- **25,885 ft (4.9 miles) of fencing, plus water system improvements & stream crossings**
- **650 dairy & beef cows on 187 acres of pasture excluded from surface water**
- **An estimated 830 tons of soil will be saved just with the fence installed this past year**

-Rico



FIND OUT MORE!!

STOP IN & CHAT

UVM Extension - Middlebury Office
23 Pond Lane, Suite 300
Middlebury, VT 05753
(802) 388-4969

VISIT OUR WEBSITE

www.uvm.edu/extension/cvcrops

GET SOCIAL

"Like" us on Facebook!

www.facebook.com/ChamplainCropSoilPasture

LEARN MORE

Meet the team, download fact sheets & MORE on our Blog
<http://blog.uvm.edu/cvcrops>

VIEW US IN ACTION

Watch videos of our work in the field
www.youtube.com/channel/UCGXPGwjQT9wlt47fVAXFC-Q

BE IN THE KNOW

Read our monthly newsletter & sign up to receive it directly
<http://blog.uvm.edu/cvcrops/newsletter>



Funding sources include

The Lake Champlain Basin Program and the Agency of Natural Resources with money secured by U.S. Senator Patrick Leahy and his staff from the Great Lakes Fisheries Commission, and the USDA Natural Resource Conservation Service. These projects enhance work with farms that has been on-going with UVM Extension Agronomy Programs in the Champlain Valley, the Northwest Crops and Soils Program and the Southern Vermont Nutrient Management Program.

Vermont Agency of Natural Resources



Champlain Valley Crop, Soil & Pasture Team

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. University of Vermont Extension, Burlington, Vermont. University of Vermont Extension, and U.S. Department of Agriculture, cooperating, offer education and employment to everyone without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status.