



## Event Summary – UVM Extension Champlain Valley Crop, Soil & Pasture Team

**EVENT TITLE:** 2016 Cover Crop Field Day  
**EVENT DATE:** April 21<sup>st</sup>, 2016  
**EVENT TIME:** 10:00 am – 12:00 pm (2 hours)  
**EVENT LOCATION:** Vorsteveld Farm  
Panton, VT  
**AUDIENCE:** 18 total attendees  
(7 farmers, 5 agribusiness service providers,  
6 Extension/University)



### SUMMARY:

The UVM Extension Champlain Valley Crop, Soil & Pasture Team hosted a cover crop field day at Vorsteveld Farm in Panton, Vermont. The farm was host to a NE SARE and USDA NIFA funded research project in cooperation with UVM Extension called, “Evaluating the use of forage radish to enhance winter rye cover crops”.

Kirsten Workman, CV Crops team member, described the project that is also the basis for Master’s thesis in Plant & Soil Science. We discussed and looked at the different winter rye and radish treatments in the field. All plots had good growth, as a warm fall and mild winter really favored cover crops this year. A handout from the field day is attached with some preliminary data from the project and a plot map.

Josef Gorres, UVM Soil Science Professor, also discussed how to identify Vergennes clay soil, described a project looking at the K Factor and erosion rates of this common Champlain Valley soil, and what some of the management implications are.

In addition to the research plots, we talked with Gerard Vorsteveld, one of three brothers who operate the farm about their reduced tillage system, and the Winter Rye/Oat/Radish cover crop mixture that they implemented on over 800 acres this last fall.

A good discussion was had about ways farmers approach phosphorus reductions, practices they are implementing, and how economics play a role in managing environmental stewardship.

### SPONSORS:

This field day was based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2014-68006-21864 and a Northeast SARE Graduate Student Grant GNE-14-091.







# COVER CROP FIELD DAY

APRIL 21, 2016 \* VORSTEVELD FAMILY FARM \* PANTON, VT

## A special thank you:

**Gerard, Hans & Rudy Vorsteveld**  
Vorsteveld Family Farm  
Panton, VT

**Eric Severy**  
Matthew's Trucking  
Cornwall, VT



## Funding for this project was provided by:



Based on work supported by USDA/  
NIFA under Award Number  
2014-68006-21864



## Project Summary:

As farmers in the northeast are faced with an ever mounting pressure (and desire) to protect water quality, increase soil health, and maintain productive and sustainable farms; they are increasingly turning to cover crops as a way to accomplish these goals. By far the most common cover crop utilized by dairy and forage crop farmers in Vermont is winter rye seeded after corn silage. With our short growing seasons, winter rye has become a dependable cover crop to provide good erosion control and nutrient cycling. However, as more producers become aware of alternative cover crop species and mixtures of species, they are asking to know more about their choices and what the potential benefits may be to planting these alternative crops. This study is evaluating whether the addition of forage radish to a winter rye cover crop could augment and enhance the performance over winter rye by itself. In addition, it will quantify the economic impacts of this combination and basic agronomic recommendations for seeding rates and establishment methods.

This field experiment has occurred on two farms over the course of two seasons. Plots were no-till drilled and broadcast after an early September corn silage harvest and then received one application of liquid dairy manure immediately after planting. Measurements were taken the fall after planting and the subsequent spring. Results will be shared with farmers and ag service providers in Vermont and around the northeast. The project is funded through USDA-NIFA and Northeast SARE grant funds.

## Project Objectives:

- Determine the effects of combining forage radish with winter rye cover crops and evaluate if the addition of forage radish has impacts on: overall performance of the cover crop, improved nutrient uptake and enhanced ecosystem services.
- Establish the proper seeding rates and planting methods for a forage radish/winter rye cover crop in a corn silage system with manure.
- Quantify the economic impact of different cover crop treatments, both seeding rates/composition and application methods.
- Promote and increase the use of cover crops and share project findings through direct farmer outreach with field days, newsletter articles, social media, Extension fact sheets and presentations.
- Provide research-based data to support or modify existing cover cropping specifications being used by technical service providers and cost share funding agencies.

## Champlain Valley Crop, Soil & Pasture Team

**Project Leader**  
Jeffrey Carter  
Extension Agronomist

**Agronomy Outreach**  
Kirsten Workman  
Kristin Williams  
Rico Balzano  
Nate Severy  
Daniel Infurna  
Cheryl Cesario



**(802) 388-4969**  
cvcrops@uvm.edu  
blog.uvm.edu/cvcrops  
23 Pond Lane, Ste. 300  
Middlebury, VT 05753

## Site Statistics:

**Location:** Panton, VT  
**Soil Type:** Vergennes clay  
**Corn Planted:** May 3, 2015  
**Corn Harvested:** September 3, 2015  
**Cover Crop Planted:** September 9, 2015  
**Manure Spread:** September 11, 2015

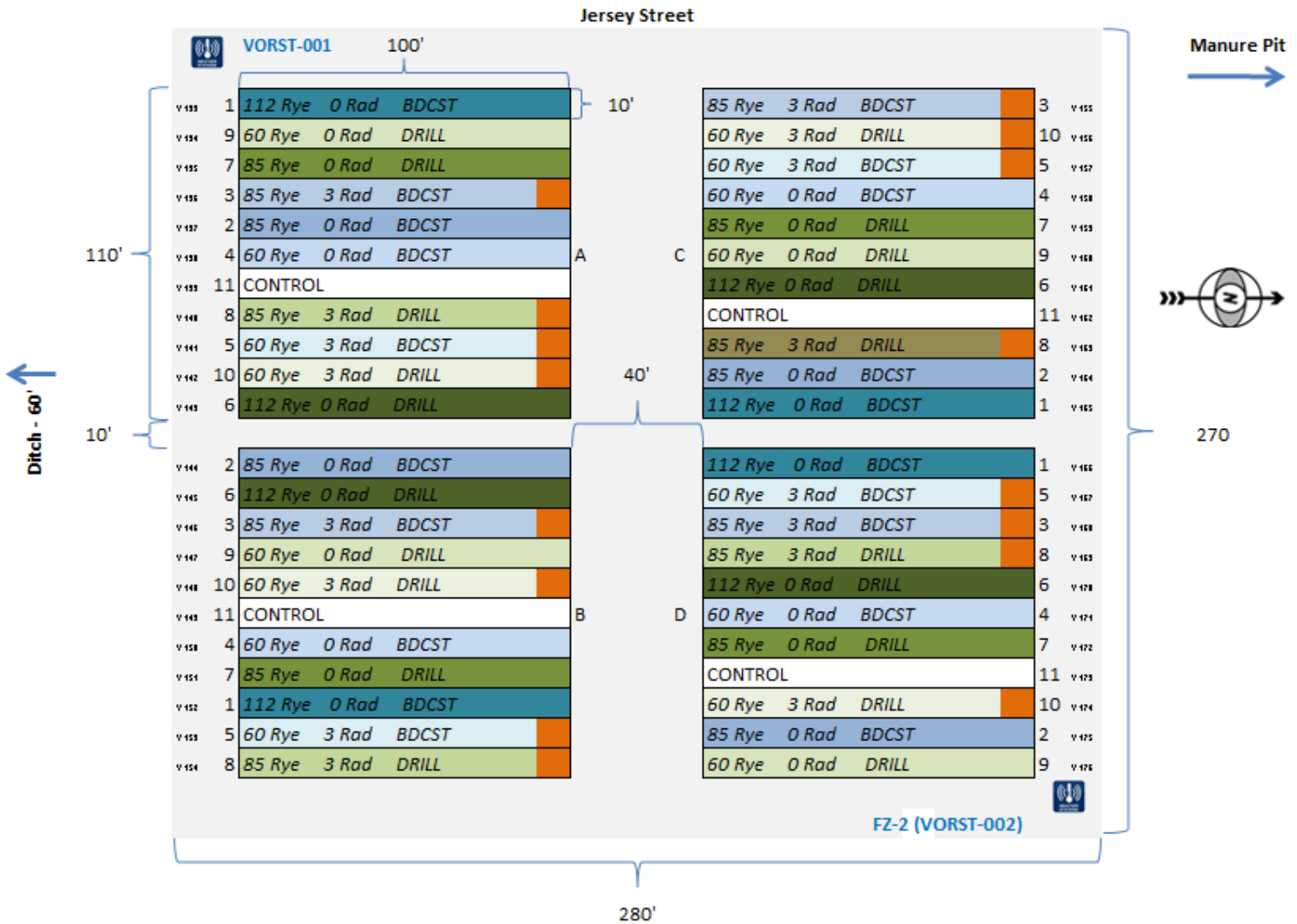


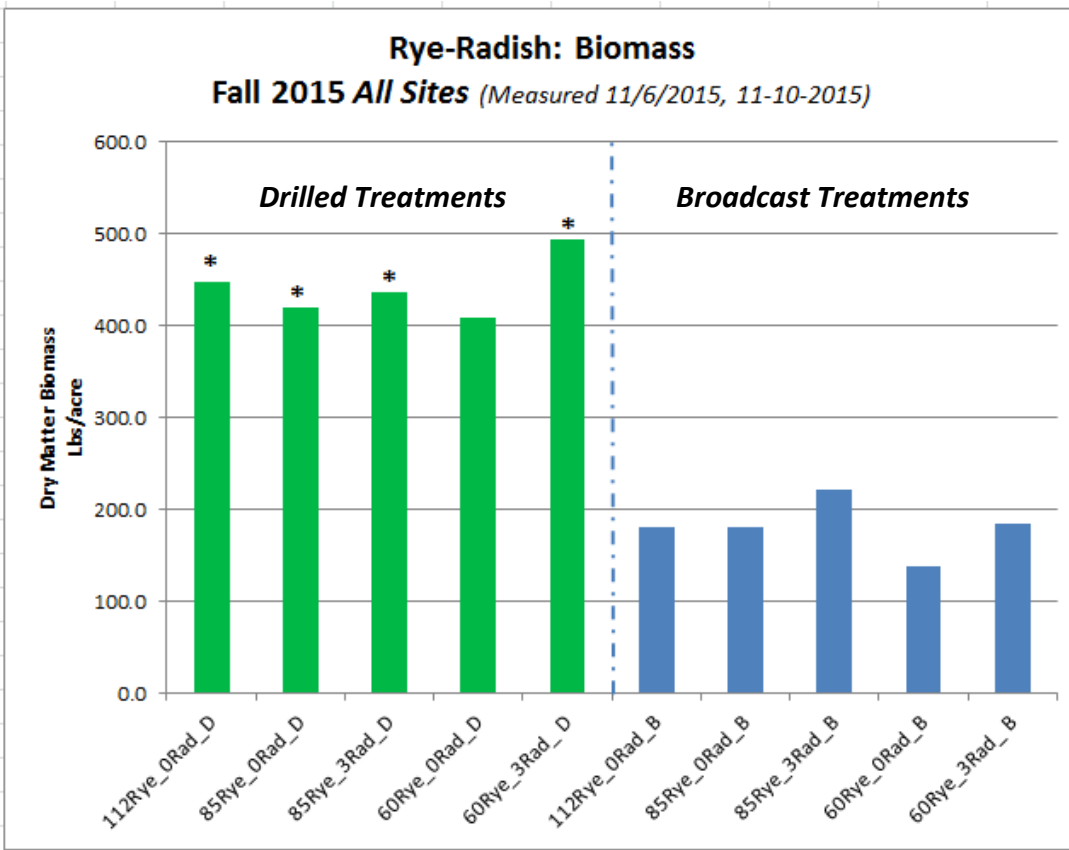
# EVALUATING THE USE OF FORAGE RADISH TO ENHANCE WINTER RYE COVER CROP PERFORMANCE

USDA-NIFA and Northeast SARE Graduate Research Project



United States Department of Agriculture  
National Institute of Food and Agriculture

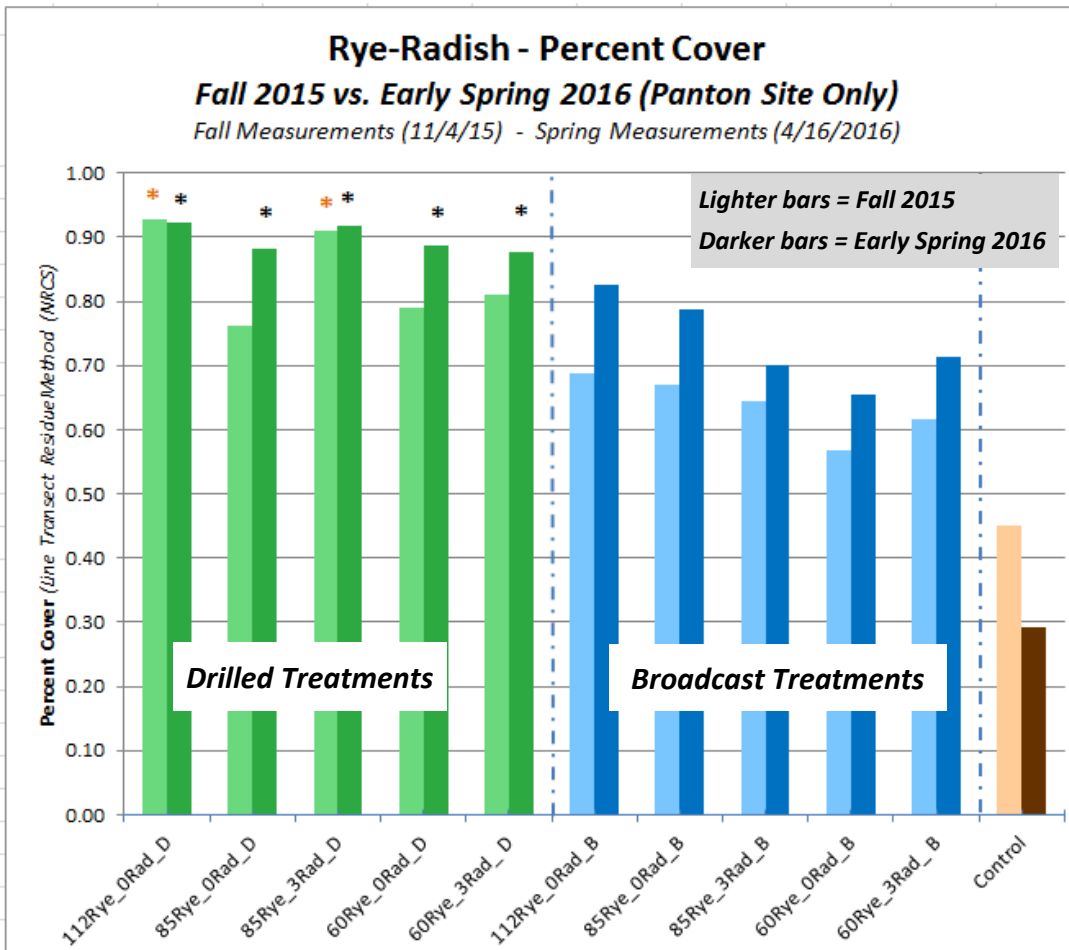
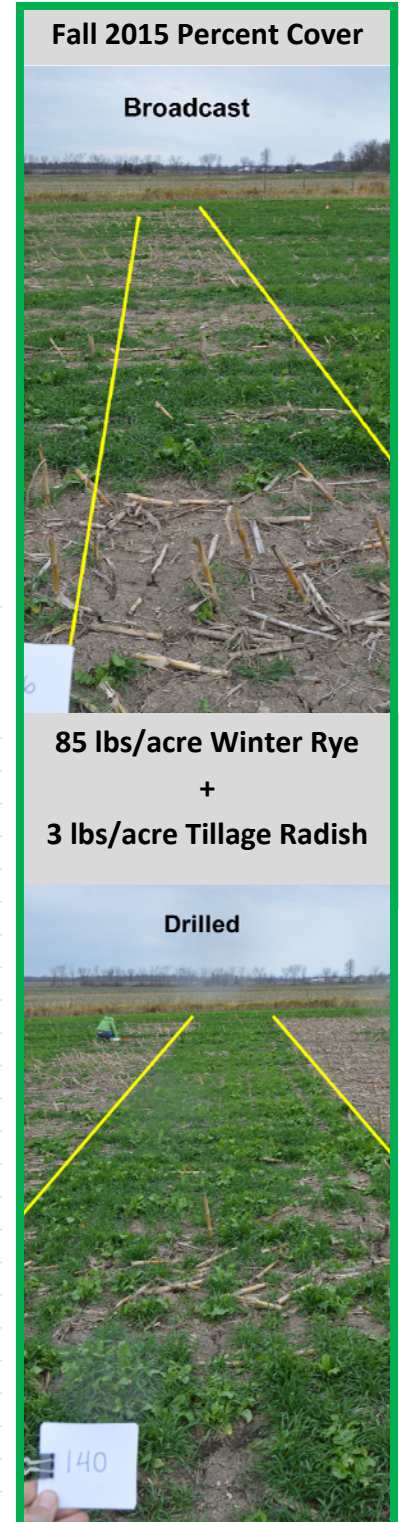




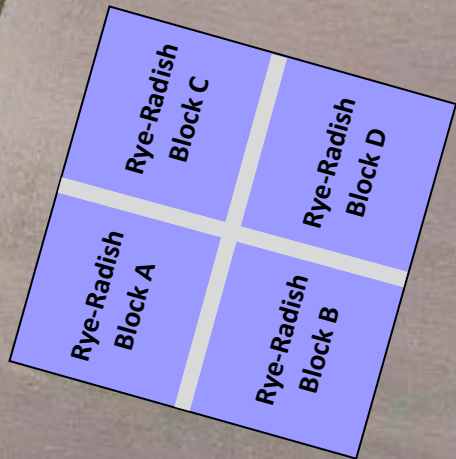
**LEGEND**

- Drilled Plots
- Broadcast Plots
- Control (No cover crop)

Treatments with an asterisk (\*) did not perform statistically different than the top performer



VORSTEVELD FARM  
COVER CROP RESEARCH & DEMO PLOTS



NOT TO SCALE

**Site Statistics:**

**Location:** Panton, VT

**Soil Type:** Vergennes clay

**Corn Planted:** May 3, 2015

**Corn Harvested:** September 3, 2015

**Cover Crop Planted:** September 9, 2015

**Manure Spread:** September 11, 2015 (4000 gallons/ac.)

