



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

EVENT TITLE: 2016 Cover Crop Field Day for TSPs
EVENT DATE: May 3, 2016
EVENT TIME: 10:00 am – 1:00 pm (3 hours)
EVENT LOCATION: Foster Bros. Farm (Middlebury, VT)
Clifford Farm (Starksboro, VT)
AUDIENCE: 23 total attendees
(1 farmer, 2 agribusiness service providers,
16 Agency staff, 4 Extension/University)

SUMMARY:

The UVM Extension Champlain Valley Crop, Soil & Pasture Team hosted a cover crop field day targeted to individuals who provide technical assistance or other services to farmers who are interested in growing cover crops. The field day was advertised to service providers through email announcements from UVM Extension as well as internally through VACD and NRCS. The goal was to share some of the results from our Vermont NRCS Conservation Grants, “Better Cover Crop Mixes for Vermont” and “Soil Health Demonstration Farm” and a USDA-NIFA and SARE funded research project, “Evaluating Forage Radish to Enhance Winter Rye Cover Crops” in hopes that it will assist them when giving recommendations to producers relating to successfully implementing cover cropping practices.



We visited four different demonstration/research sites during the field day:

1. *Foster Brothers Farm – CIG Soil Health Demonstration & CIG Compaction projects*
We re-visited the soil health field day site from October 2015 to see how the cover crop plots over wintered and discussed preliminary results from cover crop, soil health and compaction projects funded through CIG grants
2. *Foster Brothers Farm – CIG “Better Cover Crop Mixes for Vermont”*
We visited a no-till corn field that was one of 7 locations for our demonstration project evaluating 10 different three-way cover crop mixes planted at three different times (interseeded @ V7, interseeded @ R2 and drilled after corn harvest)
3. *Clifford Farm - CIG “Better Cover Crop Mixes for Vermont”*
Another corn field that was a demonstration site for the CIG grant evaluating cover crop mixes on a different soil type.
4. *Clifford Farm – USDA-NIFA Winter Rye and Radish cover crops*
In another field on the same farm, we visited a NIFA funded research project evaluating forage radish and winter cover crops, both broadcast and drilled at different seeding rates after a timely corn harvest.

The field day was successful, and we received positive feedback from multiple individuals expressing appreciation for the opportunity to see and discuss these different cover cropping systems. Having a targeted field day seemed a good way to discuss the particular issues relevant to technical service providers who are assisting producers.

SPONSORS:

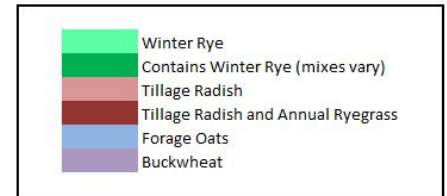
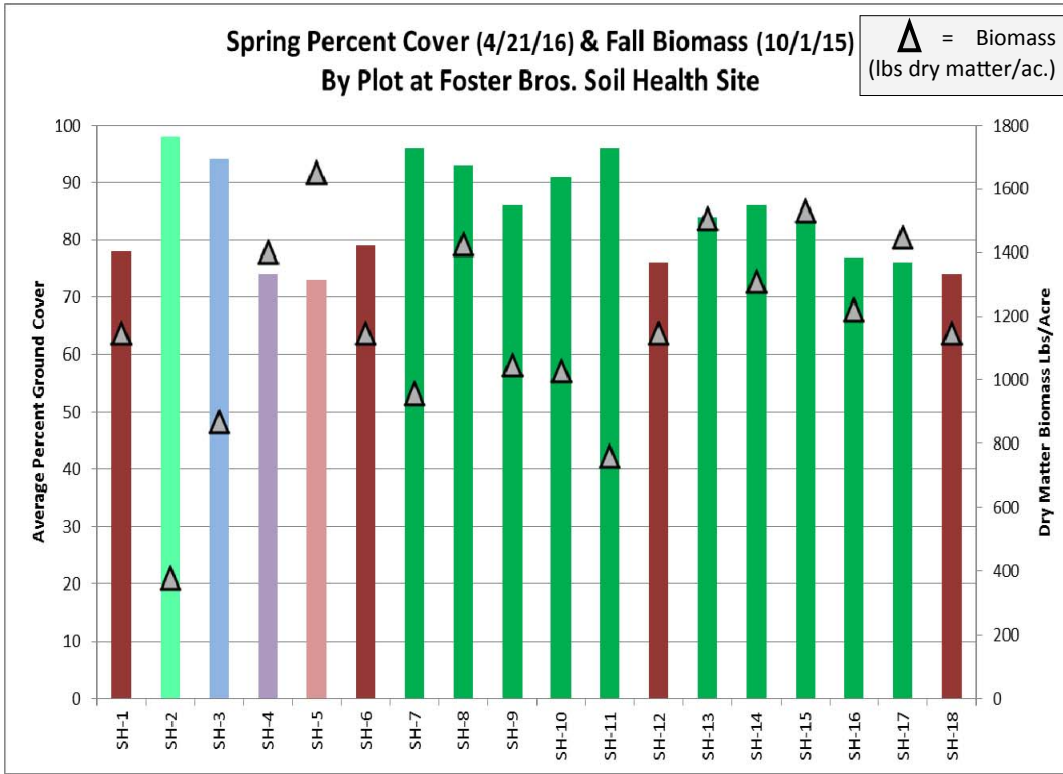
This field day was based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2014-68006-21864 and a Northeast SARE Graduate Student Grant GNE-14-091 and a Vermont NRCS Conservation Innovation Grant.



COVER CROP DEMONSTRATION PROJECTS

Champlain Valley Crop, Soil, and Pasture Team

Foster Brother's : Conservation Innovation Grant—Soil Health Demonstration Site

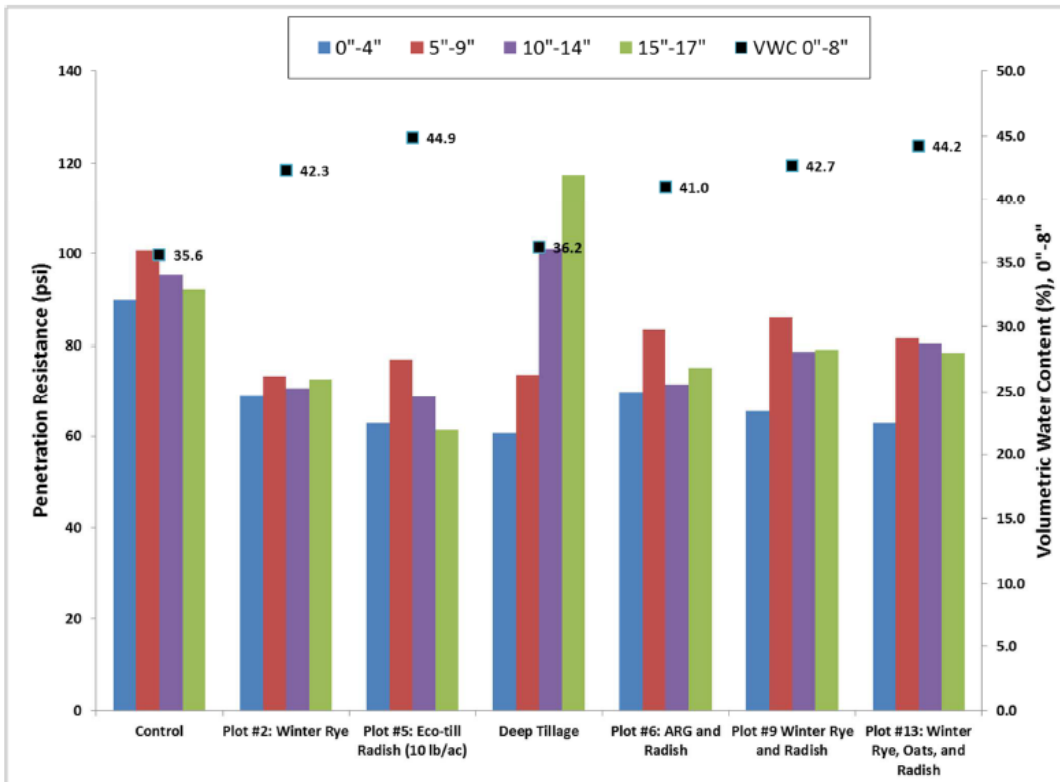


Foster Bros. - Prevented Planting CC

18	ARG + Rad 25 lb/ac
17	Rye + Oats + Buckwheat 50 + 50 + 25 lb/ac
16	Rye + Oats + Peas 50 + 50 + 30 lb/ac
15	Rye + Oats + Vetch 50 + 50 + 20 lb/ac
14	Rye + Oats + R. Clover 50 + 50 + 8 lb/ac
13	Rye + Oats + Radish 50 + 50 + 4 lb/ac
12	ARG + Rad 25 lb/ac
11	Rye + Vetch 60 + 30 lb/ac
10	Rye + W. Pea 60 + 40 lb/ac
9	Rye + Radish 60 + 4 lb/ac
8	Rye + Buckwheat 60 + 30 lb/ac
7	Rye + Oats 60 + 60 lb/ac
6	ARG + Rad 25 lb/ac
5	Eco-Till Radish 10 lb/ac
4	Buckwheat
3	Oats 75 lb/ac
2	Winter Rye 75 lb/ac
1	ARG + Rad 25 lb/ac

B: 60 lb/ac
A: 30 lb/ac

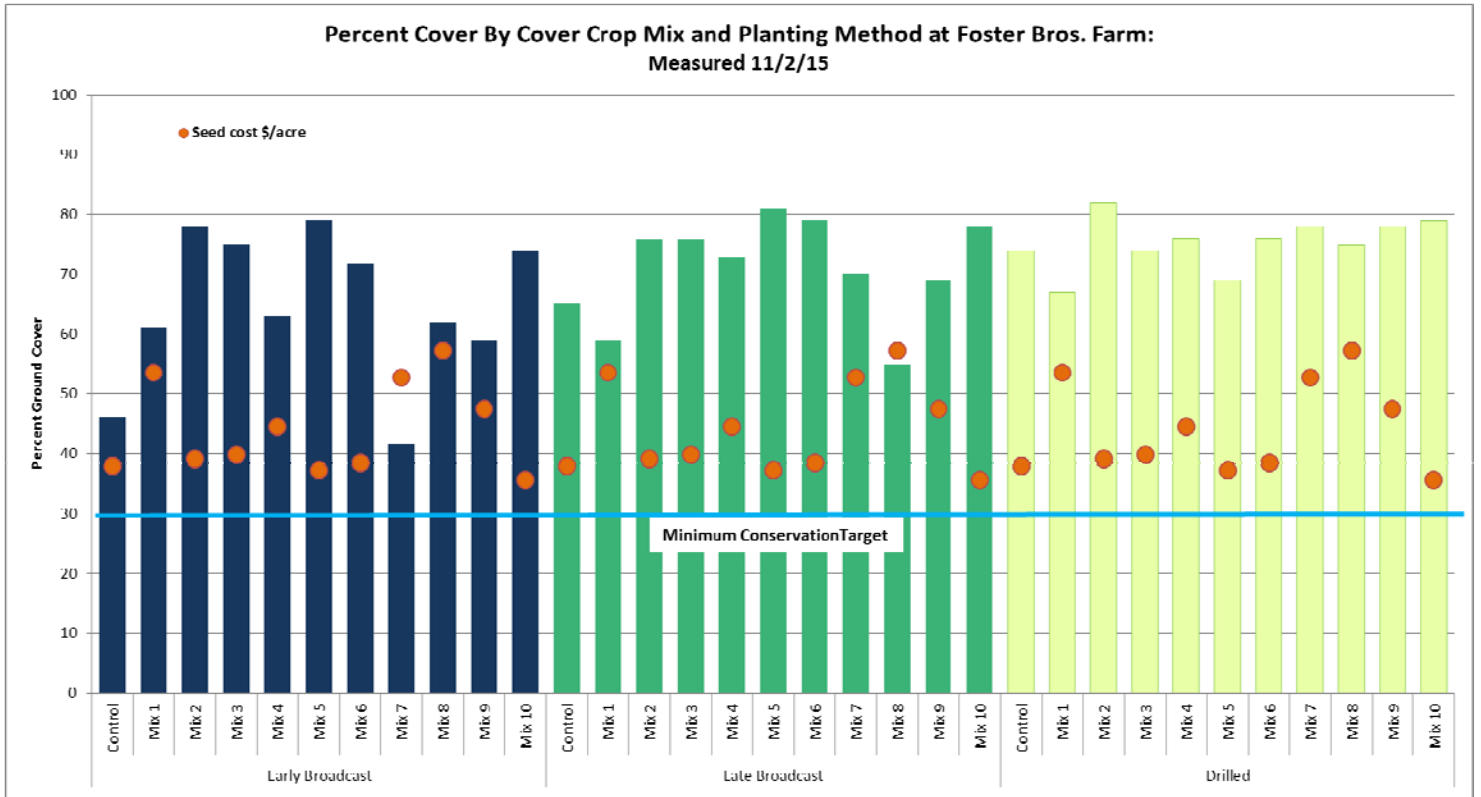
Penetration Resistance and VWC at Foster Bros. Study Site (2015 Data)*



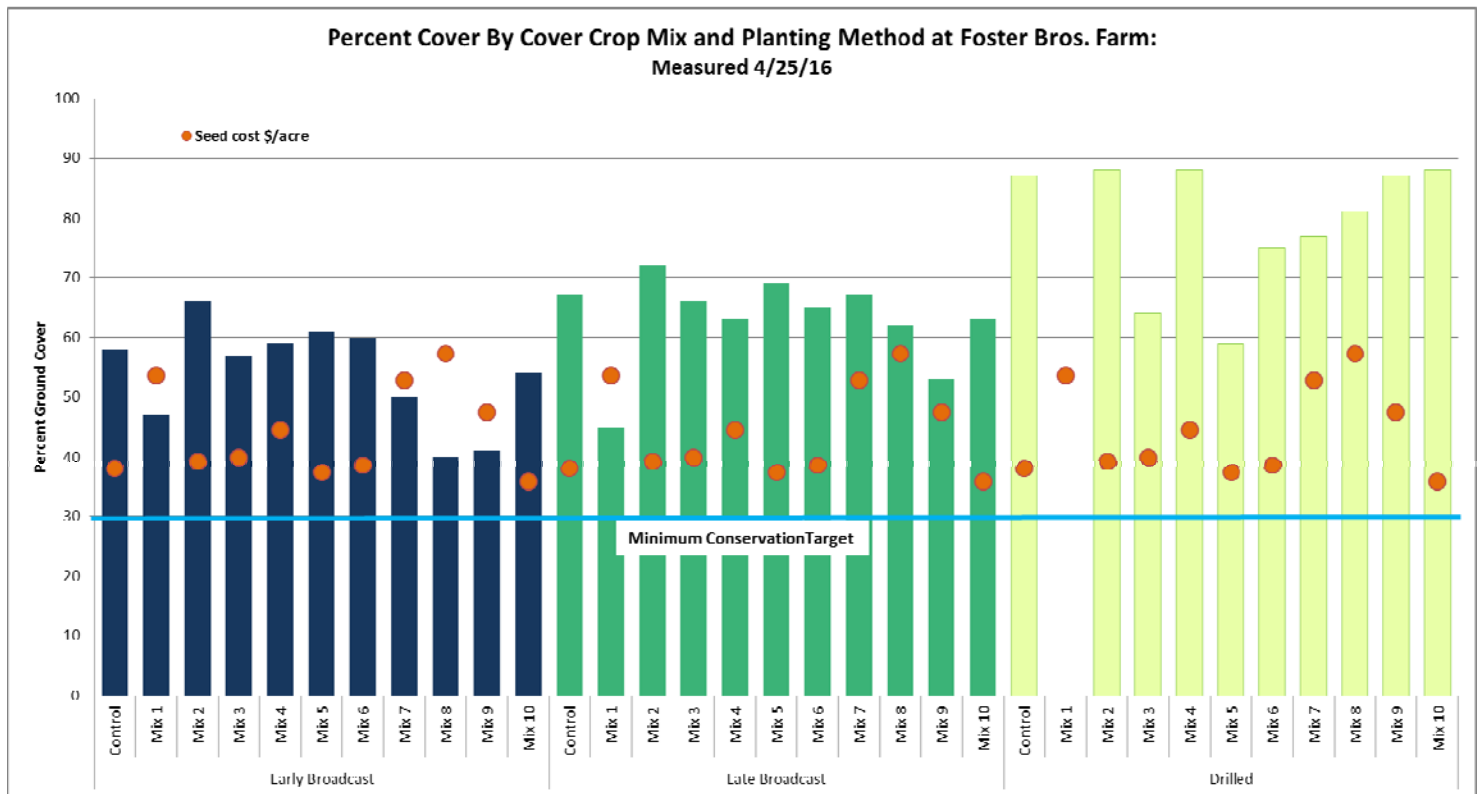
*Graph provided by Joshua Faulkner, UVM Center for Sustainable Agriculture

Foster Brother's : Conservation Innovation Grant—Cover Crop Demonstration Site

Fall 2015

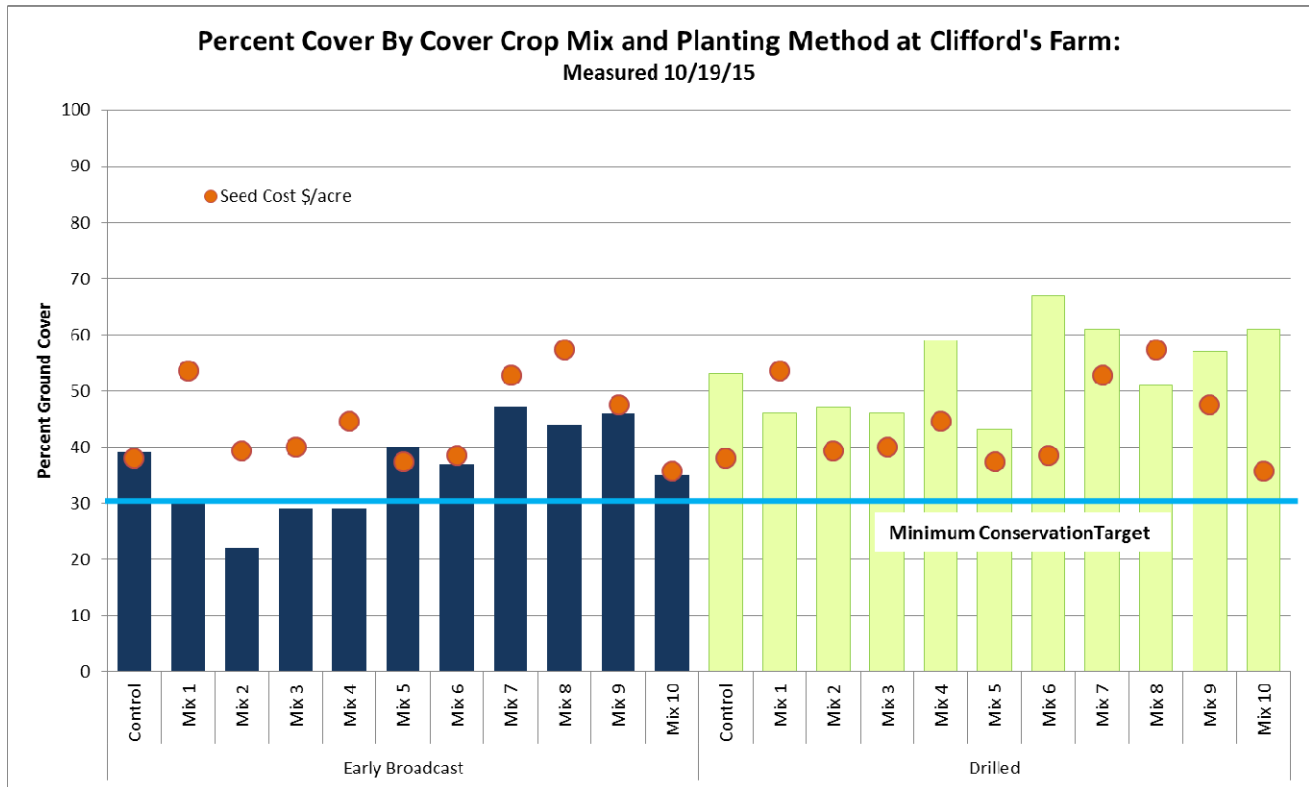


Spring 2016

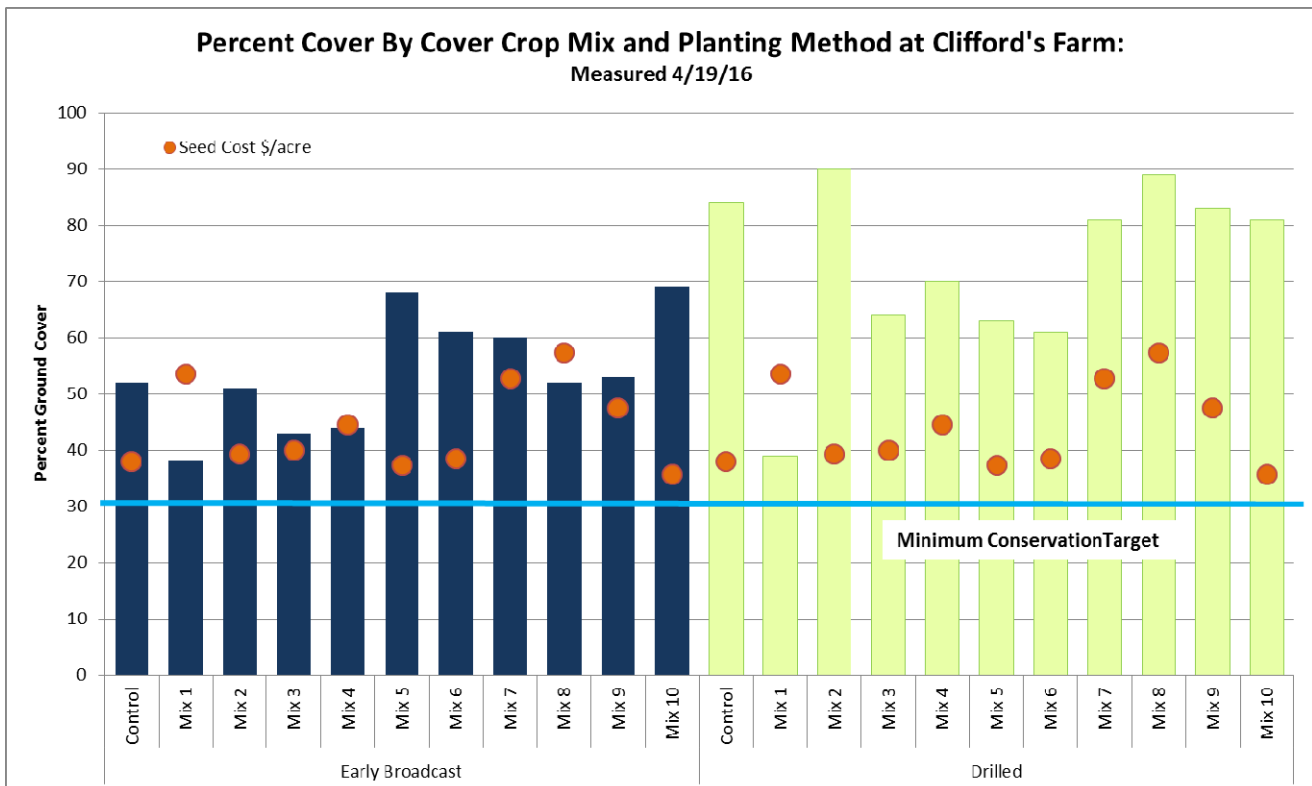


Clifford's Farm : Conservation Innovation Grant—Cover Crop Demonstration Site

Fall 2015



Spring 2016

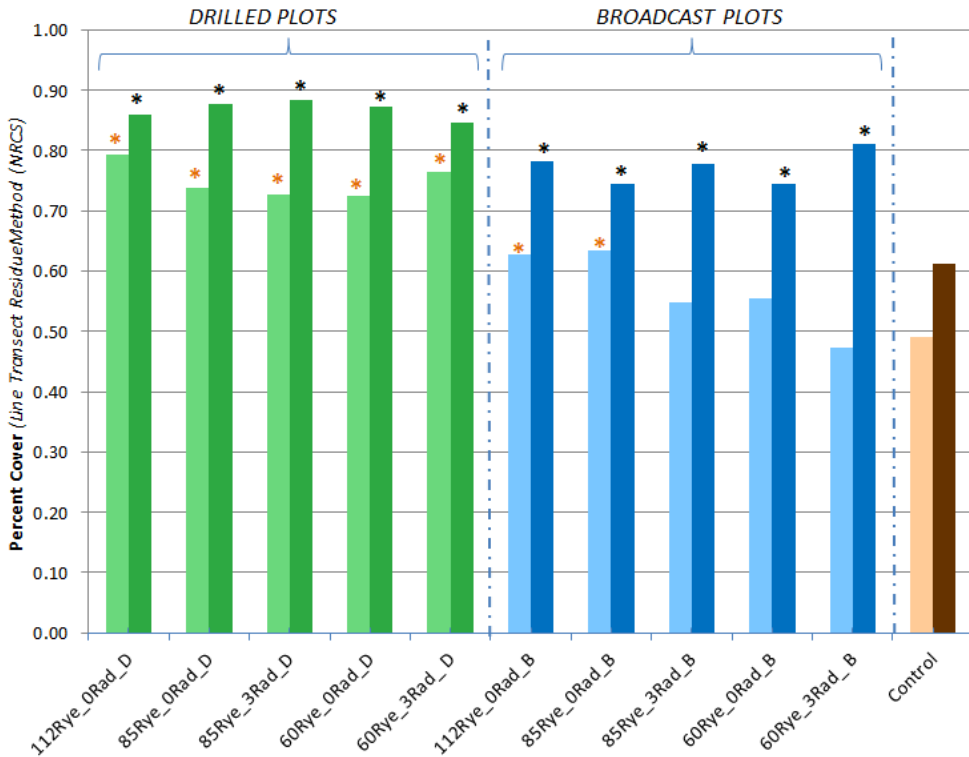


Clifford Farm : Rye-Radish Research Project (NIFA)

Rye-Radish - Percent Cover

Fall 2015 vs. Early Spring 2016 (Starksboro Site Only)

Fall Measurements (11/10/15) - Spring Measurements (4/19/2016)



LEGEND

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

Lighter bars = Fall 2015
Darker bars = Early Spring 2016



USDA United States Department of Agriculture National Institute of Food and Agriculture

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

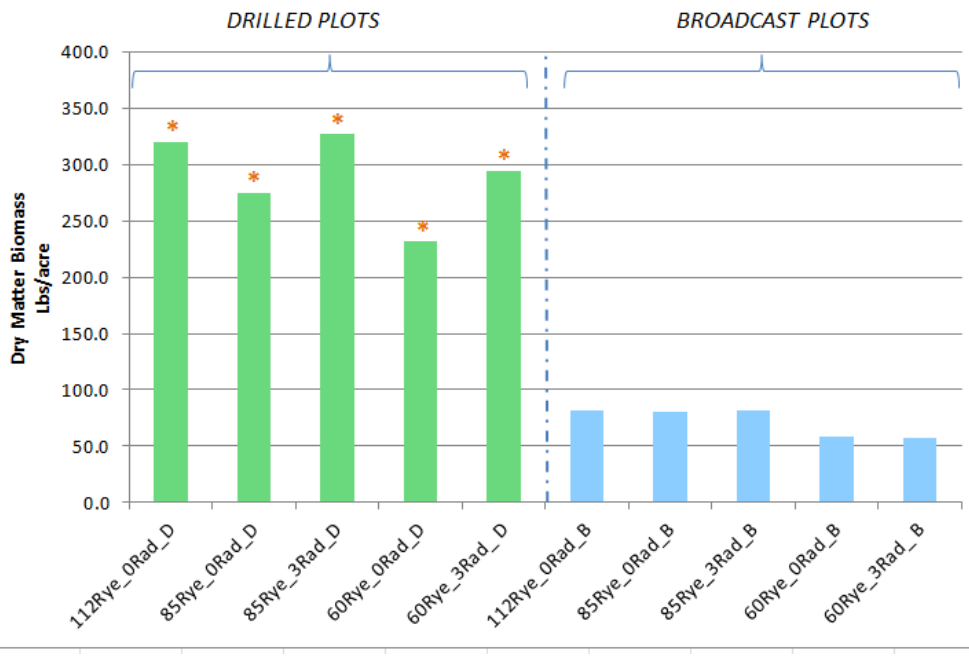


NE SARE Graduate Student Grant GNE14-091

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

Rye-Radish: Biomass (Starksboro Site Only)

Fall 2015 (Measured 11/10/2015)





UNIVERSITY OF VERMONT

EXTENSION

CULTIVATING HEALTHY COMMUNITIES

Champlain Valley Crop, Soil, and Pasture Team

Foster Site Statistics:

Soil Type: Vergennes clay (VgB)

Cover Crop Planted:

July 29, 2015 (V6/V7)

August 19, 2015 (R1/R2)

September 24, 2015 (harvest)

Clifford Site Statistics:

Soil Type: Raynham silt loam (RaB)

Cover Crop Planted:

No early broadcast

August 5, 2015 (R1/R2)

September 17, 2015 (harvest)

Broadcast

40 feet

Drilled

	Broadcast				Lbs/Acre	Drilled				Lbs/Acre
	Control	Winter Rye				Control	Winter Rye			
20 feet		100			100		100			100
	Mix 1:	Forage Oats	Field Pea	Tillage Radish	60	Mix 1:	Forage Oats	Field Peas	Tillage Radish	60
		30	25	5			30	25	5	
	Mix 2:	Winter Triticale	Aust. Winter Pea	Rapeseed	80	Mix 2:	Winter Triticale	Aust. Winter Peas	Rapeseed	80
		50	25	5			50	25	5	
	Mix 3:	Ann. Ryegrass	Aust. Winter Pea	Tillage Radish	45	Mix 3:	Ann. Ryegrass	Aust. Winter Pea	Tillage Radish	45
		15	25	5			15	25	5	
	Mix 4:	Winter Rye	Aust. Winter Pea	Tillage Radish	80	Mix 4:	Winter Rye	Aust. Winter Pea	Tillage Radish	80
		50	25	5			50	25	5	
	Mix 5:	Ann. Ryegrass	Clover - Berseem	Tillage Radish	25	Mix 5:	Ann. Ryegrass	Clover - Berseem	Tillage Radish	25
		15	5	5			15	5	5	
	Mix 6:	Winter Rye	Forage Oats	Tillage Radish	85	Mix 6:	Winter Rye	Forage Oats	Tillage Radish	85
		50	30	5			50	30	5	
	Mix 7:	Forage Oats	Hairy Vetch	Winter Rye	90	Mix 7:	Forage Oats	Hairy Vetch	Winter Rye	90
		30	10	50			30	10	50	
	Mix 8:	Winter Triticale	Hairy Vetch	Forage Turnip	65	Mix 8:	Winter Triticale	Hairy Vetch	Forage Turnip	65
		50	10	5			50	10	5	
	Mix 9:	Winter Rye	Aust. Winter Pea	Forage Turnip	80	Mix 9:	Winter Rye	Aust. Winter Pea	Forage Turnip	80
		50	25	5			50	25	5	
	Mix 10:	Winter Rye	Clover-Crimson	Rapeseed	60	Mix 10:	Winter Rye	Clover-Crimson	Rapeseed	60
		50	5	5			50	5	5	

**Champlain Valley
Crop, Soil &
Pasture Team**

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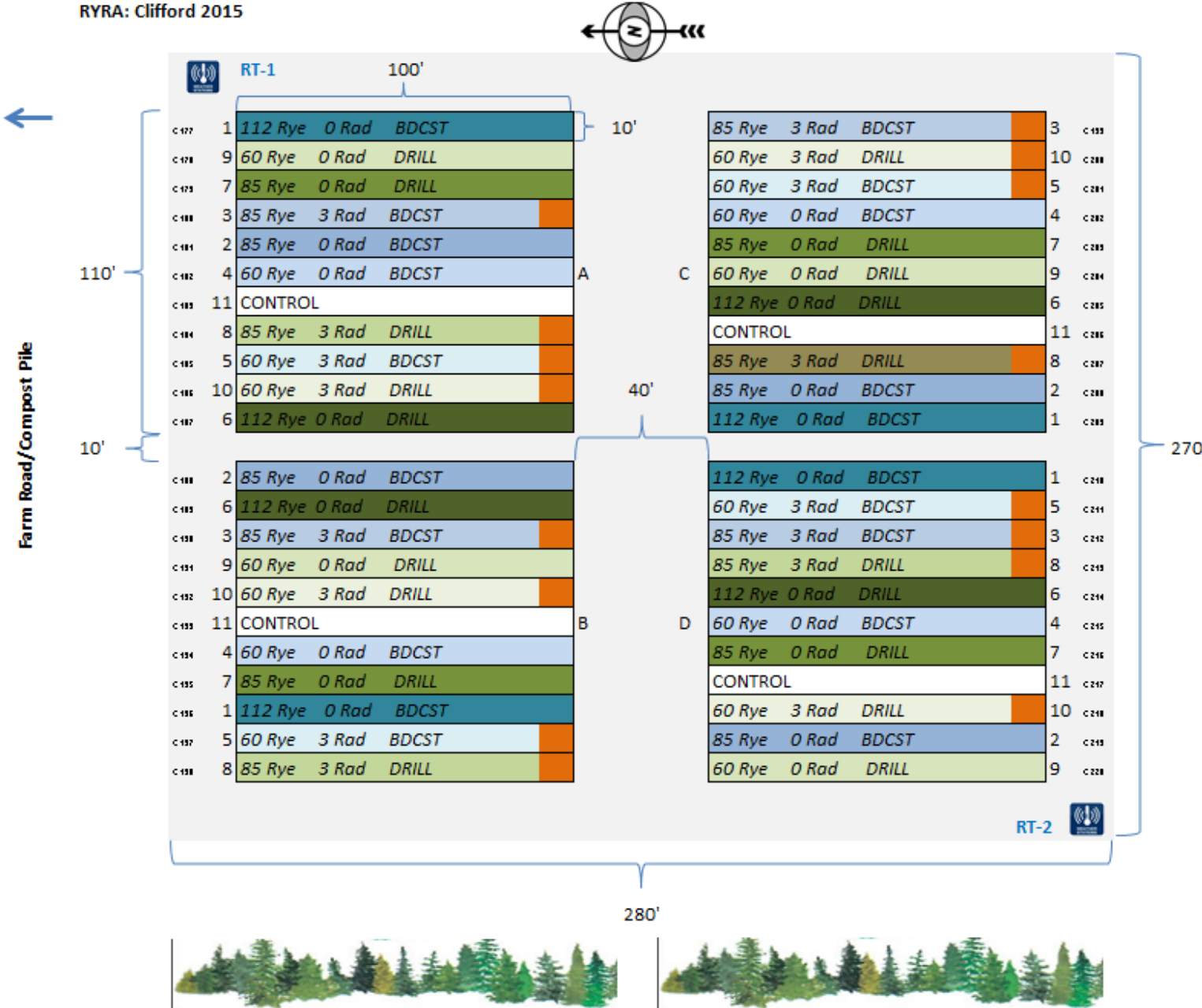
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Better Cover Crop Mixes for Vermont



Champlain Valley Crop, Soil, and Pasture Team

RYRA: Clifford 2015



Evaluating the use of forage radish to enhance winter rye cover crop performance

Site Statistics:

Location:
Starksboro, VT

Soil Type:
Stetson gravelly fine sandy loam, 5-10% slope

Cover Crop Planted:
September 23, 2015