

The logo for Root 5 Farm features the words "ROOT" and "FARM" in a black, serif font, flanking a central red circle containing a white number "5". The entire logo is framed by decorative, symmetrical black lines that resemble stylized roots or branches.

# ROOT 5 FARM

FAIRLEE, VERMONT

A photograph of a farm in Fairlee, Vermont. In the foreground, there is a large field with a green cover crop on the left and a dark, tilled field on the right. In the middle ground, there are several red barns and a long, white, covered walkway or tunnel. The background shows green trees and distant mountains under a cloudy sky.

## Building up Sandy Soils with Cover Crops

New England Veg & Fruit Conference 2022



# Outline of Presentation

- Overview of our farm
- Challenges of sandy soils
- Cover crop mixes
- Soil prep and seeding equipment





- 38 acre farm
- 8 acres of mixed vegetables
- 8 acres of cover crops
- Certified organic production





We pack 400 CSA shares each week from early May to the end of December









ROOT 5 FARM  
FAIRLEE GROWN ORGANIC





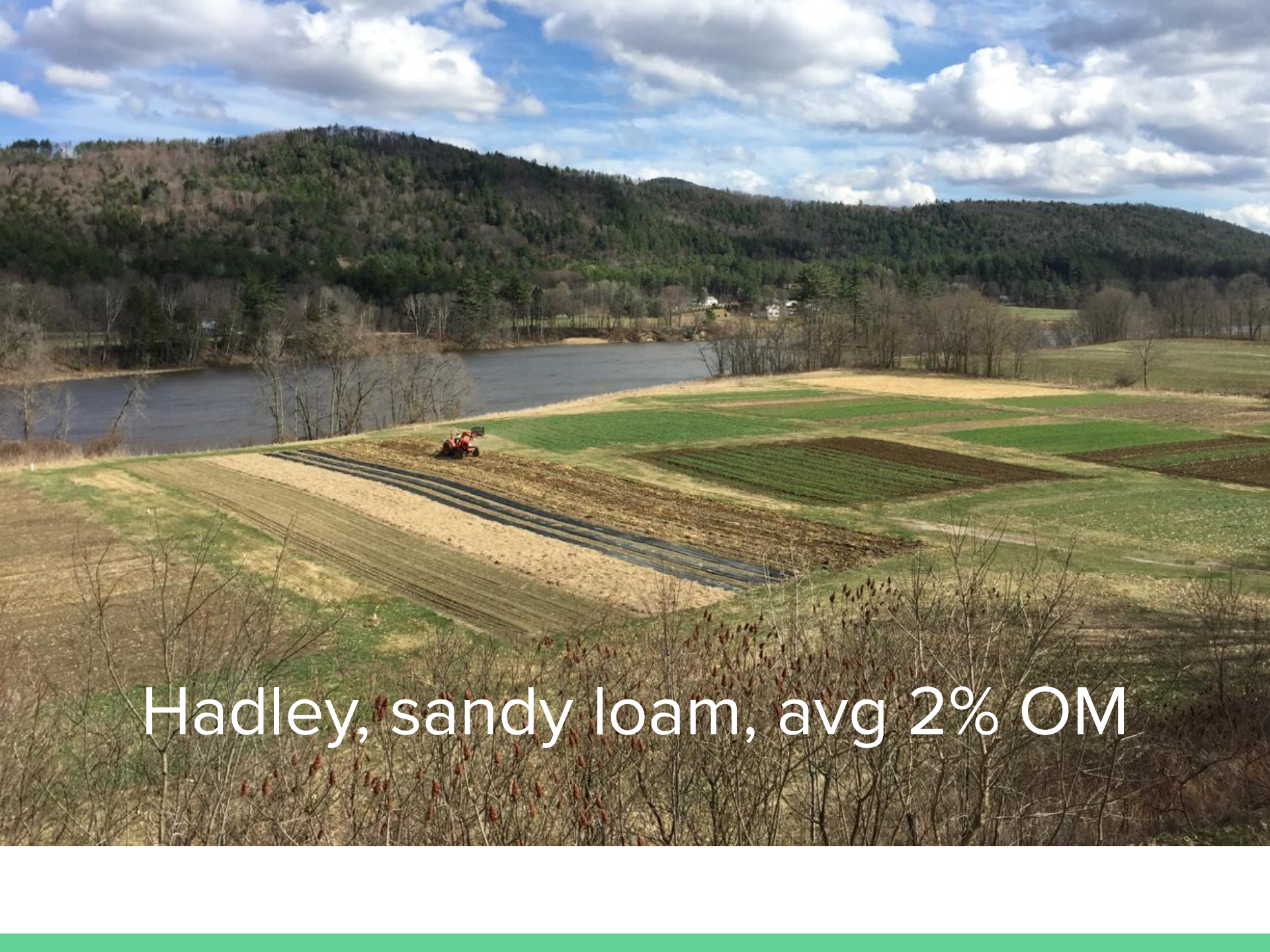


10 acres

28 acres

CT RIVER





Hadley, sandy loam, avg 2% OM



# Crop Rotation Plan (for all eternity)

## 100' Block Rotation (30-bed blocks)

Crop rotation in each block over time reads horizontally from L to R; each year's crop plan by block reads vertically

	2019			2020			2021			2022			
	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	
Lower 6	rye/vetch	mid & late season direct-seeded brassicas	thin rye (actual: open, crop debris, thin strips of rye)	early lettuce mix, head lettuce, spinach	buckwheat strips	forage radish/oats	T.A.R.A.			T.A.R.A.			
Middle 3	late lettuce, spinach	buckwheat strips/ silage tarp	oats/peas (actual: oats/peas/crop residue on west half, rye/vetch east half)	T.A.R.A.			T.A.R.A.			oats/peas	early lettuce, spinach	buckwheat strips/ silage tarp	oats/peas
Lower 2A	1st year Dutch White clover cover			2nd year Dutch White clover cover			oats/peas	early lettuce, spinach	buckwheat strips/ silage tarp	oats/peas	Herbs, scallions, fennel		TARA
Lower 3B + Lower 3C	2nd year Dutch White clover cover			oats/peas	fallow, then silage tarp	late lettuce mix, head lettuce, spinach	...plus overflow mid & late season direct-seeded brassicas	Herbs, scallions, fennel		TARA	TARA (continued)	TARA (continued)	plow early beds needed for brassicas & tarp, leave the rest TARA until spring
Lower 1A + Upper 1A + Upper 1B	hot peppers - U1B	buckwheat strips/ silage tarp	oats/peas (actual: L1A - open/crop residue/goosefoot oat, U1A - oats/peas)	TARA in L1A and U1A, scallions in U1B?	scallions - U1B	TARA	TARA (continued)	TARA (continued)	plow early beds needed for brassicas & tarp, leave the rest TARA until spring	early season direct-seeded brassicas	Yellow Sweet Clover/oats		
Lower 7 + Middle 1 + Corner 1	Herbs, scallions, fennel	tarp harvested sections in L7 to prep for late season overflow from L6	TARA (actual: L1-tarped, M1 - crop residue, weeds, C1 - tarp)	oats/peas	sudan after mulching	rye/vetch for summer seeded beds, silage tarp for early seeded block	early season direct-seeded brassicas	Yellow Sweet Clover/oats		Yellow Sweet Clover continued		oats/peas	
Lower 1C	rye/vetch cover continued	buckwheat	oats/peas (actual: sudan)	early season direct-seeded brassicas	research goosefoot: how to kill it? (Yellow Sweet Clover/oats?)	Yellow Sweet Clover continued?			oats/peas	beans, peas, head lettuce, radicchio, endive	beans, peas, head lettuce, radicchio, endive	rye/v	
Lower 1B	early season direct-seeded brassicas	Yellow Sweet Clover/oats (actual: 8-10 beds oats/peas, rest silage)		oats/peas	early sudan, followed by oats/peas	beans, peas, head lettuce, radicchio, endive	beans, peas, head lettuce, radicchio, endive	rye/vetch		mid & late season direct-seeded brassicas	thin rye		
Lower 2B	Yellow Sweet Clover continued			oats/peas (actual: and some sudan)	2 tarps early section, oats/peas on later half	herbs, radicchio, fennel	rye/vetch what we can	oats/peas in open areas	mid & late season direct-seeded brassicas	thin rye	fallow	buckwheat strips	forage radish/oats
Middle 4	beans, peas, head lettuce, radicchio, endive	beans, peas, head lettuce, radicchio, endive	rye/vetch (actual: crop residue, sections of vetch)	silage open (east) end; oats/peas on later seeded	mid & late season direct-seeded brassicas	thin rye	fallow	buckwheat strips	forage radish/oats	T.A.R.A.			



# Crop Rotation Plan (for all eternity)

**100' Block Rotation (30-bed blocks)**

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	2019		2020		2021		2022	
	Spring	Summer	Summer	Fall	Spring	Summer	Fall	Spring
Lower 6	rye/vetch	mid season direct-seeded brassicas	oats/peas	forage radish/oats	T.A.R.A.	oats/peas	oats/peas	oats/peas
Middle 3	late lettuce, spinach	straw, tarp	oats/peas	oats/peas	oats/peas	oats/peas	oats/peas	oats/peas
Lower 2A	1st year Dutch White clover cover			oats/peas	oats/peas	oats/peas	scallions, fennel	TARA
Lower 3B + Lower 3C	2nd year Dutch White clover cover		oats/peas	fallow	oats/peas	TARA (continued)	TARA (continued)	plow early beds needed for brassicas & tarp, leave the rest TARA until spring
Lower 1A + Upper 1A + Upper 1B	hot peppers - U1B	buckwheat strips/ silage tarp	oats/peas (actual)	oats/peas	oats/peas	oats/peas	oats/peas	oats/peas
Lower 7 + Middle 1 + Corner 1	Herbs, scallions, fennel	oats/peas	oats/peas	oats/peas	early season direct-seeded brassicas	oats/peas	oats/peas	oats/peas
Lower 1C	rye/vetch cover continued	buckwheat	oats/peas	oats/peas	oats/peas	Yellow Sweet Clover continued?	oats/peas	rye/v
Lower 1B	early season direct-seeded brassicas	Yellow Sweet Clover (actual: 8-10 beds, rest silage)	oats/peas	early sudan, followed by oats/peas	oats/peas	beans, peas, head lettuce, radicchio, endive	beans, peas, head lettuce, radicchio, endive	late season direct-seeded brassicas
Lower 2B	Yellow Sweet Clover continued	oats/peas (actual: and some sudan)	2 tarps early section, oats/peas on later half	herbs, radicchio, fennel	rye/vetch what we can	oats/peas in open areas	mid & late season direct-seeded brassicas	thin rye
Middle 4	beans, peas, head lettuce, radicchio, endive	beans, peas, head lettuce, radicchio, endive	rye/vetch (actual: crop residue, sections of vetch)	silage open (east) end; oats/peas on later seeded	mid & late season direct-seeded brassicas	thin rye	fallow	buckwheat strips
Bluebird 1	oats/vetch	buckwheat	garlic for 2020 harvest	buckwheat	oats/peas	oats/peas	oats/peas	oats/peas





OATS & PEAS





○ germinate and grow well at lower temperatures temperatures





Winter-killed OATS & PEAS









- Oats are good at reseeding themselves





Clover











T.A.R.A.

(timothy, alsike clover, red clover, and alfalfa)











RYE & VETCH

















BUCKWHEAT





SORGHUM



Cover Crop Incorporation

Soil Preparation

Seeding Equipment





















Forigo G25 Stone Burier













GRAIN DRILL  
GREAT PLAINS 3P600







