

# Operation Adaptation:

## Climate Change and Regenerative Agriculture

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WILD ROOTS FARM VERMONT





# How will climate change affect farming?

Climate change is already affecting farmers. As global temperatures rise, farmers are facing unique and unexpected challenges. In some regions, climate change is resulting in longer growing seasons, erratic and extreme weather events, and less (or more) rainfall. This makes an already unpredictable way of life even more uncertain.

<https://modernag.org/q/modern-agriculture/how-will-climate-change-affect-farming/>

# United States accounts for 2.3 billion acres

914 million acres farmland accounting for 2.1 million farms

45.4 % permanent pasture

42.6 % used for commodity crops (corn, wheat, soy, cotton)

8.4 % woodland

5.6 % diversified farms, suburban/urban development

[https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/Highlights/Farms\\_and\\_Farmland/Highlights\\_Farms\\_and\\_Farmland.pdf](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/Farms_and_Farmland/Highlights_Farms_and_Farmland.pdf)

# What is the ecological impact?

Increase tillage

Over compaction

Decrease in water holding capacity

Potential salination from over irrigation

Decrease in biological activity and organic matter percentages

Nutrient deficiency

Land degradation and soil erosion





[Lakechamplainlife.com](http://Lakechamplainlife.com)



<https://www.clf.org/blog/clf-sues-vermont-agency-lake-champlain-pollution/>



# Solutions to create resilient food systems

Crop diversification

Cover cropping

Buffer strips

Alley cropping/ perennial intercropping

Rotational grazing/ silvo-pasture

Limited/no-till



# Increase in

Water holding capacity

Nutrient availability

Biological activity

Rates of carbon sequestration

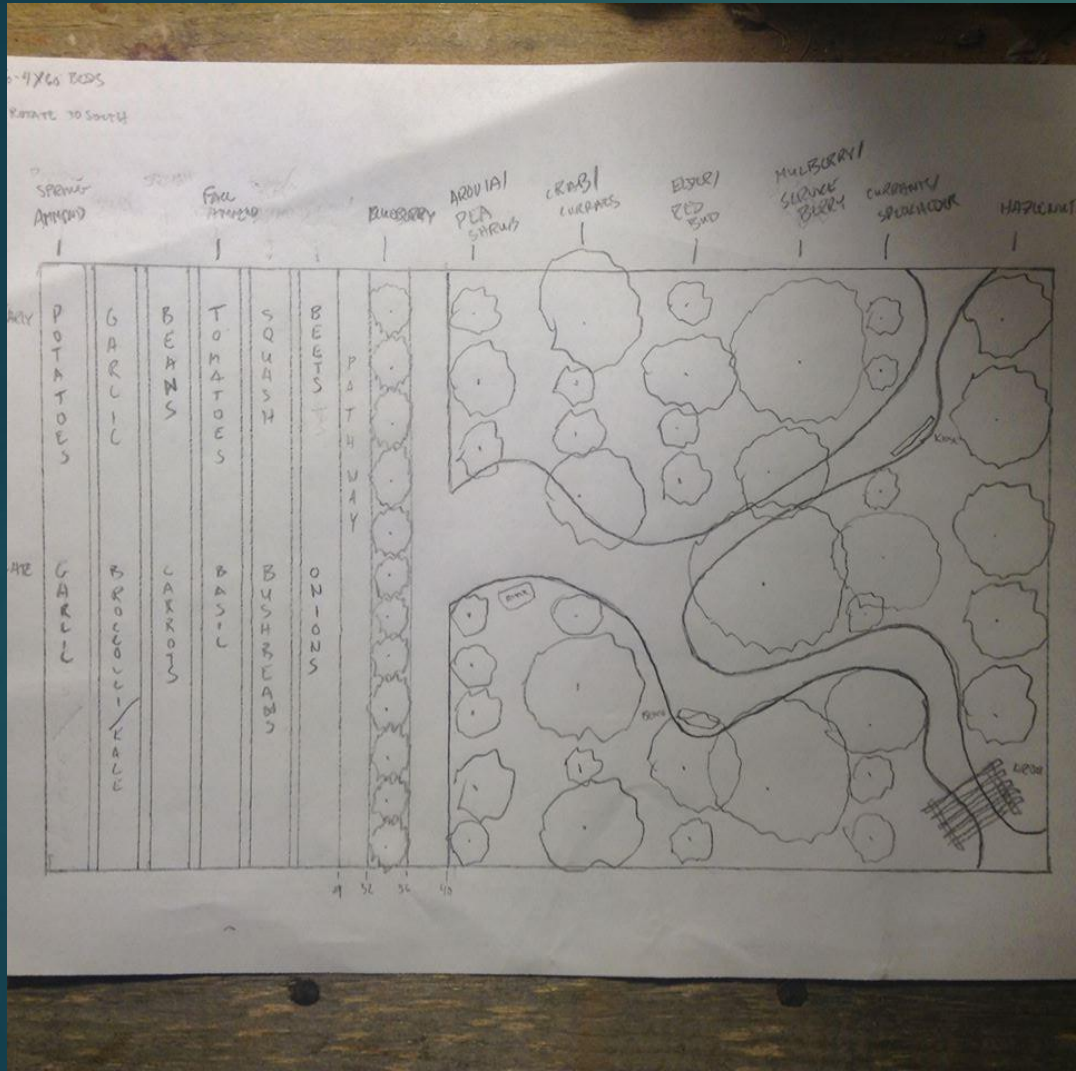
Root depth

Soil structure











# New Forest Farm- Wisconsin

106-acre agro-forestry system







# Why does this matter?

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Currently levels 408-410ppm global CO2- Safe levels are at 350ppm

<https://350.org/about/>

17 of the last 18 years are have the highest recorded temperatures in the last 136 years

<https://climate.nasa.gov/vital-signs/global-temperature/>

As weather patterns become more unpredictable, and seasons extend or decrease, crop failure is more likely with conservation production

Can conservation agriculture continue to supply the demand for national food security?





Twilight Auditorium, Middlebury College

# Addison County Farms:

the future and now

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**November 9 A Panel to Discuss**  
**6:30-8:30pm**

Do you know your  
local farmers?

**-Land Conservation**  
**-Water Quality**  
**-Farm Viability**

UVM Extension/ Vt Agency of Agriculture  
Middlebury College Food Studies/ ACORN  
Champlain Valley Farmers Coalition  
Addison County Farm Bureau  
Rural Vermont/ NOFA-VT

wildrootsfarmvt@gmail.com or mollya@middlebury.edu





## VETERANS HOMESTEAD SERIES

- 3/17 Small Scale Sugaring at Greenmont Farms in Underhill
- 3/25 Farm Business Planning at UVM Extension in S. Burlington
- 4/22 Carbon Farming at Wild Roots Farm in Bristol
- 5/27 Designing and Building the Resilient Garden at Sweet Butters Farm in Essex
- 6/24 Diversified Farm Systems at Headwaters Farm in Hinesburg
- 7/29 Designing the Mobile Chicken Coop at Papineau Family Farm in Highgate
- 8/26 Preserving Your Harvest at Tandem in Bristol
- 9/30 Livestock Integration and Rotational Grazing at Plew Family Farm in Mt. Holly

*If you are a veteran or family member and would like to participate, please inquire at 802-377-1214 or [wildrootsfarmvt@gmail.com](mailto:wildrootsfarmvt@gmail.com). On-farm workshops are led by veterans.*

## 2018 Regeneration Workshop Series

### Wood-fired Discussions

- 4/30 Soil Health & Climate Adaptation- Josh Faulkner
- 6/7 Pasture Management & Livestock Integration- Jenn Colby
- 7/12 Agro-forestry Systems- Meghan Giroux
- 8/2 Regenerative Agriculture- Jon Turner

### On-Farm Workshops

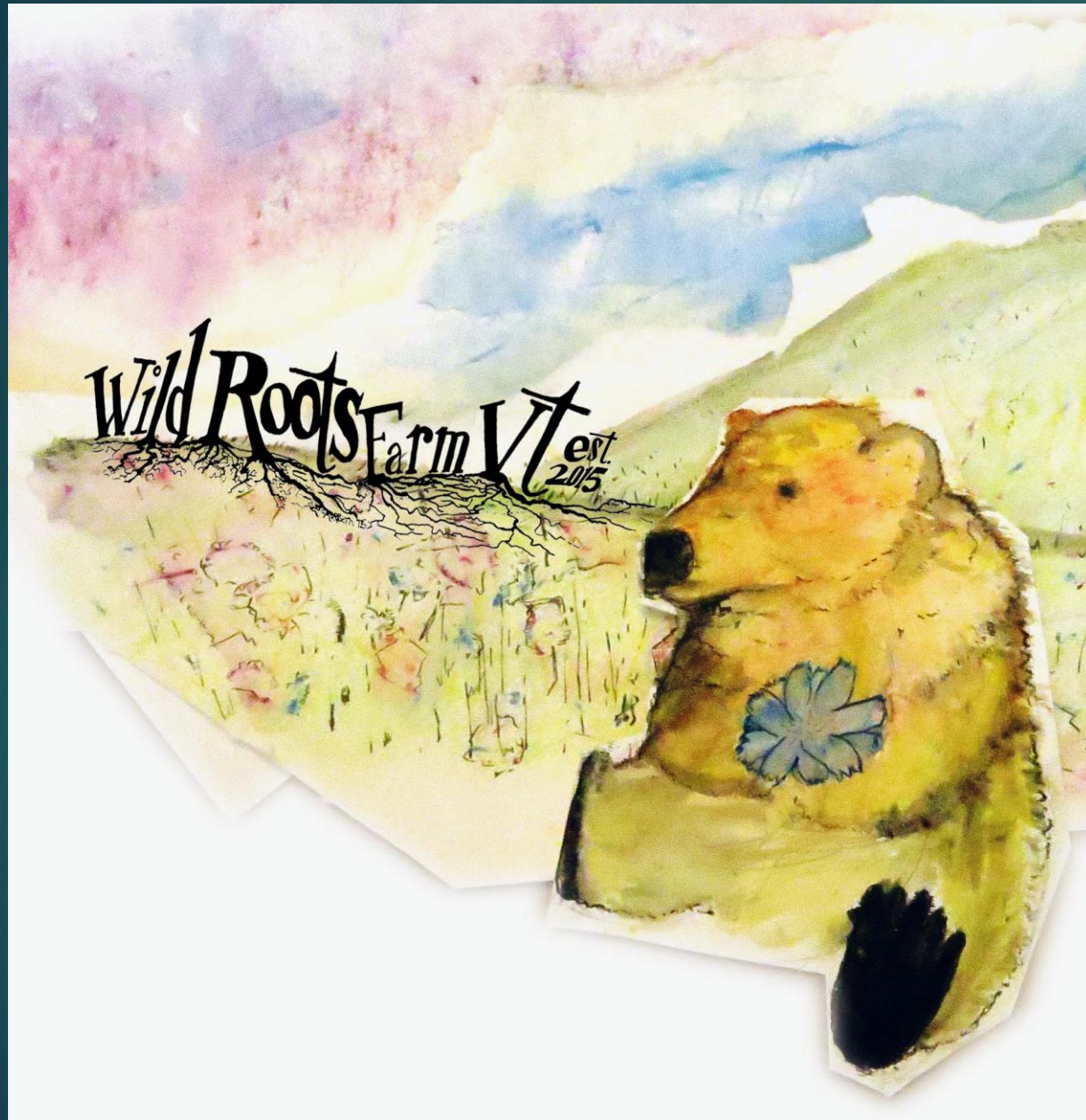
- 4/13 Grafting & Plant Propagation
- 6/17 Carbon Conscious Farming
- 7/15 Wild-crafting & Herbal First Aid
- 8/11 Perennial Beds & Pollinator Gardens

3rd Annual Hoedown and Harvest Potluck October 6

[www.wildrootsfarmvermont.com](http://www.wildrootsfarmvermont.com)







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