Food, Fiber, and Functioning Ecosystems: Vermont's journey to pay for ecosystem services

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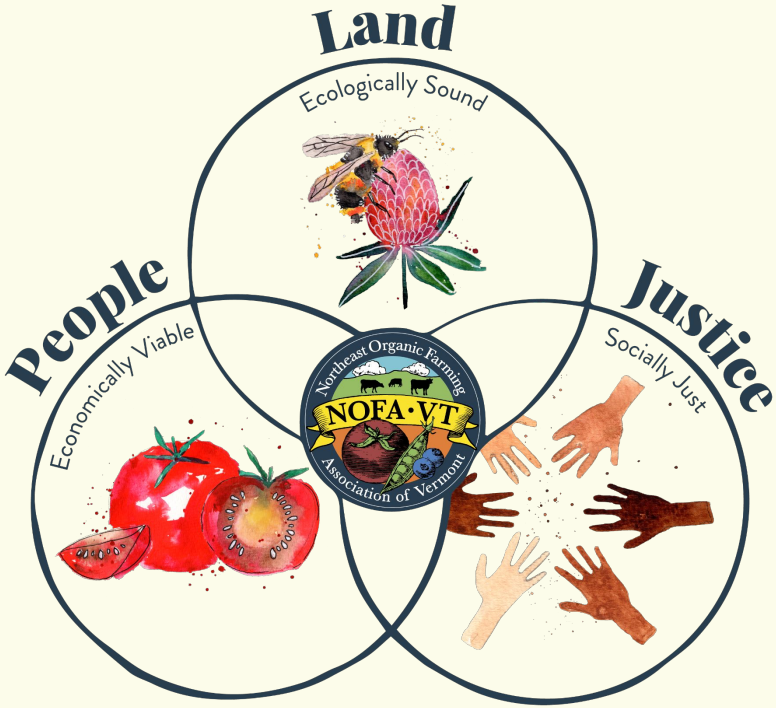
About

The Northeast Organic Farming Association of Vermont (NOFA-VT) is a member-driven 501(c)(3) non-profit organization promoting organic practices to build a food system in Vermont that is economically viable, ecologically sound, and socially just.

NOFA-VT was founded in Putney, VT in 1971, making it one of the oldest organic farming associations in the United States.



Act 83 of 2019

created the Soil Conservation Practice & Payment for Ecosystem Services Working Group.

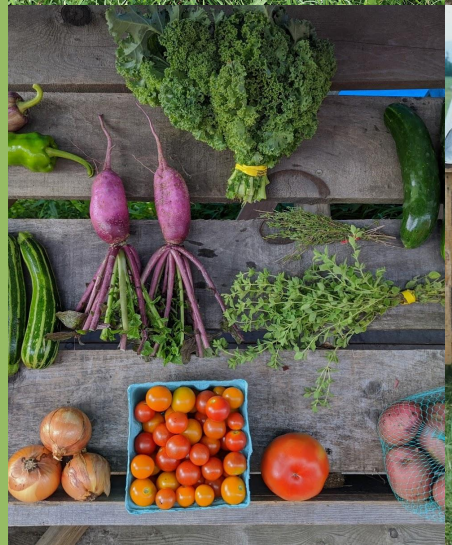
"The purpose of this Working Group is to recommend financial incentives designed to encourage farmers in Vermont to implement agricultural practices that:

- improve soil health
- enhance crop resilience
- increase carbon storage and stormwater storage capacity, and
- reduce agricultural runoff to waters."

Act 129 of 2020

- Changed the name to "Payment for Ecosystem Services & Soil Health Working Group."
- Added seats to the Working Group's membership
- Extended the Working Group until January 2023



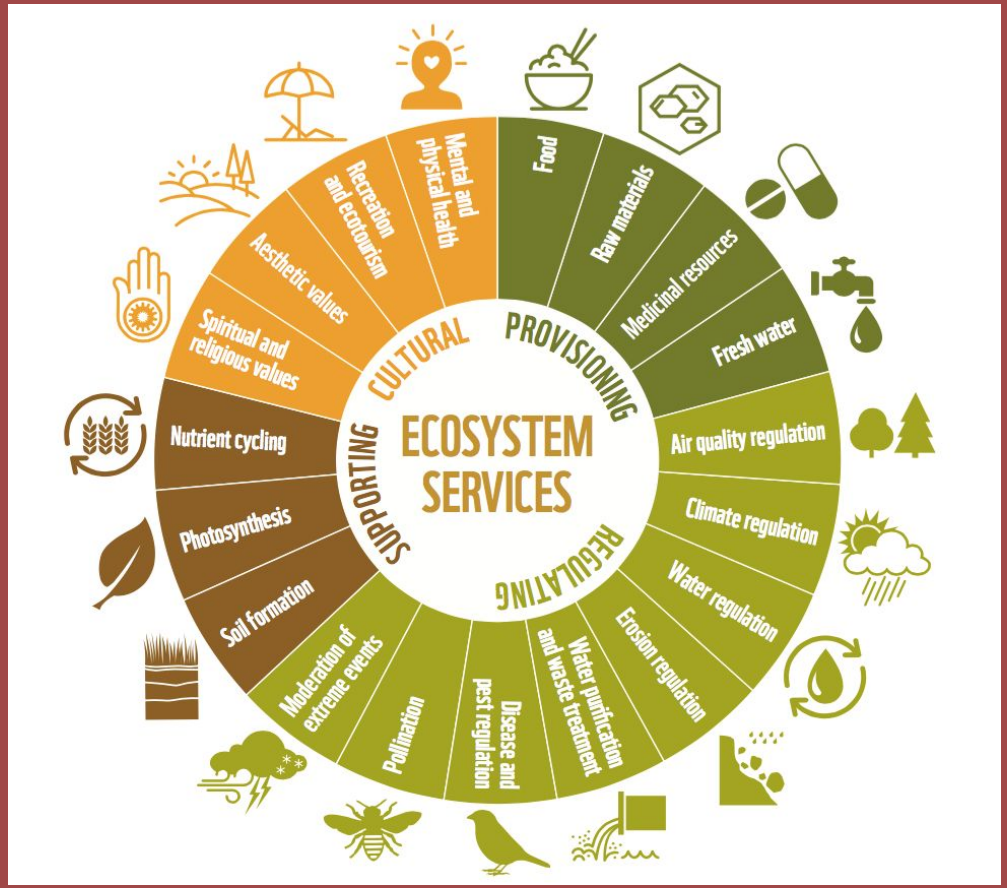



Ecosystem Services

Categories of ecosystem services:

- Cultural
- Provisioning
- Regulating
- Supporting

The PES & Soil Health Working Group has largely focused on regulating and provisioning.



Focusing on Biodiversity

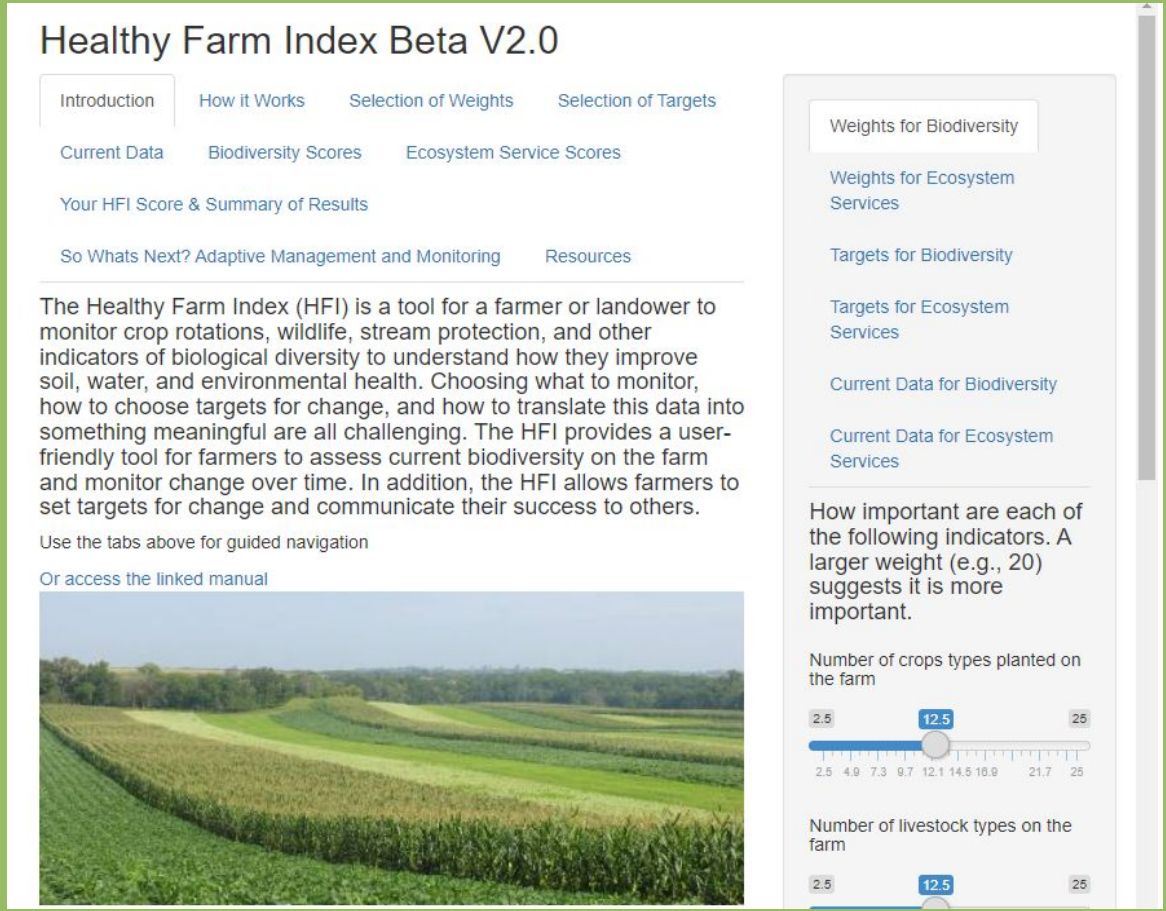
POSITIVE INDICATORS

- Brush piles, decomposing logs, patches of bare soil (for ground-dwelling insects, especially bees) and healthy duff layer in adjacent non-crop habitat.
- Native plants dominant in non-crop habitat with sparse invasive non-native plants.
- Diversity of beneficial organisms such as predatory insects, wasp parasitoids, spiders and other arthropods, bats, birds and mammals.
- Appropriate selection and diversification of crops suitable to site-specific conditions and resistant to prevailing pests, diseases, and weed pressure.

Source: Wild Farm Alliance, *Positive Organic Indicators and Red Flags: Inspecting for Natural Resources and Biodiversity on Farms*.

Photo credit: USDA NRCS

Focusing on Biodiversity



Source: Quinn et al. 2012: [Healthy Farm Index: Biodiversity and Ecosystem Services in Farming Systems]

Biodiversity Indicators

	Low/no achievement ----------> High achievement				
Indicator/ High Achievement	1	2	3	4	How measured?
1. Whole Farm					
Conservation and Wildlife	No documented/mapped conservation areas, practices, or plans.			**Conservation areas, practices, and plans appear on the farm map.**	Maps/ photos, documented progress from year to year.
	No natural or semi-natural areas identified on the farm.			**Farm property has some natural areas (woodlands, wetlands, grasslands) and semi-natural areas (hedgerows, alley plantings).**	Maps/ photos, documented progress from year to year.
Edge of field	No habitat adjacent to fields.			**Diversity and abundance of adjacent habitat like woodlands, wetlands, hedgerows, alleys or ground cover.**	Maps/ photos, documented progress from year to year.
	No brush or decomposing material around fields.			**Brush piles, decomposing logs, patches of bare soil (for ground-dwelling insects, especially bees) and healthy duff layer in adjacent non-crop habitat.**	Maps/ photos, documented progress from year to year.
2. For Annual Cropping Systems (field crops & vegetables)					
a. In field					
Species diversity	No flowering crops or plants in field.			**Flowering crop and non-crop plants are present.**	Maps/ photos, documented progress from year to year.
	Minimal soil life.			**Diversity of abundant soil life.**	**Measureable with ecoplates or other soil health tool?**
	No observed pollinators, beneficials, or birds in field.			**Beneficial insects and birds in field.**	Maps/ photos, documented progress from year to year.

Discussion Break

Paying for Practices vs. Outcomes?

	Bracket	Requirements	Equivalent	
Base	$10,000 (Flat Rate for all farms)	No RAP violations and meet basic BMP's for farm size. *involvement in the program requires farms to work with technical service providers to develop comprehensive conservation, business, and/or succession plans	Existing Activity Payment (minimum $1,500)	Incentivize change, transition costs, infrastructure. Full base payment comes at the start of the contract. Option to form Farm Management Team
Steward	$10/acre	Base plus…crop rotation, manure injection, intensive grazing and cover cropping. +Initiated Planning Process	Enhanced Activity Payment	Controlling nutrient runoff, decreased fertilizer cost, meeting regulations, cleaner water coming off farm
Soil Builder	$60/acre	Base and Steward plus… comprehensive planning, enhanced soil characteristics such as multiple soil biological species, advanced root mass, obvious glue and nutrients in optimal range. +Completed Plan +CSP Application	Bundles +Comprehensive Conservation Plan	Building organic matter, building soil systems, increased soil diversity, better feed quality, retaining carbon, less wind erosion, improved water retention
Regenerative	$90/acre	Base, Steward and Soil Builder plus… trees per acre, wild native plants, hedge rows, carbon levels in soil, water infiltration, biodiversity. +Implemented Plan	Bundles +Supplemental Payment	Strong soil systems in place, removing legacy carbon from atmosphere, hosting multiple animal & soil species, improving air quality, massive water retention, minimum inputs and repair. Long term: Once this stage is achieved farms may continue to apply for the per acre payments, ongoing. Base payments?


What do farmers want?

Farmer Insights

UVM research team conducting farmer interviews have found:

- Administrative burden strongly influences farmers' decision to participate in program.
- Farmers generally resist the idea of being paid to maintain soil health.
- Farmers more able to consider being paid to *enhance* soil health
- Farmers support co-eligibility & data transfer w/ existing programs
- Strong farmer support for tiered approach (starting w/ basic eligibility, payments increasing as thresholds are met)
- Most farmers find value in good "PR" from participation

Lessons Learned

- **Representation matters**

The Working Group has not had significant representation from or a seat designated for Vermont's Indigenous communities or other people of color.

- **Language matters**

Statutory language is limiting. This is good and bad, and hard to get right the first time.

- **Facilitation matters**

Skilled facilitation is critical to create a process where disparate opinions and voices can be heard, where power dynamics are adequately accounted for, and participants feel their time and input is valued.

- **Community engagement matters**

It takes significant planning and skill to conduct outreach to impacted communities and members of the public in a meaningful way and at the right times in the process.

Questions?

Thank You!

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