

North East Healthy Soils Network – Northeast Working Group Regional Context & Farm Financial Viability Notes

I. Working Group to Advance the Northeast Healthy Soil Movement

On the first day of the Northeast Healthy Soil Network Symposium, Thursday, February 20th, 2020, our members convened to continue an on-going discussion seeking to orient farmers, policymakers, and other stakeholders around the health of our region's landscapes and watersheds.

This goal requires us to bridge multiple pathways forward, and our network is excited to support many innovative partners adopting management tools to monitor soil health outcomes on a region-by-region, ecosystem-by-ecosystem basis. Through the strategies outlined below, we have profiled various stakeholders of the Northeast agriculture system who and their priorities and existing projects to promote healthy soils in the Northeast, relating to addressing issues of financial gaps, capitalizing technical resources, and leveraging education assistance.

II. Community Action and a Pathway to Building a Local Movement

Resource Gaps and Barriers to Land Access

- Fair wages for farm work and price parity for farm goods begins with the communities who value and consume those goods and services. Rewarding and elevating smallholder farmers for their voluntary action toward building soils requires buy-in from their neighbors.
- Smaller communities (both urban and rural) often bear the greatest costs of water pollution, erosion, and flooding. By explicitly creating a connection between soils, natural infrastructure, and water management issues, water authorities, watershed associations, disaster relief organizations, and insurance companies can further share resources.
- Building a stronger healthy soil value chain starts with farm inputs. Thus the region must directly address our dependence on agrichemicals and lack of opportunities to source organic inputs to demonstrate that we have bought into their success.
- Access to land resources is strongly connected to municipal power structures. By empowering land trusts to initiate and support ongoing conversations between townships, land owners, and farmers, our partners can leverage existing financial resources to expand long-term ownership rights. Building soils otherwise fails to generate wealth for farmers without this security.
- First generation farmers do not have a realistic pathway to transition ownership. We need to get our farmers onto land permanently, not through lease. By improving these ownership structures and expanding outside the family, farming can be made a more competitive profession.
- Soil building management practices often do not demonstrate a return on investment for more than 5 years. Ask ourselves, how do we compensate farms for these initial gaps in valuation, particularly as debt remains an acute issue?
- Questions of access, labor, wages, and debt are all tied up in the accumulation of wealth. If farm businesses can invest in farmhands, apprentices, and other future farmers by sharing ownership of some assets, these resources can be kept in the production side of the agricultural system.

Integrated Land Management: Bridging Soil Health, Suburban Landscaping, Forestry & Social Outcomes

- Generational success depends on giving particular attention to women and other socially disadvantaged farmers. Assigning leadership roles, promoting technical services, and sourcing

new ideas must be done with an eye toward parity.

- Sourcing, sharing, and analyzing data about soil health outcomes must give consideration to how these conclusions impact different farmers. Ask, are we being exclusive?
- **Resource:** Soil and water conservation districts represent a local, non-regulatory body that can navigate the space between state and local land management goals.
- **Region activity:** Partners reported a recent groundswell of interest in agroforestry. Launching a northeast pilot program to track agroforestry outcomes with the help of the Northeast Organic Farming Association (NOFA) fill a critical gap in our regional case studies.
- Shaping development processes, valuing productive working lands so they don't get developed but if they do, soil maintenance requirements
- **Action:** Zoning laws need change in suburban settings, tax on artificial inputs? Aligning regulations with outcomes we want to pursue on our landscapes
- **Region Activity:** Ct districts get state funding for LID practices, stormwater management issues priority. Town by town basis getting towns to adopt LID regulations into zoning and wetlands
- **Action:** Overturn (buried in regs) that any municipality that want to do a nutrient management plan has to go through Sec of Ag in state, can only do it with compliance on water quality
- For more flowers, pollination, wild areas - like so many lawns in VT plant natives and are so beautiful. **Action:** Get ecological tax exemption law on docet? Tax shift between property owners, ones who produce eco value subsidized by higher rate of those who are

Technical Capacity-Building and Educational Priorities

- Packaging farm stories through reputable publications, online forums, and the Soil First platform can both educate and support the de-politicization of our agriculture.
- Campaign to teach how animal agriculture and livestock production systems can be included in a healthy soil future. Soil4Climate is a strong voice in this arena.
- **Region activity:** Stronger farmer-to-farmer education programs needed throughout the region. For example, connecting farms like Stonewall to organizations like NOFA and creating new educational hubs will help build accessible resources. And farmer-to-buyer workshops can capitalize on rural revitalization efforts to create shared goals.
- **Resource:** SWCD Soil conservation alliances have the capacity to further support farmer-to-farmer education and represent a replicable model for information sharing.
- **Resource:** Uncertainty about how to use data on farms must be addressed directly. Natural Resources Conservation Services (NRCS) can host webinars and further increase the accessibility of educators to farmers.
- **Resource:** American Farm Bureau Federation has a deep knowledge of our farm communities and how to distribute local assistance. In addition to National Grange and National Farmers Union, finding sympathetic voices in these organizations will ensure this transition maintains

momentum.

III. Policy Action and a Pathway to Advancing our Legislative Needs

Realigning Legal and Financial Frameworks

- Transition legal and regulatory language from subsidies and penalties toward payment for services so that we are “hiring farmers” for the value they add to our ecosystems.
- State funding to preserve farmland, support experimental research, and expand extension services must be a priority. Farm viability is strengthened by many private and nonprofit partners, but state interests must be also directly and financially tied to these successes.
- Subsidized prices and labor needed for a transitional period. Chuck Currie at Freedom Food Farm is a strong voice who argues long-term viability should not require costly public spending.
- A tax and credit regime focused on agrochemical inputs is broadly viewed as one of the most impactful ways to encourage management transition and fund outcome-driven practices.

Measuring and Quantifying the Benefits of Soil Health (See working group discussion Summary for more information)

- NOFA Massachusetts has begun to consider which soil tests are the most accessible and align with their priorities--identifying aggregate grade, infiltration, and slake testing as their principal indicators for aligning testing protocols.
- Dorn Cox at OpenTEAM continues to critically think about quantifying regional and scalar uncertainty in the measurement data and argues we must be proactive in convening conversations between people with deep and narrow knowledge.
- Servicing a database to demonstrate robust links between specific soil health indicators and various ecosystem services will help create verified datasets through which outcomes can be connected to policies. Recognizing that we do not yet fully understand the drivers of soil health or impacts of current conventional practices and chemical applications, we have to ask, what can we do with what we know now?
- **Resource:** NRCS has the foundational tools and protocols on which to build a common language of soil health. This agency is a mainstay for rural stakeholders and their actions moving forward should closely connect to regional agricultural goals.
- **Resource:** Research teams like the Bard Land Lab have an advantage as locally integrated institutions. These university labs have distinct incentives and unique flexibility to develop datasets with baseline protocols and experiment with soil building outcomes.
- **Action:** Encourage data sharing and transparency through platforms like OpenTEAM. Only by talking about in-field data collection can we build a common language and shared set of indicators for assessing our successes.

Technical Program Needs

- Direct development and implementation of highly localized farmer-to-farmer training programs based on soil building. Current public service and voluntary ecosystem conservation can only

achieve so much with current support.

- Food waste management must be nested inside potential soil health legislation. Sustainable supply chains from start to finish will best support our efforts. See Closed Loop Systems for innovative waste management and upcycling.
- A policy platform that allows local governments to source successful programming from around the region and the country. National partners like Mad Agriculture can help develop best practices for technology and resource transfers across regions and landscapes, but these resources should be formalized and institutionalized in policy.
- **Resource:** Vermont Department of Environmental Conservation has taken the lead with regard to healthy landscapes and their effect on water quality issues. Yet visible policy engagement, such as farmer involvement in the Vermont Payment for Ecosystem Service Working Group, can engage and push this work one step further.

Activity: NRCS has a mandate to lead on soil health assessments and to standardize protocols for data collection, but we need programs to create connections between their work and our movement.

On Farm Financial Viability: What would our stakeholders include in their state Green New Deal for Agriculture Legislation?

Expressed 20th & 21st February, 2020

Needs and Concerns:

- *At a Glance* top Needs Expressed by farmers in the room:
 - Making conventionally farmed food more expensive than regeneratively farmed food, to reflect cost of environmental damage. Internalizing environmental harms of industrial farming, by *incentivizing more costly environmentally regenerative practices*
 - GND policy could shift subsidies but how do we support farms until then?
 - Through educating consumers about benefit of healthy soil farmed foods so more people buy that food at its price point. Through price subsidies. Regional coop networks as supported local market structures.
 - Most needed risk mitigation intervention is subsidizing *labour* - for transition periods or as a long-term viability aid
 - Risk mitigation and economic viability should be central to framing financial incentives in general. Frequently, issues of scale create the greatest vulnerabilities. There exists a lack of investors to shoulder the risk of financing new techniques to achieve healthy soil outcomes.

To perpetuate the healthy soil movement, keep soil-building farms in business.

Needed actions to address the constrained bottom lines of **Small Farms:**

- **Labor:** Recent rulings in Massachusetts Courts have found confined the definition of farm labor. This confined definition will either constrain the number of hours laborers can work or increase costs. Additionally, rises in minimum wage will also constrain the capacity of small farms to be profitable.

- **Equipment Access and Cost:** Farmers with limited access to finances without providing their land as security, cannot shoulder risk of investing in experimental and difficult to access equipment.
- **Price Variability:** Farmer-Consumer relationships are characterized by large power disparities. Large-scale purchasers are able to request the production of goods and untenable price-points.
 - Case of Food Vision Grant – where changes in input costs prevented an agreed upon sale.
- **Innovative intervention to improve Land Tenure:** Approximately 40% of farmers in New England lease their land, dis-incentivizing investment and preventing the securitization of loans.
 - *Land valuations* not representative of soil health's impact on long-term viability? Is recurring income a priority, or can asset value increase be utilized to leverage recurring costs and yield changes (especially during transition)
 - Include farmers in renewable energy & solar siting conversations, innovate new dual-land use models to raise farmer bottom lines with energy production
- **Transition costs:** Large disparity between states on availability and transparency of sources of public and private funding.
- **Identification of Interested Investors:** Incentivizing investor interest and identifying investors continues to be a major challenge for regenerative agriculture practitioners and small-scale farmers specifically.
- **Scope of Investment Programs:** Are locally oriented programs able to mobilize enough capital for ensuring regenerative agriculture? Despite the presence of grants and other sources of public and non-profit finance, small-scale regenerative farms remain unable to access important equipment, technical assistance, and inputs.
- **Contrary Land Use Policies:** Solar and clean energy projects may undermine sustainable land use initiatives. Policy landscape (as well as zoning regulations) must recognize the importance of agricultural lands and ensure the competition for land use is limited.
 - Renewable energy installations represent profitable avenues for farms, yet these projects should be conditioned on soil assessments and other transitional opportunities. If farmers are not fully informed on their options, then these installations will appear most appealing.

Farm Finance Pathways: Actions the Network members can help achieve

- **Strengthening local markets for greater parity:**
 - Many on-farm decisions are not driven by local or regional markets. If we can better integrate farmer advocates throughout the food system, farms can become part-owners in processing, distribution, and sales. Furthermore, a fair trade model that shortens supply chains can efficiently close some of these gaps in the value chain.
 - Farm business models, diversified fund streams needed to buffer against competition. To support technical training, the region must develop a market infrastructure that pays for these resources.
- **Food Prices made representative of the Positive Externalities:**
 - ❖ **Internalizing all externalities:** Establishing competitive prices for goods that are environmentally sustainable and regenerative.
 - ❖ Public recognition of the value to infrastructure and public health of improved soils through proper practices.
 - ❖ **Food System Fee:** Reorient the greater food system towards sustainable practices and incentivize consumer purchases by making conventional agricultural product prices more representative of their extractive qualities.

- ❖ **Re-evaluating land for a new Productivity Index, Sensitizing Investors:** despite small profit margins, small farms are largely limited by access to finances and are less risk exposed (as compared to large scale commodities).
 - ❖ Contract assistance should help outline a fiduciary obligation landowners have to conserve and improve the health of their soil. In other words, land should be valued on a healthy soil index rather than a productivity index commonly used to rate soils, landscapes, and climates.
 - ❖ Recognition of the value created for agricultural lands. Regenerative agriculture can increase illiquid capital wealth by restoring lands and expanding future productivity.
 - ❖ Recognition of the decreasing recurrent input costs associated with regenerative agriculture if compost/manure/soil-organic-matter market is made viable.

- **Pooling of Resources:** Statewide conservation groups, advocacy organizations, and public institutions (at all levels) can coordinate efforts in order to address funding for transition and reimbursing farmers who have already made the transition.
 - Inter-state cooperation for creating a catalogue of active institutions/groups to facilitate transition.
 - Facilitating the creation of cooperatives and other resource pooling frameworks.
 - Connecticut Conservation Districts may provide a framework for equipment sharing for farmers without the available capital or yield to justify purchase or private lease.
 - Similar cost-share program in Vermont: VT program offered a grant to Butterworks in order to purchase no till equipment. The program is cost efficient, with a \$10 /acre fee for users.
 - Environmental Bond Bill: MDAR Acre program (with approximately \$4 million statewide) provides full cost grants for equipment purchases. Legislatively, could be adopted within a climate adaptation and/or mitigation strategy.

- **Manage Land use competition:** Pasture land, as well as agricultural land, must be adequately valued and zoned in order to protect them from unsustainable development patterns.
 - Further research on dual use land must be incentivized, as the impact of cattle grazing on agricultural lands and soil improvement on marginal lands could have an immense impact on farm viability.

- **Ongoing Political Movements:** As the presidential election looms in 2020, soil health and regenerative agriculture have been featured in numerous platforms. Recognizing, lobbying, and educating politicians on the advantages of transitioning the agricultural system must taken on by practitioners and advocates.
 - Didi's publication, "Why communities should invest in soil health and the soil sponge," has been used by Democratic candidates for talking points.
 - Diversity of membership with a common cause and mission is key. Diverse methods of improving farmer sustainability must be lobbied for and encouraged within the market.
 - Bold visions: The movement to create agricultural commons and decommodification of land could result in improved soil/ecosystem health.
 - Case Study: Andhra Pradesh project of Budget Natural Farming Initiative delivered surprising results that led to improved soil qualities, fewer expenses, and increased yields.

Leveraging Unconventional Sources of Funding

Steps towards leveraging all possible Financing Sources: While additional mobilization among state, non-profit, and for-profit actors must be provided in order to bring awareness to farmers and competition to lower the cost of finances, there are many sources of possible funding.

- Croatan Institute published Soil Wealth on unconventional sources of investment and financing.
 - CIG conservation innovation grant is being piloted, as well as additional financing models, to encourage private investment in seed distribution.
- **More Press for the Movement:** How to capture the stories of soil-building farming as it is happening in the Northeast
 - **Increasing visibility:** Those farmers who are at the vanguard, as well as successful proofs of concept, must be made visible to investors. Investors looking to diversify investment portfolios may be just as interested in regenerative agriculture for multiple reasons. From merely publicity and perceptions of “greening the economy” to real understandings of the land use and food system risks imposed by conventional farming. However, in order to attract investment, public sensitization must take place.
 - **Successful Farmers:** Farmers who have succeeded despite the odds
 - Establishing Press Releases and other publications
 - Tours of successful farms (utilizing regenerative – healthy soil – methods) could both act to sensitize public on the importance of such practices, provide additional income for farmers, and encourage a decentralized social-media method of advertising.
 - Similar publicity has been observed with Gabe Brown Russel Hedrick Soil Health Academy.
 - **Expanding use of SoilFirst:** Not only coordination with other farmers and supply chain actors, but coordinating publication and investment opportunities. This platform could facilitate ‘first-mover’ market capitalization.
- **Chanel funding towards Pilot Programs to expand eco-system service payment for soil-building farming Pilot Programs**
 - Proof of concept that could increase margins for small scale farmers and motivate more investment.
 - Continuing questions: Is this a role for private investment capital or public redistribution? To what extent are existing systems, such as REGGIE, able to contribute to PES? How can the public/private investment network realize returns with regard to investments in natural capital? Will the 2020 Farm Bill be able to provide funding for eco-service projects/pilots?
- **Strengthening pro-farmer contractual framework with large purchasers:** legal provisions, as well as independent contracts, must address power disparity between small-scale producers and large-scale consumers.
 - Such contracts must address price variability in order to ensure farmers can produce organic commodities
 - Expanding the role of third-party arbitration on changes to contracts
- **Land Tenure Innovation and Reform:** Land access can be improved through numerous innovations.
 - **Recreating the commons:** Agrarian Trust’s innovative Agrarian Commons program has established 501(c)(2) land-holding entities in order to address collective action issues of cost associated with regenerative farming. Also, engages the local community and creates public awareness of food production systems.
 - **Land Value:** Investors and Public entities can be sensitized on the perverse market incentives created by current land appraisal systems.
 - Moving valuation based upon historic yields (extractive metric) to a soil health metric.
 - Important to establish measurement definitions that facilitate such valuations.
 - Renters’ Leases can include disclosures of soil health and create precedent for enforcement of compensation for land degradation.

- University of Massachusetts extension program has experimented with tying lease costs to metrics of land health and stewardship practices. Renters can realize lower than principal cost for improving land (increasing value of “natural capital”).
- Virginia program experimented with sample lease, in which renter reimbursed farmer for cover crop expenses (in order to preserve soil health/land value).
- Croatan Institute has highlighted the Land Secure financing tied to conservation practices. Conservation districts redistribute property tax revenue to farmers for improved soil stewardship practices.

See “Northeast Healthy Soil Network Action Plan” for solution action strategies based on these points