

Production Techniques for Sustainable Ecosystems

2025 NEW HAMPSHIRE FOOD AND AGRICULTURE STRATEGIC PLAN

Purpose: To understand the methods of food production (crops and livestock) that are designed to protect the environment, enhance soil health, and conserve natural resources, while also being economically viable and socially responsible. Methods include, but are not limited to, organic, permaculture, regenerative, climate-smart, agroforestry, biodynamic, integrated pest management, and Indigenous agricultural practices.

What's at Stake?

Sustainable production techniques, and the food systems that they influence, are critical to the climate resilience and environmental health of future generations. The agri-food sector generates 31% of anthropogenic greenhouse gas emissions. Additionally, unsustainable practices deplete natural resources, degrade soil health, pollute water, contribute to biodiversity loss, and diminish public health, factors that jeopardize food security, ecosystem stability, socioeconomic welfare, and agricultural productivity. Sustainable agriculture offers powerful solutions to mitigate these impacts, foster innovation, and build resilience in New Hampshire's food system. Policymakers and funders have a critical opportunity to act now and safeguard our future.

Current Conditions

New Hampshire is progressing in adopting sustainable agricultural practices. From 2012 to 2017, no-till and reduced-till practices grew by 147% and 34%, respectively, while cover crop acreage increased by 66%. The University of New Hampshire is leading a \$10 million USDA-funded agroforestry project, has hired a soil health state specialist, and is helping permaculture practices gain traction through community initiatives. Historically, synthetic fertilizers are widely used to enhance yields, but the rising costs of inputs, including fertilizers, is driving interest in reducing reliance on inputs. Federal funding for conservation practices has increased, with New Hampshire receiving \$5.2 million in Environmental Quality Incentives Program (EQIP) funding in 2023, up from \$3.8 million in 2021.

However, financial constraints, a lack of technical knowledge, and market access challenges continue to limit widespread adoption of sustainable production techniques. A study published in 2023 highlights that market development, including access to premium markets, plays a significant role in encouraging farmers to adopt sustainable practices. The study emphasizes that financial incentives, technical support, and policy frameworks are essential to overcoming barriers to adopting sustainable practices. Additionally, farms using organic agricultural practices are not able to capitalize on existing market share because of certification challenges in New Hampshire.

Challenges and Opportunities

CHALLENGES

- New Hampshire's thin, rocky soils face erosion, nutrient runoff, flood damage, and potential pesticide and per- and polyfluoroalkyl substances (PFAS) contamination.
- The initial costs of transitioning to sustainable practices can deter farmers.
- The USDA's Farm Service Agency insurance programs are not well subscribed to and are not tailored to sustainable production or to the types of farms in New Hampshire, further increasing transition risks.
- There are barriers to accessing the information farmers need to implement sustainable practices effectively. These information gaps create perceived risks and uncertainties about yield stability, making farmers hesitant to adopt new practices.
- Accessing markets that value and pay a premium for sustainably produced goods is difficult in a nationally consolidated market system and within food safety regulations. Without reliable market access, the financial incentives to adopt sustainable practices are reduced.

OPPORTUNITIES

- There are funding opportunities for farmers to implement sustainable practices, such as the NH Conservation Districts' Climate Resilience grant, Natural Resources Conservation Service (NRCS) programs, and NOFA-NH's Farmer Resilience Fund.
- UNH Extension and the NH Water Resources Research Center provide soil health and water quality testing.
- Technical assistance is available from county conservation districts, UNH Extension, NOFA-NH, and the National Center for Appropriate Technology's Appropriate Technology Transfer for Rural Areas (ATTRA) Sustainable Agriculture program.
- Food hubs and the Local Food for Local Schools Purchasing Incentive Pilot Program support regional market development and local procurement.
- University research programs and the USDA's Northeast Sustainable Agriculture Research and Education (SARE) grants support on-farm research and education.

ORGANIC AGRICULTURE IN NEW ENGLAND, 2021

A little more than 2% of New Hampshire farms and 2.6% of farmland acreage are certified organic. Responses from the 2021 Certified Organic Survey indicate that New Hampshire had the third most certified organic farms and amount of farmland acreage among New England states.

SOURCE: USDA *Certified Organic Survey, 2021 Summary*.

| State | Number of Farms | Acres |
|----------------------|-----------------|---------------|
| Vermont | 693 | 203,083 |
| Maine | 496 | 45,862 |
| New Hampshire | 93 | 10,851 |
| Massachusetts | 89 | 4,764 |
| Connecticut | 54 | 1,185 |
| Rhode Island | 28 | 257 |

Recommendations

- **Allocate \$5 million annually to grants for farmers using or transitioning to sustainable practices.** Allocate \$5 million annually, including seeking matching private investments, to a state-funded grant program that provides up to \$250,000 to farmers using or transitioning to sustainable practices. Appropriate funds within the program to support specific provisions, like cost share programs for organic certification and EQIP practices, and establish priority ranking for historically underserved farmers. Ensure small farms have equal access to such funding, since New Hampshire agriculture is primarily represented by small farms.

- **Invest \$2 million to subsidize the cost of testing soil samples.** Funding the subsidization of soil testing could include microbial residue and PFAS and expand the testing capability of the University of New Hampshire laboratory.
- **Fund technical assistance and training for organic and sustainable production techniques.** Through a competitive proposal process, fund comprehensive technical assistance and training programs for organic and sustainable production techniques, focused on topics like transitioning to organic, integrated pest management (IPM), and recordkeeping.
- **Develop markets for organic and sustainable farmers and food businesses.** Develop these markets by creating economic and regulatory incentives and marketing campaigns, including:
 - Offering a tax credit for retailers who source from sustainable producers
 - Creating supportive regulations for public institutions to source from sustainable producers
 - Develop a “New Hampshire Organic and Sustainable” brand and marketing campaign
- **Increase funding for sustainable and organic agriculture research.** Particularly increase research that prioritizes collaborative on-farm trials and research with farmers and is focused on practical applicability, increasing climate-related challenges, and IPM.

Authors

Lead Author: Julie Davenson, Board President, Northeast Organic Farming Association of New Hampshire

Contributing Authors:

Jeremy DeLisle, Field Specialist, Food and Agriculture, UNH Extension

Joyce Ford, Board of Directors, Northeast Organic Farming Association of New Hampshire, Retired organic farmer and organic inspector

New Hampshire
*Department of Agriculture,
 Markets, and Food*



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For more information, including references and opportunities to get involved, visit the 2025 NH Food and Agriculture Strategic Plan web page on nhfoodalliance.org or scan the QR code on the inside front cover of the print version.