



Climate Change and Agriculture in the Northeastern US

2021 REPORT

Summary

Regardless of sector, **farmers report a significant need for expanded one-on-one business and technical assistance to ensure they can weather the economic storms created by climate impacts.** In the face of increasing impacts on farming from climate change, it's important that we consider opportunities to use our skills in one-on-one business and technical assistance to ensure farmers can best adapt to and help mitigate a changing climate. This paper will explore key opportunities by farm sector for farm viability advisors, programs, and funders to advance climate resilience on farms in New England and the Hudson Valley.

The Agricultural Viability Alliance

The Alliance's goal is to increase the number and economic viability of farm and food businesses by bringing together providers and organizations from across New England and New York's Hudson Valley to address shared challenges, facilitate more uniform high-quality coverage, and more effectively share and expand limited resources. **We help farm and food businesses succeed.**

This project serves business technical assistance providers and organizations that will ultimately support the long-term viability of farms and food enterprises in the region. In addition to our economic impact, our work also fosters a more equitable and inclusive sector that engages traditionally underserved communities, and we support and strengthen entrepreneurs who help conserve farmland while adapting to and mitigating the effects of climate change for generations to come.

Farming and Climate Justice

The Alliance seeks to become a truly transformational network of professionals, including through implementing the equity and inclusion framework that guides the Alliance's activities. We know that these goals are better achieved when we work together as a whole region, rather than in our state silos.

We integrate our Diversity, Equity and Inclusion efforts into every aspect of our work. We recognize that Black and Brown farmers, women, and queer farmers, and small- to medium-sized farms run by low-income entrepreneurs and those in multigenerational poverty have been underserved by structural support systems.¹ In order to ensure that our farming communities thrive in the era of climate change we cannot ignore how injustice has impacted access to the resources our neighbors need to survive. **The Alliance is committed to working towards equity in our farming systems, especially in the face of climate change.**

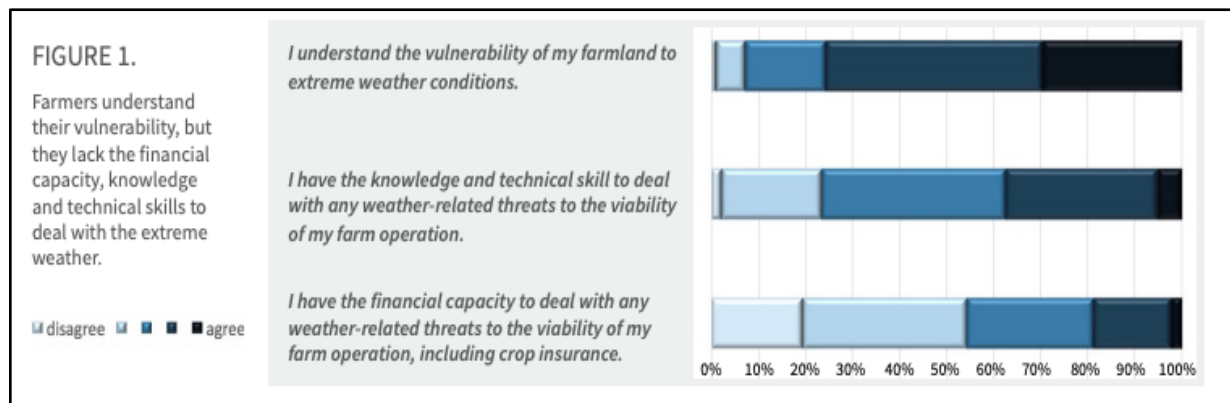
Positive Impacts of Farms on Climate Mitigation

In addition to ensuring that our farming sector remains intact in the era of climate change, on-farm mitigation strategies have the potential to create a net negative in carbon. **Soil preservation, water management techniques, and holistic on-farm practices could significantly reduce the amount of carbon the agricultural sector is currently releasing into the atmosphere.**²

Farmers Are Climate Leaders

Our farmers are already experiencing the impacts of climate change. In New England increased flooding, intermittent droughts, and changing temperatures create challenges that farmers in our region are working to solve—but they need our support.

A study from the USDA Northeast Climate Hub shows that, while farmers understand climate change is affecting their farms, they need increased technical and financial support to be able to adapt.³ Fortunately, studies are increasing on opportunities to keep farms not only viable but also thriving in a changing climate.



¹ <https://sustainableagriculture.net/publications/grassrootsguide/farming-opportunities>

² <https://earthjustice.org/sites/default/files/files/Climate-Change-Agriculture-FACT-SHEET-v3.pdf>

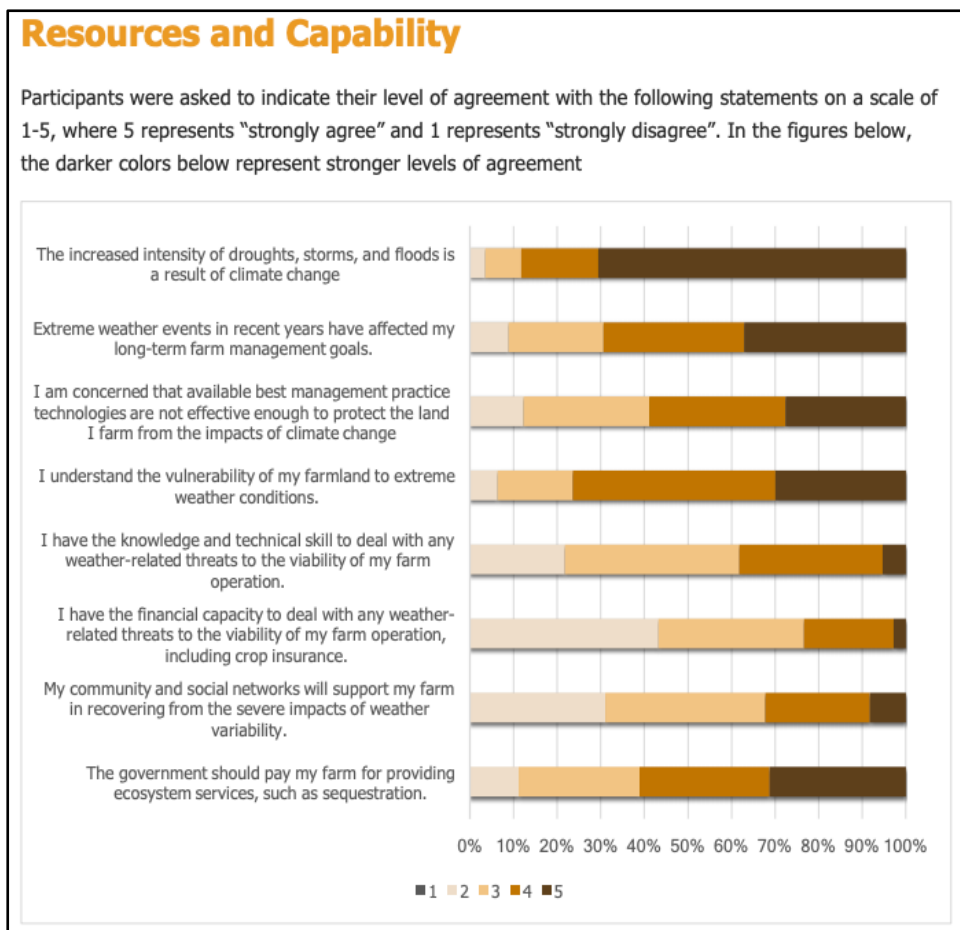
³ https://www.climatehubs.usda.gov/sites/default/files/white_final_web508.pdf

Fruit and Vegetable Farming Adaptation

According to a recent survey of fruit and vegetable farmers across New England, New York, and Pennsylvania by the University of Vermont (UVM), over 72 percent of vegetable or fruit farmers have made changes or plan on making changes to their farms due to heavy flooding. Of those same respondents 66 percent have made changes or plan to due to concerns with draught.

Over 95 percent stated concerns of how increasingly extreme spring weather will impact their farm.⁴ Extreme weather events, such as storms, are intensifying and causing significant financial losses to fruit and vegetable farmers in the region. Hurricane Irene caused \$10 million in farmland repairs for farmers in New York State alone in 2011.⁵

While farmers are working to address farm impacts from extreme weather from climate change, less than 45 percent believe they have the knowledge and technical skills to remain viable in the face of these challenges. In order to ensure that fruit and vegetable farms thrive in New England and the Hudson Valley, we must expand one-on-one technical and business assistance. When asked what is needed to assist them in building on farm adaptation and mitigation techniques respondents to the New England Climate Study Report from UVM found the following:



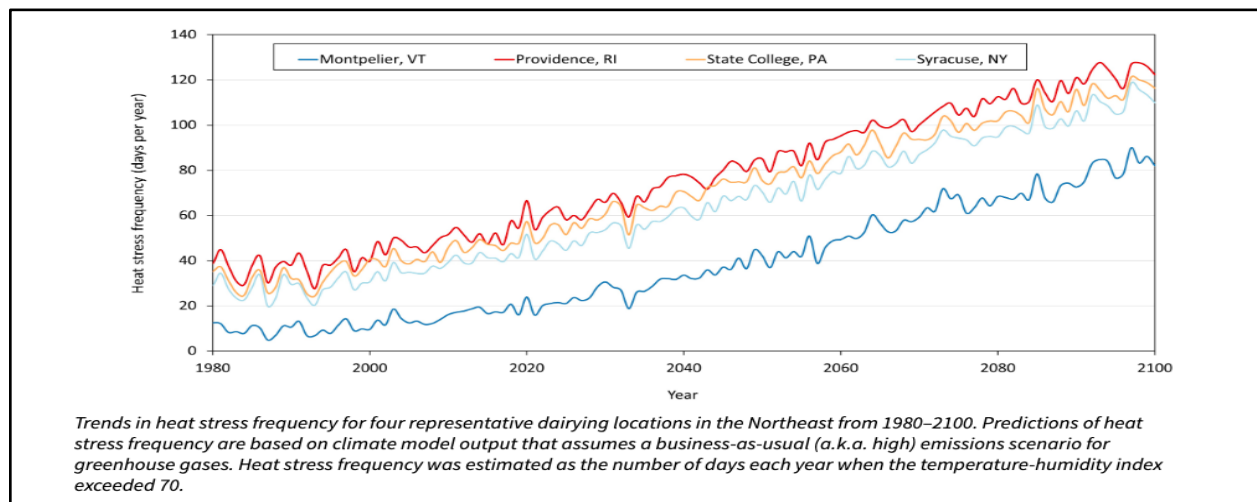
⁴ <https://adaptationsurvey.files.wordpress.com/2018/10/new-england-adaptation-survey-report-updated-10-22.pdf>

⁵ <https://earthjustice.org/sites/default/files/files/Climate-Change-Agriculture-FACTSHEET-NY-Jan-2020.pdf>

Heat Stress and the Dairy Industry

In New England rising temperatures are causing significant heat stress in the dairy industry. In the abnormally hot summer of 2005, for instance, dairy heat stress reduced milk production on some New York dairy farms by as much as 20 percent.⁶

As a result of increased heat stress, dairy farmers are turning to cooling strategies. These range from minimal cooling strategies, such as open barns for increased ventilation, to intense cooling in barns from high power air conditioning units.⁷ **In order for milk production to maintain a net profit for farmers, funding these capital investments into barn infrastructure is key.**

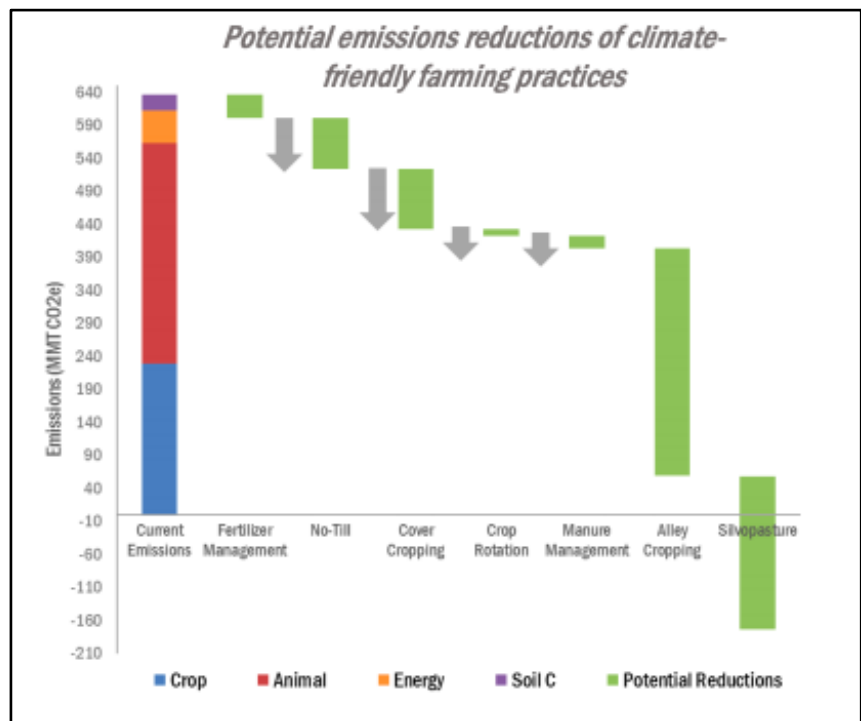


⁶ <https://www.climatehubs.usda.gov/hubs/northeast/topic/managing-dairy-heat-stress-northeast-rapidly-changing-climate>

⁷ <https://www.climatehubs.usda.gov/hubs/northeast/topic/managing-dairy-heat-stress-northeast-rapidly-changing-climate>

Technical and Business Assistance is the Solution

Regardless of sector, farmers report a significant need for expanded one-on-one business and technical assistance to ensure they can weather the economic storms created by climate impacts. Less than half of farmers from any sector in the studies cited believed they had the business or technical knowledge to implement effective farm adaptation and mitigation strategies and plan their finances accordingly. Access to microloans and capital investments, with one-on-one advising to ensure successful implementation, was listed as a key need for future farming success. If we want to ensure that our farmers in New England and the Hudson Valley not only survive but also thrive in the face of climate change, we must use policy to expand one-on-one advising resources—especially to farmers who have been historically shut out of resources.



Combining business and technical assistance with increased capital investments is the solution to mitigating on-farm climate change impacts for generations to come.

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