

GRADUATE STUDENT CLIMATE ADAPTATION PARTNERS (GRADCAP) WEBINAR SERIES



ADAPTING TO PRECIPITATION EXTREMES ON VEGETABLE AND BERRY FARMS IN THE NORTHEASTERN US

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Farmers draw on an extensive toolbox of familiar and innovative management strategies to adapt to a changing climate.

Increases in drought and heavy precipitation events in the northeastern U.S. are leading causes of crop loss for vegetable and berry producers. Drawing on the experiences of 193 farmers from Canada to Pennsylvania, the New England Adaptation Survey explores trends in practices which producers have already used, and are planning to use, for managing these two climate risks of high concern. Over 90 different adaptations were described by farmers in open-ended questions. More than 60% of respondents reported using cover crops and soil health strategies to manage for the risks of both heavy precipitation and drought.

Many farmers noted the importance of controlling and catching storm water during heavy rain events and storing it for times of drought in ponds, cisterns and high-organic matter soils. Soil protection, site planning, and crop selection also emerged as important adaptations. Notably, less than 9% of respondents reported the use of crop insurance to manage for extreme precipitation risks. Our analysis links adaptive management strategies to site characteristics and specific climate impacts, suggesting that growers who have similar vulnerabilities have similar adaptations to climate change. Results of the survey suggest that most farmers are confident in understanding their vulnerability to extreme weather conditions, yet the majority of growers believe that they do not have the financial capacity, knowledge or technical skills to deal fully with the threat extreme weather presents to the viability of their farm.

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FIGURE 1.

Farmers understand their vulnerability, but they lack the financial capacity, knowledge and technical skills to deal with the extreme weather.

disagree

 agree

I understand the vulnerability of my farmland to extreme weather conditions.

I have the knowledge and technical skill to deal with any weather-related threats to the viability of my farm operation.

I have the financial capacity to deal with any weather-related threats to the viability of my farm operation, including crop insurance.

