

# Agricultural Barriers to Addressing Climate Change in the Northeastern U.S.

BY PENNSYLVANIA STATE UNIVERSITY AND CORNELL UNIVERSITY | AUGUST 2016



**PURPOSE** | To determine the current barriers in addressing climate change for research and Extension faculty of land-grant universities in the Northeast U.S. relative to the agriculture, natural resources, and forestry sectors. Here we're looking at what respondents identified as barriers to addressing their climate change information.

**METHODOLOGY & DEMOGRAPHICS** | The population consisted of all Extension professionals, faculty, and scientists from the 16 land grant universities in 12 Northeastern states in the Colleges of Agriculture (N=3,757): CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, WV, and VT. An on-line survey was conducted using Qualtrics, which was reviewed by a panel of experts, and pilot tested in the Southern Region of the U.S. IRB was approved from both Penn State and Cornell Universities. There was an acceptable reliability based on pilot test data, and Dillman's five-point contact method was used to collect data. The response rates were as follows: 1,211 participants responded out of 3,757 (32.2%). Where 554 of 1,211 (45.7%) dedicated at least 1% of their time to climate change activities. 494-527 (of 554) respondents answered this segment of the survey.



## INFORMATION AVAILABILITY

**BARRIER 1** | Respondents indicated that the lack of information and options available to them that were specific to local needs were among the most difficult barriers. Lack of mitigation options and lack of adaptation options specific to local needs were ranked 2nd and 3rd from both Extension personnel and researcher faculty.



## WORKPLACE FUNDING AND TIME

**BARRIER 2** | Lack of time and a lack of funding were considered top workplace barriers by both Extension personnel and researcher faculty. Respondents also indicated the real costs for changing their practices is too high.



## TARGET AUDIENCE PERCEPTIONS

**BARRIER 3** | Respondents perceived that the most difficult barrier was the perception of their target audiences that changing their practices was too costly. Other barriers perceived include the perception that it's too risky to adopt new technologies and that their target audiences lack awareness regarding the impacts of climate change.



**BARRIERS  
SPECIFIC TO  
EXTENSION**

**BARRIER 4** | Perceived lack of priority placed on climate change by their target audiences, this posed a barrier that was contrasting the research respondents. Extension respondents also struggle with the political sensitivity of climate change, an issue felt less by the research faculty who typically have less contact with land managers.

**CONCLUSIONS AND FUTURE PRIORITIES** | Findings from this study provide insight into the barriers that land-grant university research and Extension personnel in the Northeast perceive as most challenging when addressing climate change issues. The respondents of this study represented research faculty, Extension specialists, and Extension educators from the 16 land-grant universities in the Northeastern U.S.

- 1** Three key areas of barriers are: informational availability, workplace, and target audience.
- 2** Lack of information specific to a local area, lack of time and funding, and the felt risks involved with changing practices all ranked as top barriers for both Extension and research faculty.
- 3** Extension specifically perceived a lack of priority placed on climate change from their target audience, as well as political sensitivity of climate change with their audiences.
- 4** Understanding the barriers respondents face and addressing them will assist in developing programs to overcome these barriers and make a stronger impact when addressing climate change.

**ABOUT USDA NORTHEAST CLIMATE HUB** | Our mission is to develop and deliver science-based knowledge and practical information for land managers and farmers to support their decision making related to climate impacts. We work in partnership with local, state, and federal governments, land grant institutions consultants, and private organizations reaching across twelve states from Maine to West Virginia and the District of Columbia.