

How Farmers Look at Climate Change

At the farmer's level, adaptation to climate change is a part of daily life. The environment directly affects crop yields, so whether a farmer is conscious of climate change or not, each farm constantly adapts to its impacts.

While Rhode Island is not currently conducting research on varieties or breeds that would be suitable for the changing climate, this type of research is being considered in New England. For one example, Maine's February 2010 Department of Environmental Protection report, *People and Nature Adapting to a Changing Climate: Charting Maine's Course*, notes "there is an emerging need to develop, test, and market new crop varieties suitable to Maine's changing environment. A collaboration of Maine farmers and the Cooperative Extension Service could produce a commercial opportunity."

While this research is not yet taking place in Rhode Island, there is a foreseeable possibility that it may be done on an as-needed basis at URI. Reasons for this type of research could be associated with agricultural production issues in a warmer climate.

For example, the RI State Agricultural Extension has mentioned problems in the 2010 growing season with

sun scald on apple crops, which ruins the appearance and taste of the fruit. It is impossible to say that climate change is the cause of two extremely hot weeks in August that year which caused the sun scald and other problems—such as the death of many squash and pumpkin blossoms—but it is reasonable to imagine that increased warming of the climate makes heat waves more frequent and severe, and therefore could also increase the need for adaptation in agriculture regarding these issues.

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-Farmer Skip Paul, Wishing Stone Farm

Warmer temperatures in the spring can make early crops ready even sooner than usual, sometimes by two to three weeks. Farmers are optimistic about the possibilities for adaptation in Rhode Island, one saying the "adaptation strategy for agriculture is already out there. We will look at the regions south of us and start trying those vegetables and fruits. We know a lot about vegetable and fruit requirements in warmer climates."

Year-Round Farmers Markets

Rhode Island farmers are selling year round at the Farm Fresh RI wintertime markets, which is a feat that may not have been possible 10 to 15 years ago. The year-



Cattle at Watson Farm.

Photo Credit: Ayla Fox

round market displays an increase in demand, and may also illustrate how the potential for growing and selling 12 months in RI increases with milder winters. One Rhode Island farmer speculated “Perhaps we could not do this a decade ago—have a winter farmer’s market with so much food. The market is a little bit more bountiful than it used to be.”

The increased demand for local agricultural products incentivizes adaptation to climate change.

Whether this promising expansion is what farmers are thinking is uncertain, but in a 2010 interview with Waves of Change farmer Skip Paul of Wishing Stone Farm had some interesting observations about farming in Little Compton, RI since 1981: “Back in 1980 when I first started planting, I would harvest my last crop of broccoli in early November. Now it is commonly late November and sometimes even early December. I can take more risks and try more Hail Mary crops to harvest late in the season.”

Paul added that, “The winter seems milder. It seems like we have more insects that can handle the winter now, as opposed to thirty years ago.” Through his observations over the years Paul has adapted to plant crops later and later in the year, planting broccoli in late August for an early December harvest being just one example. Taking advantage of longer growing seasons may be the best way to continue economic growth in Rhode Island agriculture.

Shifting Insect Populations

There are also concerns about insect species shifting with the milder winters, such as the cross-striped cabbage worm’s recent migration northward. Attributing these shifts to climate change is still tenuous, as new vectors or other variables could also cause the change. Other existing opportunities for RI farmers include the Sustainable Agriculture Research and Education (SARE) EQIP program funded by the Natural Resources Conservation Service, which recently ended, but had included funding for high tunnel construction throughout RI farms. High tunnels — unheated greenhouses—provide environmental control and can be seen as a means of adapting to a changing climate. By using a high tunnel for production, farmers can extend their season and continue to harvest protected crops even after the field crops are finished.

Good News, Bad News for Future

Agriculture in Rhode Island is one of the few growth sectors in the state economy during the recent economic recession. As the tough financial times lessen, Rhode Island farmers will likely continue to consider season extension for increased sales. If the climate shifts enough, the potential of variety trials and research at URI and other regional Land Grant institutions will help farmers adapt to the changing climate. However, warmer winters bring increasing risk of insect pests and heat waves endanger some Northern crops such as apples.



Bailed hay at Windmist Farm.

Photo Credit: Ayla Fox