How might climate change affect our food supply?

July 30 2014, by Dan Fay

It's no easy question to answer, but prudence demands that we try. Thus, Microsoft and the United States Department of Agriculture (USDA) have teamed up to tackle "food resilience," one of several themes that make up the White House's Climate Data Initiative.

"Through his Climate Data Initiative, President Obama is calling for all hands on deck to unleash data and technology in ways that will make businesses and communities more resilient to climate change," said John P. Holdren, President Obama's Science Advisor. "The commitments being announced today answer that call by empowering the U.S. and global agricultural sectors with the tools and information needed to keep food systems strong and secure in a changing climate."

The Climate Data Initiative has unleashed a torrent of climate-related data from NOAA, NASA, the US Geological Survey, US Department of Defense, and other federal agencies, including the USDA. These facts and figures, which reside on Data.gov's Climate website, pose a classic "big data" challenge: how to efficiently analyze enormous information sets and share the meaningful insights.

Microsoft has posted the USDA datasets to the Microsoft Azure Marketplace (enter search term USDA), and, together with the USDA, we will be sponsoring workshops, webinars, and "appathons" to demonstrate the value of open access data and to promote the development of tools for understanding these datasets. The overarching goal is to encourage data providers, scientists, farmers, food producers and the public to discover the food supply's key vulnerabilities and inherent resiliency. This predictive information will inform a planning model built on the powerful business intelligence tools that are part of the Microsoft Azure cloud-computing platform, enabling federal agencies, along with the public, access and tools to promote data synthesis with other data sources.

To advance this effort even further, Microsoft Research is announcing a special Climate Data RFP focused on food resilience in the face of climate change. This RFP offers 12 months of free cloud-computing resources to 20 awardees selected from proposals submitted by September 15, 2014. Each award provides up to 180,000 hours of cloud-computing time and 20 terabytes of cloud storage.

To qualify for the awards program, you must be affiliated with an academic institution or non-profit research laboratory. In addition to individual investigator projects, we are interested in projects that will support access to services and data of value to a collaboration or community.

Your proposal should not exceed three pages in length. It should include resource requirement estimates (number of core, storage requirements, and so forth) for your project. Apply and learn more about the RFP at Food Resilience Climate Data Initiative.

We encourage all investigators to join with the USDA and us in an effort to understand the impact of [climate change](link) on our food supply.

Provided by Microsoft

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