

United States Senate
Washington, DC 20510-1304

December 20, 2018

President Richard Guebert Jr.
Illinois Agricultural Association
P.O. Box 2901
Bloomington, IL 61702-2901

Dear President Guebert:

On November 24, the U.S. Global Change Research Program released its fourth National Climate Assessment, a report mandated by the Global Change Research Act of 1990. The report, compiled by 13 federal agencies, outlines the impacts of climate change across the United States now and throughout this century. I ask that you review this report, and share with me thoughts on how these impacts will affect farming in Illinois. The report can be found here: <https://nca2018.globalchange.gov/>.

The National Climate Assessment predicts significant changes in climate and weather patterns that could have a significant impact on agricultural production throughout the country. The report also takes a detailed look at the impacts in the Midwest, and it predicts a significant shift in climate and weather patterns that historically have been ideal for successful corn and soybean farming in Illinois.

As you are aware, agriculture production is key to the success of Illinois' economy, generating more than \$19 billion annually. Over 75 percent of the state's lands are used for production, making agriculture key in every corner of our state. Illinois' 72,200 farms are critical contributors to the economic success of our rural communities. But that success faces significant threats in the near future if the projections of the National Climate Assessment hold true.

For the past 30 years, shifts in climate and weather patterns have affected farming in Illinois and throughout the Midwest. During this time, the Midwest has experienced increased rain fall—from April through June—resulting in high soil moisture levels that, combined with less frost in the spring, have allowed some crops to withstand increasing heat stress in the short term. These changes in our growing season have delayed plantings and increased threats from pests.

The report also projects that higher growing season temperatures and humidity will result in a decline in agricultural productivity. Higher carbon dioxide levels in the atmosphere are expected to create temporary gains in yields, but these gains will be overshadowed by losses caused by increasing extreme weather events.

I recently visited Taylorville to see the tornado damage firsthand. December tornadoes in Illinois are not unheard of, but they are rare. We seem to be facing these weather extremes more frequently in Illinois, a fact pointed out in this assessment.

The changes outlined in the report are projected to decrease yields for corn from 5 percent to 25 percent and result in more than a 25 percent reduction in soybean yields by 2050 in the southern portions of the Midwest. More intense heat waves, extreme rains, and drought are projected to reduce yields of all crops in the region. Rainfall levels will continue to increase, creating issues with runoff, soil quality, and our waterways.

These climate stressors will not be limited to crops, but also pose threats to our livestock. Warmer temperatures are expected to impact breeding success and cause a decrease in the production of milk and eggs.

The National Climate Assessment also outlines important steps that farmers can begin to implement to curb some of the impacts from projected climate changes. These recommendations could improve soil and water health through the use of cover crops, water management strategies, and implementing additional diversity in planting and chemical use.

I hope that you will carefully and objectively review the findings of this report and encourage your farmers and members throughout the state to meet this challenge head on by taking steps to mitigate these issues. I stand ready to help you in this effort. Our farms are an essential part of our state and our Illinois life style. We all should work together to ensure that farming has a bright future. I look forward to hearing your thoughts on this report.

Sincerely,



Richard J. Durbin
United States Senator