Assessing the Economic Consequences of the August 2020 Derecho in Iowa

1. August 2020 Midwest derecho
   • August 10, powerful storm hit Iowa, eastern Nebraska, Illinois, Wisconsin, and Indiana
   • Most significant damage centered in Iowa
   • Characterized by high winds and weak tornadoes, some torrential rain and hail reported
   • Sustained 70 mph winds, peak wind speed of 140 mph

2. Research methodology
   • Research different types of damages and losses from the derecho
   • Assess the economic consequences of the derecho in Iowa based on damage reports and data collected from the Bureau of Economic Analysis
   • Use an input-output economic model to quantify the direct and indirect production losses in Iowa

3. Economic consequences to Iowa industries
   • Derecho resulted in wide-scale utility disruptions, residential and commercial property damage, and severe crop damage
   • Quantitative data collected on crop damage, electric power outages, and property damage
   • Input-output model translates these direct impacts into total production losses in Iowa

4. Regional comparison
   • Compare industry GDP in 2020 for different states based on data from the Bureau of Economic Analysis
   • Use annual percent change in GDP to compare different states
   • Agriculture production in Iowa dropped by 9.2% whereas agriculture production in Wisconsin and Minnesota increased by 10% in 2020

5. Implications of economic calculations
   • National Oceanic and Atmospheric Administration estimated economic damage of derecho at $11-12 billion for all states
   • Agricultural suffered the most
     • Damage to crops, arable lands, and property and equipment
     • Economic model suggests $3.64 billion in production losses
   • GDP comparison suggests $3.56 billion in losses
   • Finance, insurance, and real estate and manufacturing hit hard due to electric power losses and damage to private property
   • Industries like construction that benefited from derecho: Demand for services increased as a result of increased need to rebuild

Annual change in agriculture production by state

Iowa production losses from 2020 derecho categorized across industries

Production losses in Iowa total $7.08 billion