

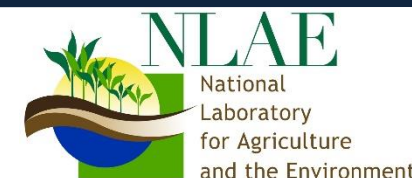
Specialty Crops and Climate Change in the Midwest

Laurie Nowatzke
Coordinator
USDA Midwest Climate Hub

Apple blossoms damaged by a freeze event on May 9, 2020, in Berrien County, Michigan. Photo credit: by Mike Reinke, Michigan State University Extension.

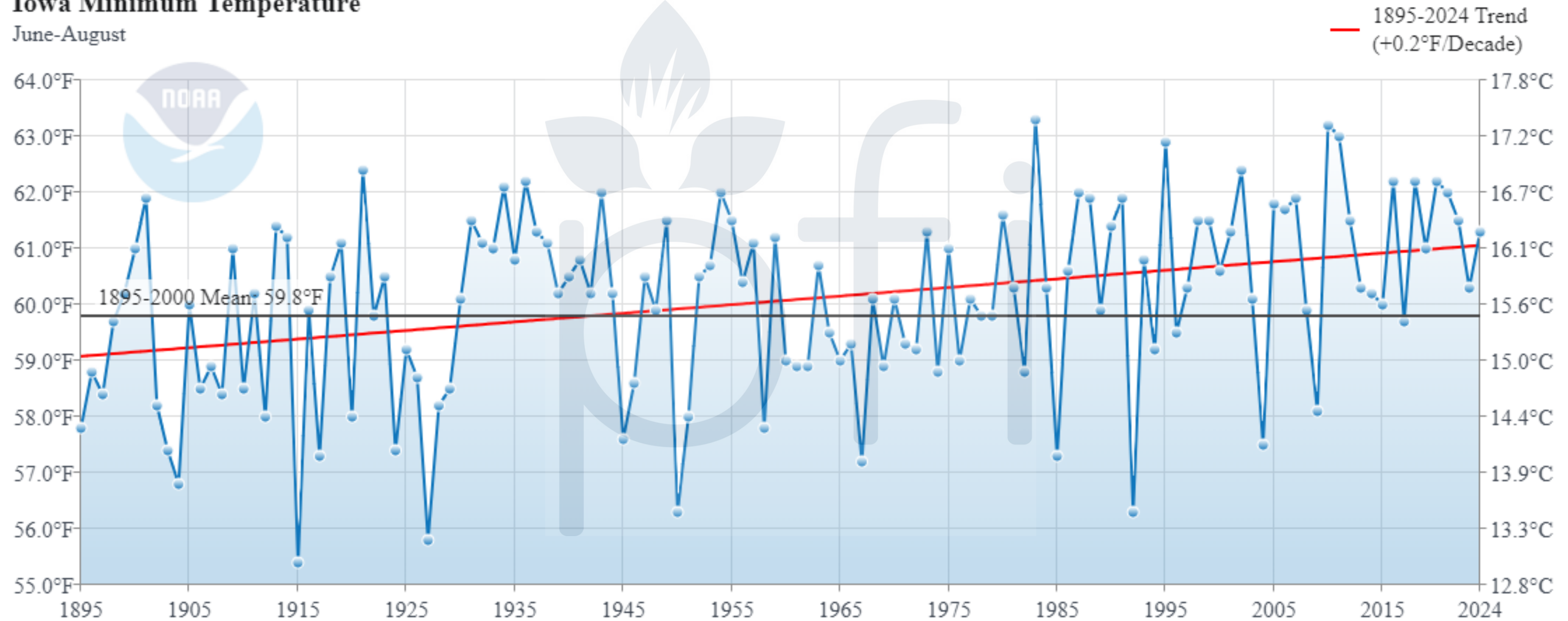


Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE



How does climate change impact specialty crop production?

Iowa Minimum Temperature
June-August

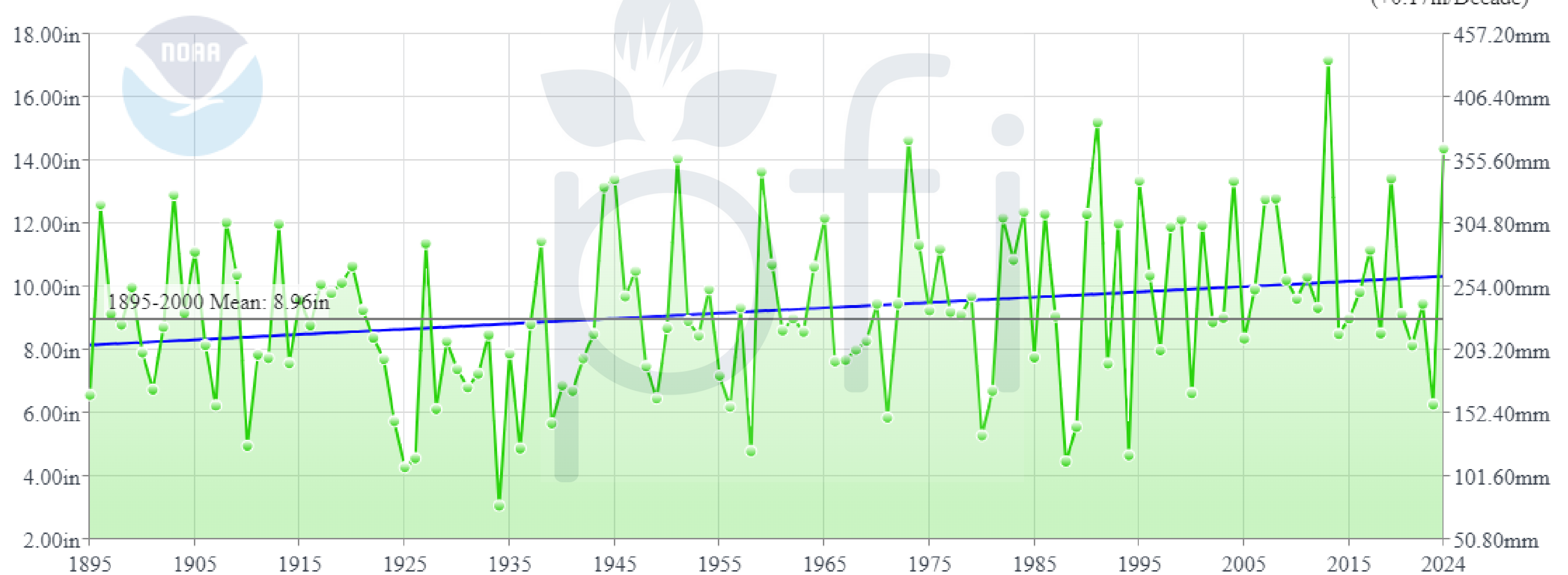


Iowa is getting warmer overall
Huge increases in summer nighttime 'lows'

How does climate change impact specialty crop production?

Iowa Precipitation

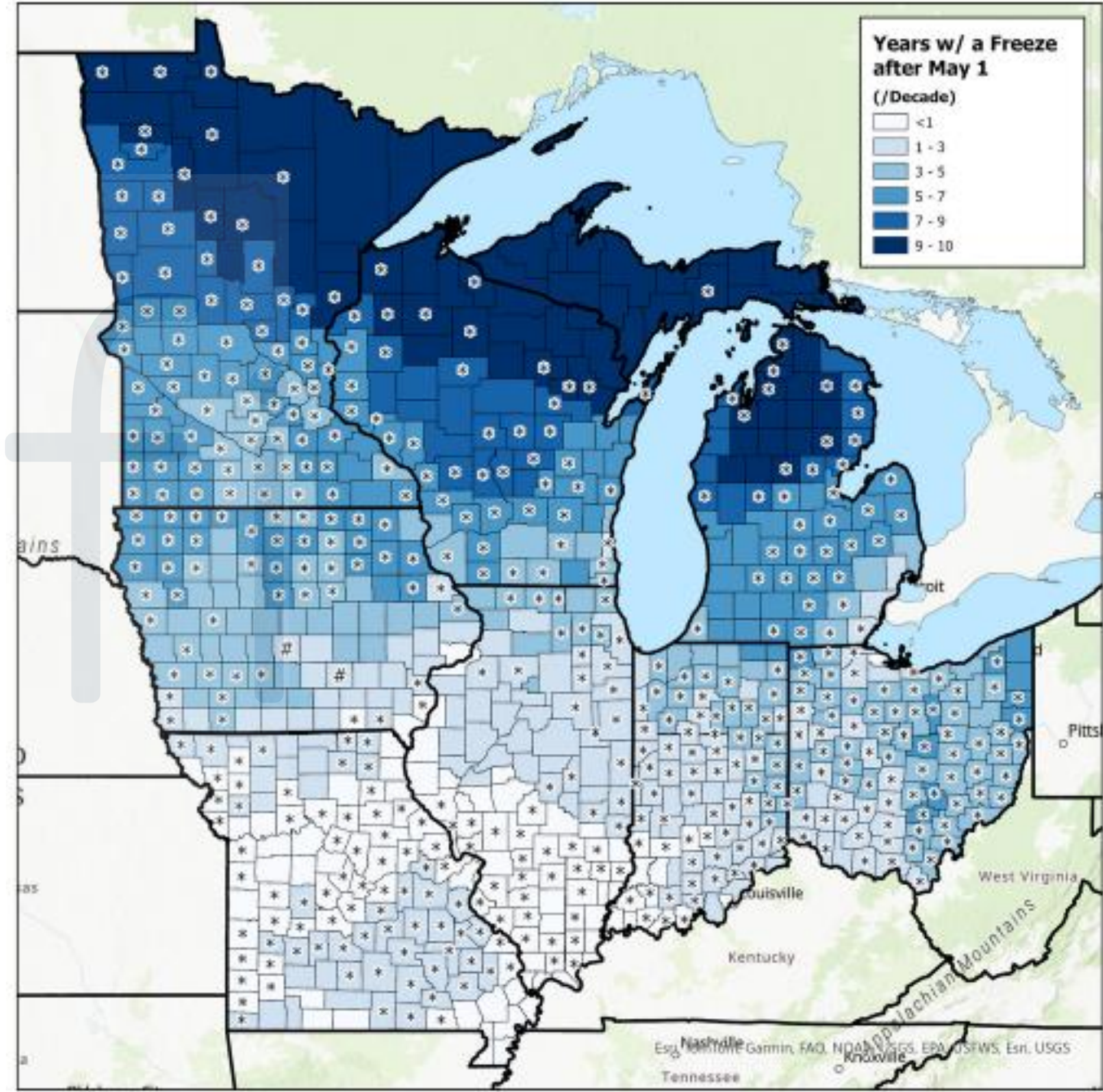
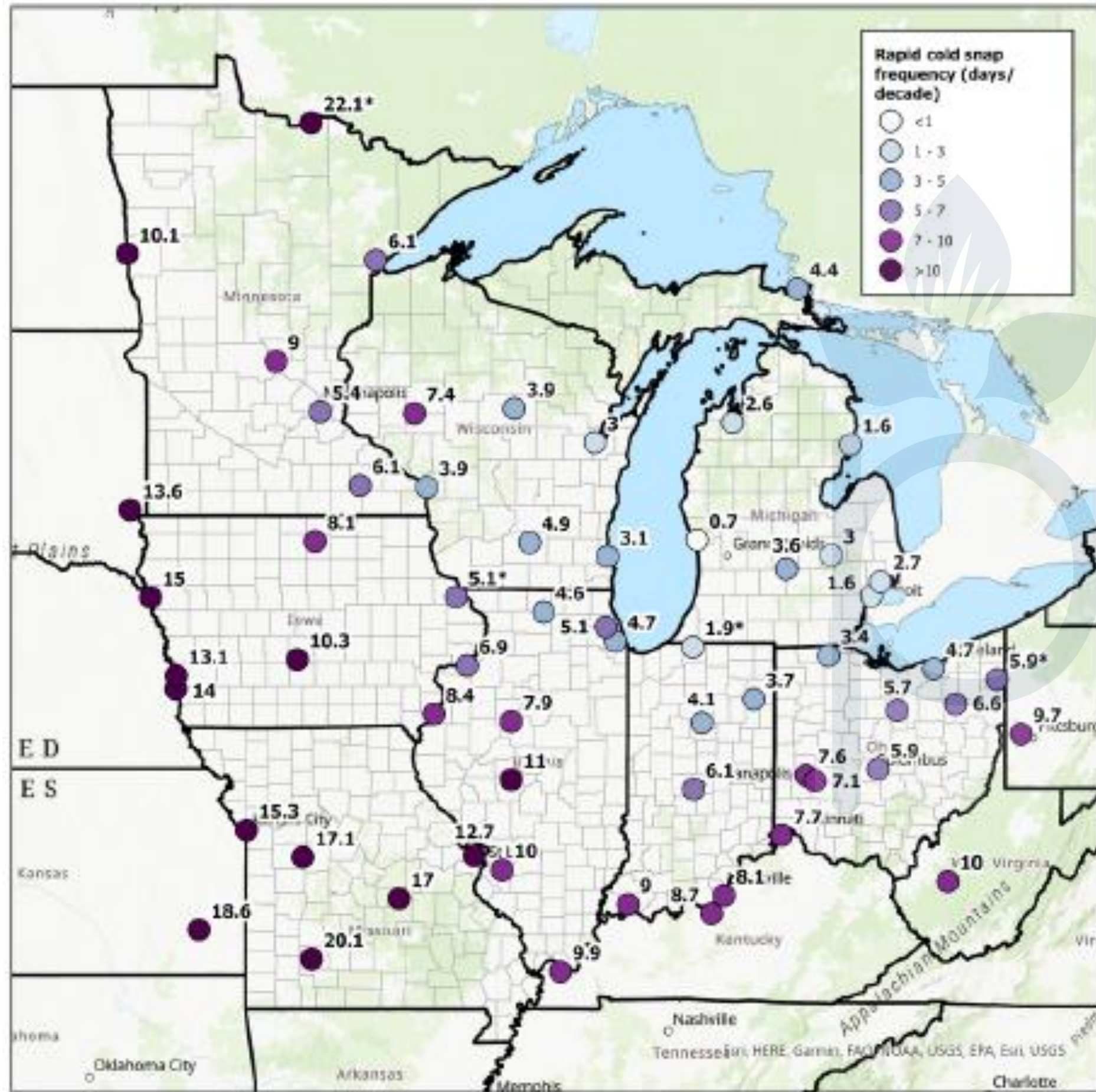
March-May



Iowa is getting wetter overall

Mostly in spring & fall (especially April and October)

Winter brings uncertainty



Specialty Crop Bulletins & Resources

The Goal

To inform farmers & those who advise farmers as to:

- how climate has been/is projected to change,
- what will be the impacts on agricultural operations in the state, and
- what can be done to help adapt to/mitigate negative impacts.

Which crops / crop groups?

- Christmas trees (Michigan State)
- Orchards & Vineyards (University of Wisconsin)
- Maple Syrup (Northern Forests Hub, various extension)
- Small-scale vegetables (in planning phase)
- Others based on interested collaborators



Specialty Crop Bulletins & Resources

Warmer Springs and Increased Growing Season Length

Climate projections in the Midwest region include warmer spring temperatures, longer growing seasons (e.g., frost-free period), & the last spring freeze occurring earlier in the spring. This will impact tree fruit & grapevines in meaningful ways:

Problem: Early bud break & increase risk of frost damage

Warmer temperatures during spring will accelerate the loss of cold hardiness of fruit trees resulting in earlier bud break, which renders plants more susceptible to spring frosts.

Strategies to mitigate spring frost damage include:

- The use of wind machines & heaters,
- Overhead sprinkler irrigation, &
- Planting cultivars that break bud later in the season to mitigate the potential risk of trees and vines breaking dormancy during late-winter warm spells (i.e., loss of cold hardiness).



Climate Change Impacts on Tree Fruits & Viticulture in the Midwestern Region



CONTACT US

www.climatehubs.usda.gov/hubs/midwest

Dennis Todey - Director
515-294-2013
Dennis.Todey@usda.gov

**National Laboratory for
Agriculture and the Environment**
Attn: Midwest Climate Hub
1015 N University Blvd
Ames, Iowa 50011-3611

Laurie Nowatzke - Coordinator
515-204-0213
Laurie.Nowatzke@usda.gov



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