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Mid-April soil temperature swings result in poor corn stands and replanting

Roger W. Elmore

Iowa State University, relmore@iastate.edu

Lori Abendroth

Iowa State University, labend@iastate.edu

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Mid-April soil temperature swings result in poor corn stands and replanting

Abstract

Soil temperature swings were dramatic in mid-April across Iowa. This variability in soil temperatures has been the conversation topic of many agronomists. Recent ICM articles have covered guidelines for replanting corn and corn seedling health due to poor stands (refer to the May 22, 2006, *ICM* article on pages 131-132, [Corn seedling health and stand establishment](#)).

Keywords

Agronomy

Disciplines

Agricultural Science | Agriculture | Agronomy and Crop Sciences | Soil Science



Crop Production

Mid-April soil temperature swings result in poor corn stands and replanting

by Roger Elmore and Lori Abendroth, Department of Agronomy

Soil temperature swings were dramatic in mid-April across Iowa. This variability in soil temperatures has been the conversation topic of many agronomists. Recent *ICM* articles have covered guidelines for replanting corn and corn seedling health due to poor stands (refer to the May 22, 2006, *ICM* article on pages 131–132, “Corn seedling health and stand establishment”).

The two graphs illustrate the dramatic swing in soil temperatures at the 4-inch depths between April 15

and April 22. It appears this occurred fairly consistently statewide. We do not have data from normal planting depths, but we would expect them to be even more variable than what is shown because they fluctuate more based on air temperature. Coupled with rainfall events, these soil temperature variations help explain the stand and emergence problems we’ve experienced. They also highlight why certain planting dates in April were more affected than others.

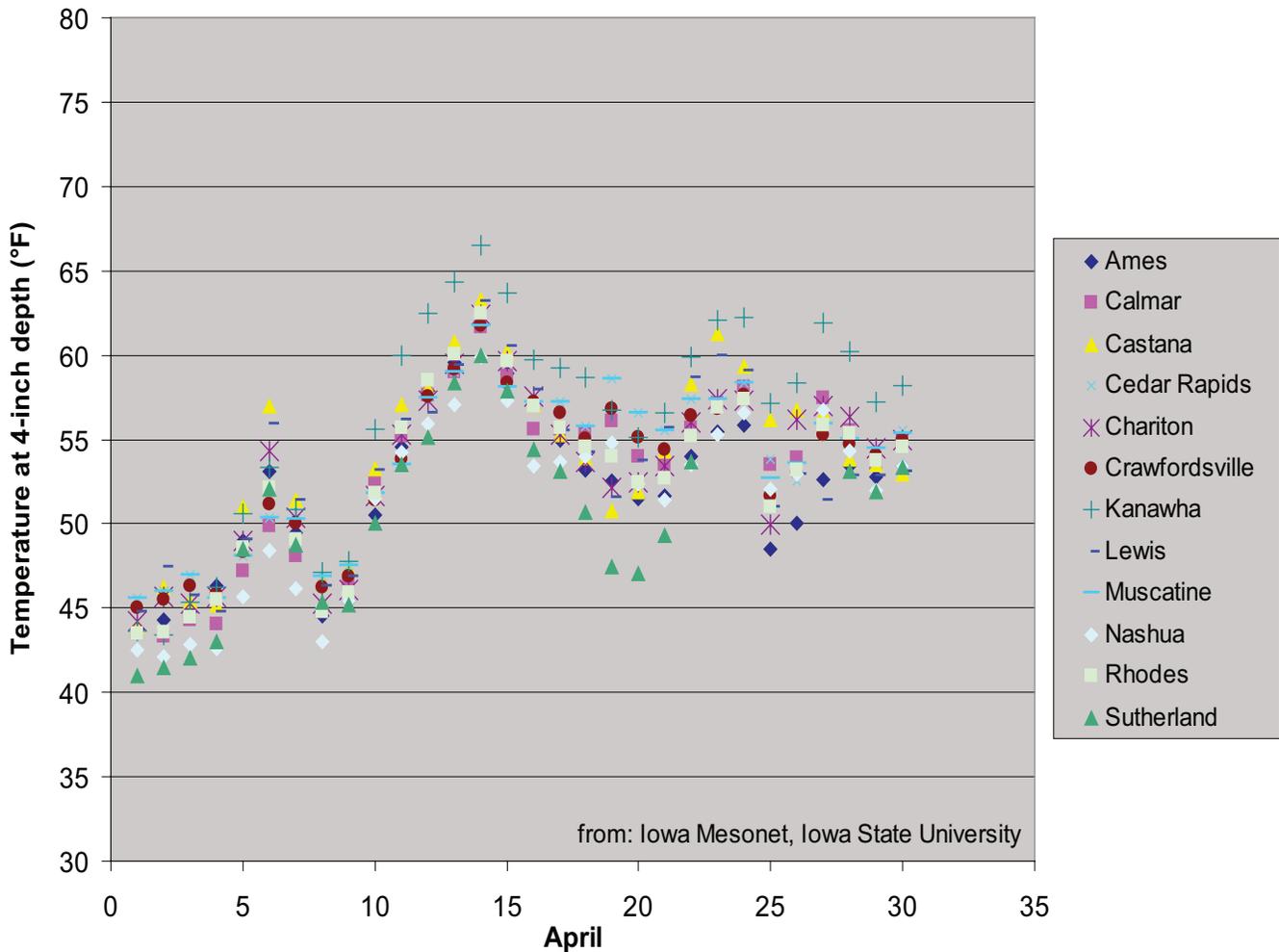


Figure 1. Soil temperatures for April 2006 in Iowa.

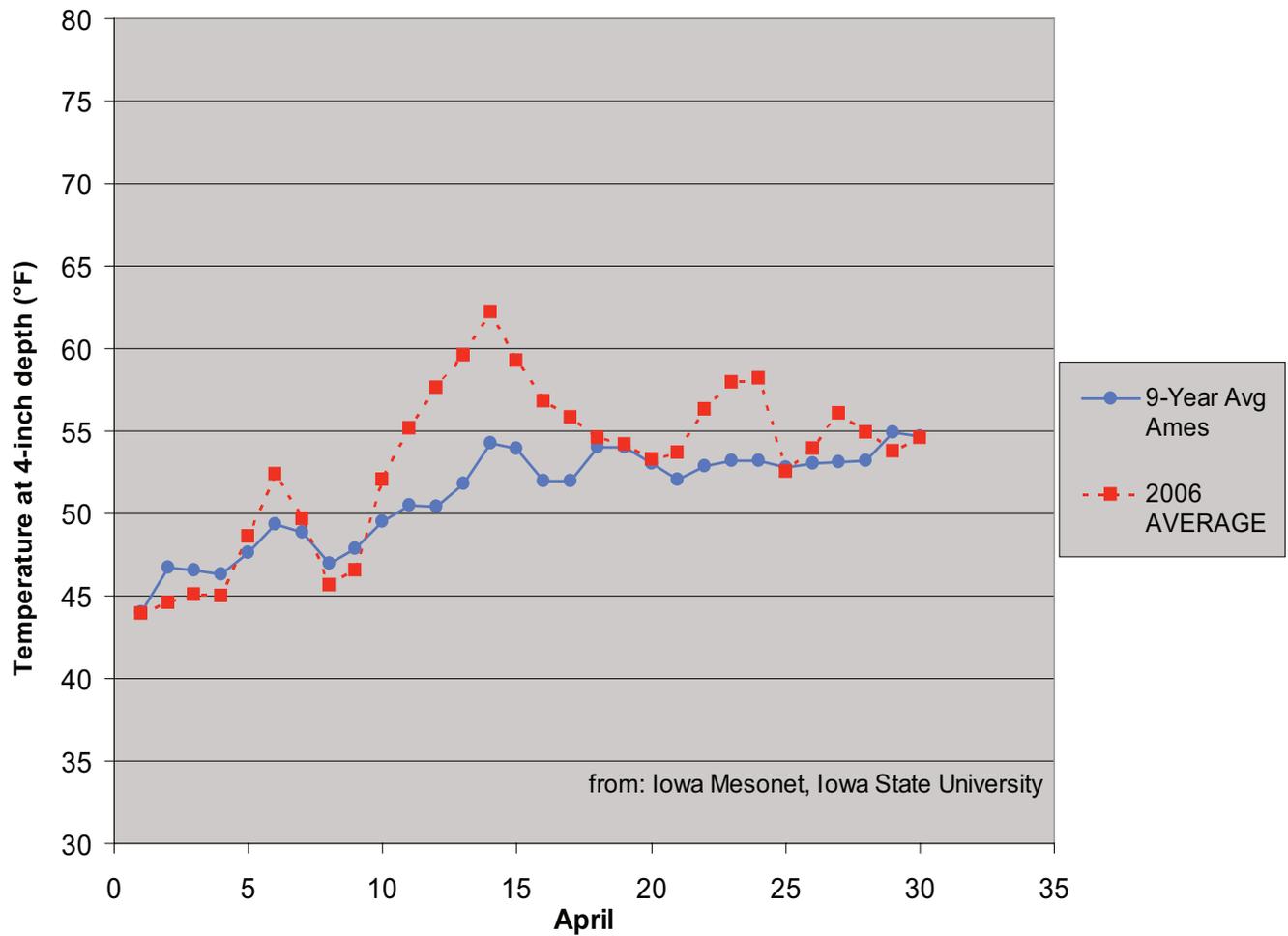


Figure 2. Statewide average, April 2006 soil temperature versus the 9-year average for Ames, Iowa.

Roger Elmore is a professor of agronomy with research and extension responsibilities in corn production. Lori Abendroth is an agronomy specialist with research and extension responsibilities in corn production.