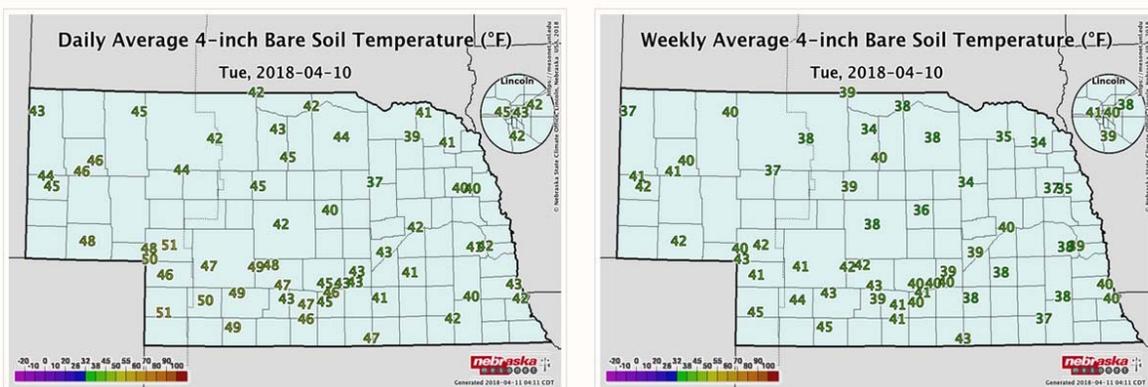


Soils slow to warm in 2018, don't be in a hurry to apply preemergence herbicides April 12, 2018

Spring 2018 has moved at a snail's pace and even the slightest warming trend has consumers and professionals ready to get going. One management practice that is closely linked with soil temperature is the application of preemergence herbicides. Summer annual grasses such as crabgrass require optimal soil temperature and moisture to germinate and persist. Crabgrass and foxtail germination will occur when soil temperatures in a lawn at the 0-2 inch depth are consistently between 60 and 70 F. For preemergence herbicides to be most effective, they must be applied before the soils reach this optimum temperature range. A soil temperature of 55 F (daily average) for several consecutive days is a reasonable based estimate for preemergence application timing. You can monitor soil temperature yourself with a thermometer but, in my opinion, a far easier and more precise measurement of soil temperature across Nebraska can be found at:

<https://cropwatch.unl.edu/cropwatchsoiltemperature>



Left: One-day average soil temperatures. **Right:** Seven-day average soil temperatures.

Daily (April 10, 2018) and weekly average soil temperature across Nebraska indicating soil temperatures have not reached optimal for preemergence herbicide applications in lawns or flower beds.

Data from: <https://cropwatch.unl.edu/cropwatchsoiltemperature>

The temperatures reported are at 4 inches and taken in bare soil. Some sites have grass cover and indicate that in the data list. Interestingly, the difference between bare soil and grass cover is rarely more than 0.5 F in the spring making the 4 inch measurement appropriate. Later in the growing season the differences are far more substantial.

If you just couldn't help yourself and have already applied a preemergence application, the applications will still be effective early season, but you will want to closely monitor any late spring or summer crabgrass germination escapes that might require postemergence control.

Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln cooperating with the Counties and the United States Department of Agriculture.

University of Nebraska-Lincoln Extension education programs abide with the nondiscrimination policies of the University of Nebraska-Lincoln and the United States Department of Agriculture.

Two final thoughts: 1) Integrated Pest Management includes the judicious use of pesticides and any management practice that encourage a healthy, dense turf stand, such as proper mowing, irrigation and fertility, are a critical part of an effective crabgrass prevention strategy. 2) The appearance of professional lawn care operators (LCO's), who may or may not be applying preemergence herbicides at their optimal application timing, is not an indication that they don't know what they are doing. Unlike the DIY homeowner, who has only one lawn to treat, many of these companies can have in excess of 500-1000 clients. While they may sacrifice some efficacy with an early application, it is a necessary strategy when dealing with a large group of customers. Most LCO's in Nebraska follow up with a second application to insure season long control.

Roch Gaussoin, Professor and Extension Coordinator, rkaussoin1@unl.edu