Issue 832

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Extension Agronomy

eUpdate

12/18/2020

These e-Updates are a regular weekly item from K-State Extension Agronomy and Kathy Gehl, Agronomy eUpdate Editor. All of the Research and Extension faculty in Agronomy will be involved as sources from time to time. If you have any questions or suggestions for topics you'd like to have us address in this weekly update, contact Kathy Gehl, 785-532-3354 kgehl@ksu.edu, or Dalas Peterson, Extension Agronomy State Leader and Weed Management Specialist 785-532-0405 dpeterso@ksu.edu.

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1. Kansas Mesonet has wind chill analysis at your fingertips

The official first day of winter is still a couple days away and cold temperatures are returning! However, it is not always the temperature that gives the air that bite. The "feels like" temperature is usually influenced by the wind as well. We call this the wind chill. Factoring in the wind chill is particularly important in Kansas as the wind is often blowing.

What is the wind chill?

When temperatures drop below 50°F and wind speeds are greater than 5 mph, the "feels Like" temperature is lower than the actual temperature. Wind chill can be calculated two ways: 1) using the chart below, or 2) mathematically. As the wind increases and/or the temperature decreases, wind chill values decrease. This means that despite it being 0°F on a very cold morning, when factoring in the wind (for example 20 mph), it can feel like a much colder temperature (in this example, -22°F).

This colder "feels like" temperature can not only make you feel chilled quicker; it can also lead to other problems such as frostbite much quicker. Exposure time estimations of frostbite issues at 0°F with no wind is 30 minutes, while 0°F and 55mph winds is less than 10 minutes of exposure. Wind chills can be determined by the following chart from the National Weather Service (https://www.weather.gov/safety/cold-wind-chill-chart):

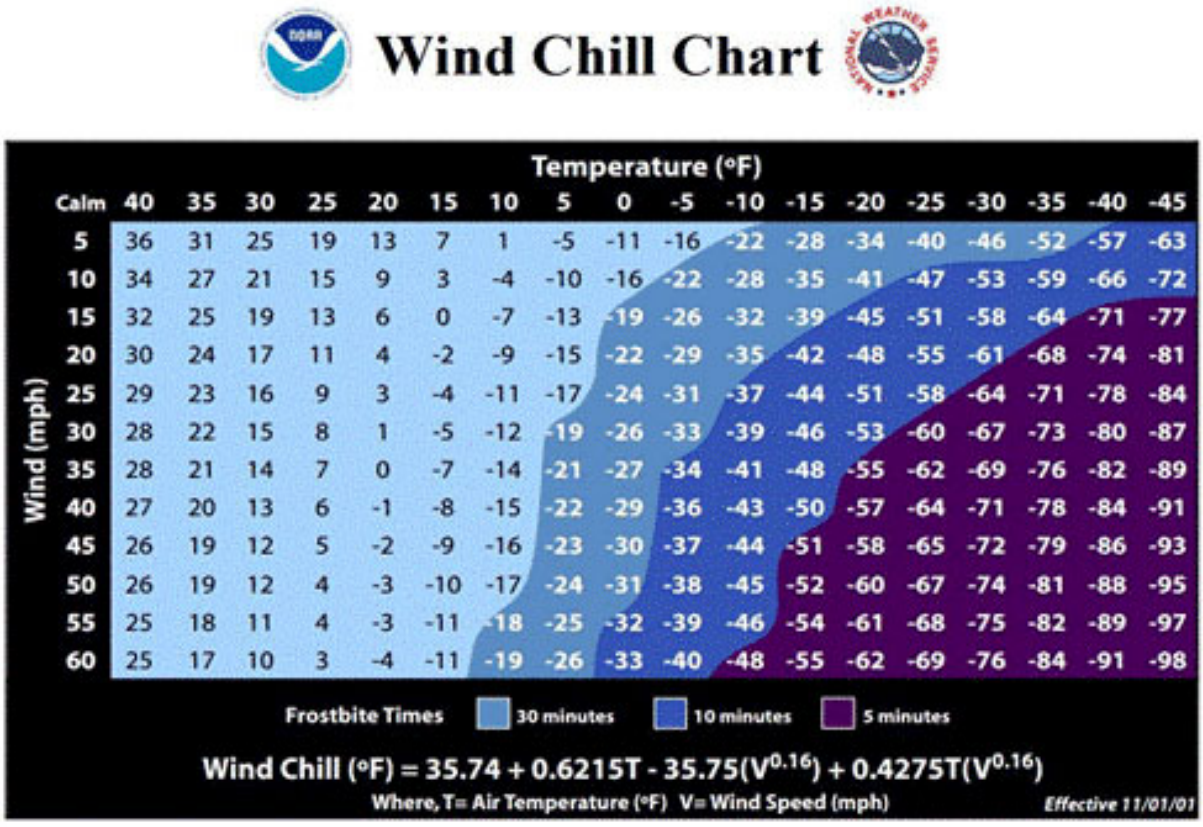

Figure 1. Wind chill chart from the National Weather Service.

Where can you access wind chill data?

The Kansas Mesonet makes viewing the wind chill very easy! We have put together a webpage that displays a gradient map that depicts the current wind chill at:

http://mesonet.k-state.edu/weather/windchill/

It is also accessible by clicking the banner on the Kansas Mesonet homepage, mesonet.ksu.edu. The map defaults to the current wind chill, but also has a selection at the top where you can change the map to view temperature and wind speed/direction. Since these are the two ingredients for the wind chill, it tells the complete story. The table below the map also displays the wind chill, temperature, and wind data for each station in sortable columns. By clicking the column headings, that particular column will sort from lowest to highest values. Click it again and it will reverse. You can also select a specific station either on the map or in the data table and it will display the specific information for that location.

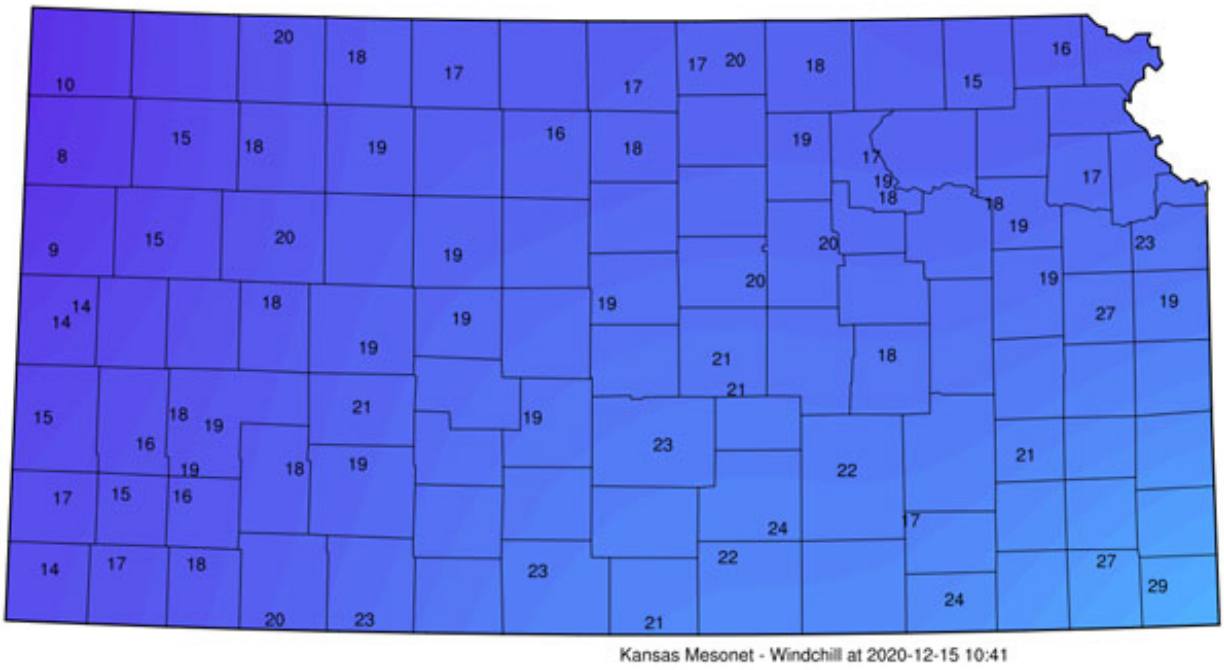

Figure 2. Map of wind chills as of 12/15/2020 at 10:41 a.m.

How many hours has the temperature been below freezing?

Winter wheat and cover crop producers still have an interest in the cold temperatures. The freeze monitor data is available on our webpage. It allows you to track the hours below 32°F or those below 24°F. You can access it through the menu in the top left (Weather àFreeze Monitor) or at: mesonet.ksu.edu/weather/freeze

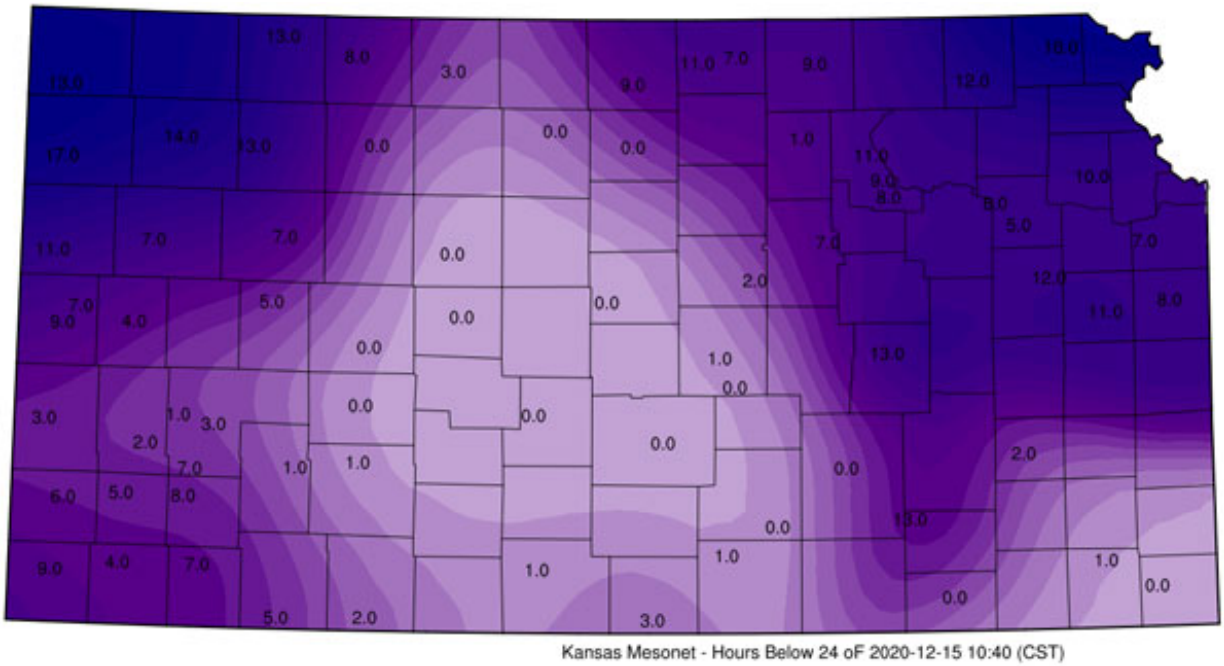

Figure 3. Hours below 24°F as of 11:47 am on 12/15/2020.

Stay warm and safe on these cold days! Winter is just beginning…

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2. World of Weeds - Eastern redcedar

As we approach the Christmas holiday, the evergreen Eastern redcedar seemed an appropriate species to highlight in this month's World of Weeds article.

Ecology of eastern redcedar

Despite being native to the Great Plains, eastern redcedar (*Juniperus virginiana*) escapes from shelterbelt and ornamental plantings have resulted in widespread infestation of range and pasture that often require management (Figure 1). It is thought that the tree was originally confined to ridges and bluffs, but is now found in diverse sites, ranging from rocky uplands to swampy bottomlands. Eastern redcedars do provide food and shelter for many wild animals, but consuming leaves may be harmful to pregnant cows.

Figure 1. Eastern redcedar on rangeland in Kansas. Photo by Walt Fick. K-State Research and Extension.

Identification

Eastern redcedar can be recognized by its opposite, evergreen leaves. Each leaf is actually a small (0.05-inch-long) triangle that pressed tightly over the margins of neighboring leaves. Younger leaves

are not pressed together and are actually longer than more mature leaves. The canopy is pyramid-shaped, comprised of slender gray branches. It is a relatively slow-growing species with mature trees reaching heights of up to 65 feet. Bark is reddish brown and shreds into long, narrow strips.

Eastern redcedar is a dioecious species, meaning some plants only produce male reproductive structures while others only female structures (Figure 2). Eastern redcedar 'berries' are actually female cones. Cones are small (1/10 to 1/3-inch diameter), blue to purple colored spheres covered with a white wax. Each cone contains one to three small, egg-shaped seeds. Pollen cones are found at the end of branches.

Figure 2. Male (left) and female (right) eastern redcedar cones. Images from the Kansas Forest Service.

Management

Eastern redcedar can be managed with prescribed fire, especially trees that are less than 3 feet tall. For larger trees, cutting below the lowest branches is effective because eastern redcedar does not resprout. Grazon P+D, Surmount, and Tordon 22K are among the more effective herbicides; however, control by broadcast applications decreases rapidly as trees height increases. Soil-applied herbicides that can control eastern redcedar include Velpar L and Prononone Power Pellets. In addition, grazing management that promotes a health grass sward is important to preventing the spread of eastern redcedar.

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3. New K-State 2021 Chemical Weed Control Guide now available online

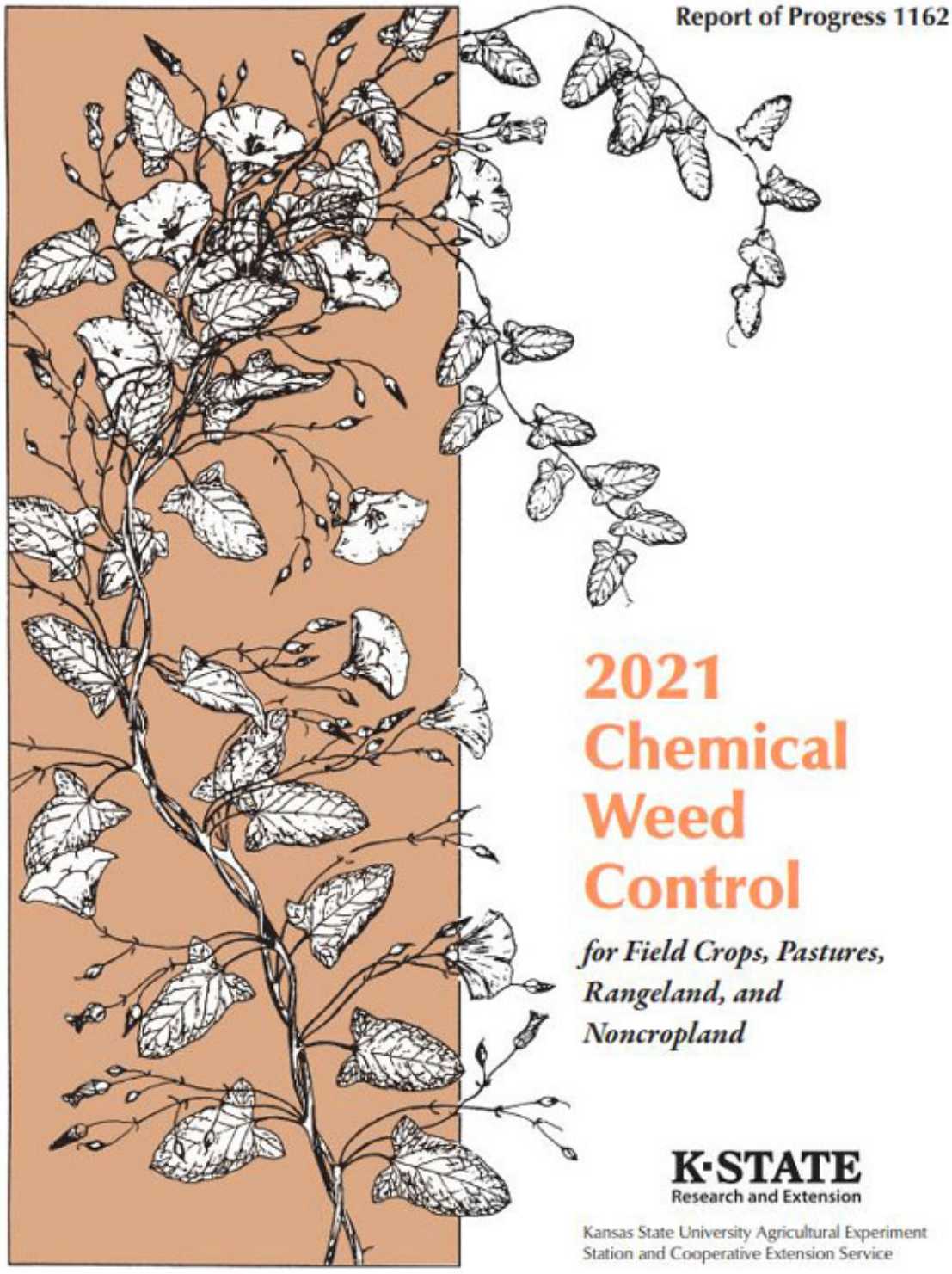
One of the most popular K-State Extension publications is here! The 2021 Chemical Weed Control Guide is now available online at:

https://bookstore.ksre.ksu.edu/pubs/SRP1162.pdf

This publication provides information related to herbicide effectiveness and some use limitations in major crops in Kansas. The use of trade names does not imply endorsement of a particular product, nor does exclusion imply non-approval. Always consult the herbicide label for the most current use requirements.

Herbicides should be used in combination with other weed management practices, including crop rotation, tillage, cover crops, and management practices that enhance crop competitiveness. Available time, labor, equipment, and other costs as well as types of weeds and areas infested need to be considered when planning a weed control program.

Hard copies of this publication will be available soon.



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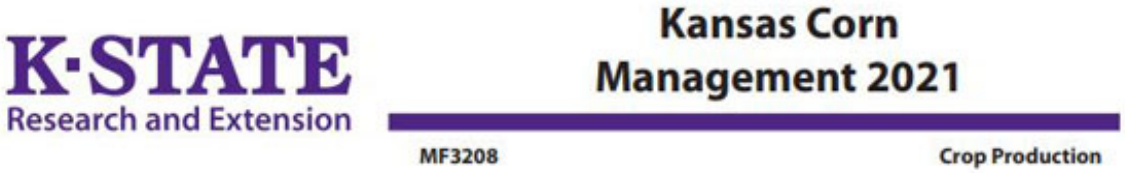
4. 2021 Corn Management publication and Corn Schools

A newly revised K-State Research and Extension publication, *Kansas Corn Management 2021*, is now available and can be accessed online at: https://www.bookstore.ksre.ksu.edu/pubs/MF3208.pdf



This publication offers advice to producers, crop consultants, and agronomists to manage Kansas corn crops as efficiently and profitably as possible. The recommendations provide guidelines and must be tailored to each producer's cropping conditions.

This comprehensive guide is written specifically for Kansas and includes valuable, up-to-date information on:

- Planting practices
- Plant density and yield gain
- Dry down before harvest
- Tillering (New section for 2021)
- Weed management
- Nutrient management
- Diseases
- Insect management
- Risk management and corn markets
- Machinery
- Irrigation

Contributors to the 2021 version of this publication include:

Ignacio Ciampitti, Crop Production and Cropping Systems
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Jonathan Aguilar, Bio and Ag Engineering – Irrigation
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2021 Kansas Corn Management Schools – Update

The 2021 Winter Corn Management schools typically held in-person in January are moving to a virtual format. Kansas Corn is working with K-State Research and Extension to put together a webpage to house all of the presentations to be viewed virtually on-demand. In addition, there will be a series of three webinars in January and February that will each include two presentations with time for live questions. There will be registration pages set up for these events. Participants will have to register in order to get the Zoom link sent to their email.

Stay tuned to the eUpdate for more information on the 2020 Corn Schools, including registration and program details.