



K-STATE
Research and Extension

Extension Agronomy

eUpdate

01/26/2023

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. Corn management in Kansas for 2023

K-State Research and Extension has released a popular publication updated for the 2023 growing season: [MF3208 Kansas Corn Management](#).

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Kansas Corn Management 2023

MF3208

Crop Production

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
- Weed management
- Nutrient management
- Diseases
 - New section on tar spot in corn.
- Insect management
- Machinery
- Irrigation

Visit the KSRE Bookstore to order paper copies of this publication or to view/download the online version: <https://bookstore.ksre.ksu.edu/Item.aspx?catId=221&pubId=18439>

Contributors to the 2023 version of this publication include:

Ignacio Ciampitti, Farming Systems
Sarah Lancaster, Weed Management
Dorivar Ruiz Diaz, Soil Fertility and Nutrient Management
Jonathan Aguilar, Bio and Ag Engineering – Irrigation
Ajay Sharda, Bio and Ag Engineering – Planting Systems
Rodrigo Onofre, Plant Pathology
Brian McCornack, Entomology
Adrian Correndo, Crop Production and Cropping Systems



2. A closer look at normal low temperatures for Kansas

The first half of January was quite mild across the state. The second half has been more winterlike, with snow falling across most of Kansas in the past week. With this snow cover, there has been a return to more seasonable temperatures, but it's nowhere near as cold as it was just over a month ago, when Kansas was plunged into a deep freeze. Every Kansas Mesonet site fell below zero on December 22, when low temperatures ranged from -19°F at Sherman (Sherman County) to -3°F at Ashland 8 S (Clark County), courtesy of the coldest air mass to invade Kansas in nearly two years. For those longing for springtime, a hopeful sign is when the daily normal low temperature start to increase. In this report, we take a closer look at when normal lows begin increasing each year.

The normal lows referenced in this report are for the 30-year period 1991 to 2020, as issued by the National Centers for Environmental Information. Table 1 contains information for 36 locations in the state, four from each of Kansas' nine climate divisions. From the table, we see that the coldest normal lows are in the teens in the northern third of Kansas, and increase as one goes south, into the low to mid 20s. The date that each location first reaches its coldest normal low is earlier in the western half of the state, where it typically occurs in December, while in the eastern part of Kansas, that date is in January.

The number of consecutive days on which each location has its lowest normal low varies greatly around the state, from as short as 5 to as long as 51 days. A longer period of minimum normal lows does not imply a colder location, however. Case in point: the shortest run, 5 days, is in Fort Scott. Their minimum normal low is 21°F, two degrees colder than nearby Chanute, where their minimum normal low of 23°F lingers for 23 days. The longest run, 51 days, is in Goodland. Their minimum normal low is 17°F, two degrees warmer than a couple of counties away in Oberlin, where the minimum normal low of 15°F only lasts for 15 days. It's important to note that 30-year normals are determined by not only calculating the averages for each day, but also by smoothing them across adjacent days to ensure gradual daily changes throughout the year. Thus, all of the variation in periods of minimum normal lows are more likely due to mathematics than meteorology.

When do normal low temperatures begin to increase?

The date when normal lows begin increasing, like the periods of coldest normal lows, varies quite a bit. There is no geographical tendency for one part of the state to start seeing increasing normal lows earlier than another. In fact, the earliest and latest "warm-up date" are both in the same division: northwest Kansas, where Oberlin's normal lows start warming on January 10, but Goodland's normal lows don't increase until February 4. If all the "warmup dates" are averaged together, the average date when normal lows start increasing in Kansas is January 25. So, by the time you're reading this, things are already looking up in many areas!

Looking further ahead, the first day when the normal lows are above freezing is in early to mid-March in south central and east central Kansas. Further north and west, this date is later in March. In the northwest, the last normal low at or below freezing is later, in early April. Thus, the threat of freezing conditions will linger for at least one to two more months, depending on your location. But you can rest assured that increasing normal lows will start very soon, if they have not already at your location. And there's more good news: meteorological spring begins on March 1, just over one month away!

Table 1. List of the coldest average daily minimum temperatures, the first and last dates of the coldest average minimum, the number of days in between the first and last dates, and the first date in meteorological spring when the average daily minimum is above freezing for selected locations in Kansas.

Division	Location	Coldest Normal Low (°F)	First Date of Coldest Normal	Last Date of Coldest Normal	Number of days with Coldest Normal	Date when normal low first exceeds 32°
North west	Colby	15	20-Dec	28-Jan	40	10-Apr
	Goodland	17	16-Dec	4-Feb	51	8-Apr
	Oberlin	15	27-Dec	10-Jan	15	4-Apr
	St. Francis	15	18-Dec	19-Jan	33	7-Apr
North Central	Concordia	19	31-Dec	1-Feb	33	18-Mar
	Phillipsburg	16	1-Jan	29-Jan	29	31-Mar
	Plainville	17	5-Jan	30-Jan	26	28-Mar
	Smith Center	16	28-Dec	2-Feb	37	30-Mar
North east	Hiawatha	15	5-Jan	27-Jan	23	26-Mar
	Holton	15	5-Jan	26-Jan	22	26-Mar
	Manhattan	18	14-Jan	21-Jan	8	19-Mar
	Marysville	15	7-Jan	27-Jan	21	24-Mar
West Central	Quinter	17	31-Dec	21-Jan	22	31-Mar
	Scott City	16	21-Dec	28-Jan	39	5-Apr
	Tribune	16	18-Dec	24-Jan	38	8-Apr
	WaKeeney	17	1-Jan	23-Jan	23	28-Mar
Central	Great Bend	18	30-Dec	28-Jan	30	24-Mar
	Hays	17	24-Dec	2-Feb	41	24-Mar
	Russell	19	24-Dec	2-Feb	41	20-Mar
	Salina	20	29-Dec	28-Jan	31	14-Mar
East Central	Emporia	20	14-Jan	21-Jan	8	13-Mar
	Garnett	19	15-Jan	27-Jan	13	15-Mar
	Olathe	21	6-Jan	28-Jan	23	9-Mar
	Topeka	20	5-Jan	30-Jan	26	11-Mar
South west	Ashland	18	29-Dec	18-Jan	21	20-Mar
	Dodge City	20	28-Dec	24-Jan	28	20-Mar
	Elkhart	21	22-Dec	23-Jan	33	21-Mar
	Garden City	17	27-Dec	13-Jan	18	27-Mar
South Central	Hutchinson	20	25-Dec	31-Jan	38	15-Mar
	Pratt	19	29-Dec	27-Jan	30	20-Mar
	Wichita	22	8-Jan	23-Jan	16	7-Mar
	Winfield	24	28-Dec	1-Feb	36	4-Mar
South east	Chanute	23	7-Jan	29-Jan	23	5-Mar
	Coffeyville	24	7-Jan	25-Jan	19	1-Mar
	Columbus	23	6-Jan	26-Jan	21	5-Mar
	Fort Scott	21	15-Jan	19-Jan	5	7-Mar

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3. Don't miss the 2023 K-State Crop Talk webinar series

The popular K-State Crop Talk webinar series is back and set to kick off on February 7, 2023. This year, Crop Talk will be focused on agronomic topics for producers across the state of Kansas. Topics include spring annual forages, climate-smart agriculture, alternative weed control research, and the latest on corn tiller research. Continuing education credits have been applied for and 1 credit will be available for each session.

Each webinar will begin at 12:00 pm (CST) and last until 1:00 pm, beginning with the first one on Tuesday, February 7.

Upon registration, participants will receive an email with instructions to attend via Zoom or YouTube. These webinars are open to all and there is no cost. Visit the K-State Northwest Research and Extension Center's website to register: <https://www.northwest.k-state.edu/events/crop-talk-series/index.html>.

Please contact your local KSRE extension office or the Northwest Research and Extension Center at 785-462-6281.

A complete list of webinars, with dates, topics, and speakers, is detailed below.

February 7 – Spring Annual Forages to Fill the Gap in Cattle Feed

John Holman, K-State Agronomist

February 14 - Climate Smart Agriculture, What's all the Buzz

Peter Tomlinson, K-State Environmental Quality Specialist

February 21 – Alternative Weed Control Research from Kansas

Sarah Lancaster, K-State Weed Science Specialist

February 28 – Corn Tillers: The Good, the Bad, and the Ugly

Rachel Veenstra, K-State Crop Science Agronomist



Crop Talk

Webinar Series

- February 7** **Spring Annual Forages To Fill the Gap in Cattle Feed**
John Holman, K-State Agronomist at Garden City
- February 14** **Climate Smart Agriculture, What's All the Buzz?**
Peter Tomlinson, K-State Environmental Quality
Agronomist
- February 21** **Alternative Weed Control Research from Kansas**
Sarah Lancaster, K-State Extension Weed Specialist
- February 28** **Corn Tillers: The Good, the Bad, and the Ugly.**
Rachel Veenstra, K-State Crop Science Agronomist

Held from 12:00 – 1:00 pm CT

Register to attend at www.northwest.ksu.edu/events

Webinars will be broadcast via zoom and YouTube
Links for joining will be sent after registration



Certified Crop Advisor (CCA) Credits have been applied for
1 per session

If you have questions, please contact your local Extension agent or the K-State
Northwest Research and Extension Center at 785-462-6281.

K-State Research and Extension is an equal opportunity provider and employer.

4. Registration is still open for the 2023 Kansas Corn Virtual School

The last of the Kansas Corn Schools is being offered as a virtual event on February 2, 2023. There is still time to register for this school which is being hosted by Department of Agronomy, K-State Research and Extension, and Kansas Corn.

The online session on Feb. 2 will run from 6:00 to 8:00 pm using the Zoom online platform. To receive the Zoom link, you must register at <https://kscorn.com/cornschoo/>.

Presentations start at 6 p.m.

- Agronomics for Corn Production, Dr. Ignacio Ciampitti
- Update on Corn Diseases, Dr. Rodrigo Onofre
- Revisiting Residual Herbicides in Corn, Dr. Sara Lancaster
- 2022 Corn Markets & Cost>Returns, Dr. Dan O'Brien
- KCGA Policy Achievements and Ambitions – Josh Roe, Kansas Corn

2023 Kansas Corn Schools

February 2, 2023
Virtual Corn School



Premier Sponsor



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Presentations start at 6 p.m.

- Agronomics for Corn Production, Dr. Ignacio Ciampitti, K-State
- Update on Corn Diseases, Dr. Rodrigo Onofre, K-State
- Revisiting Residual Herbicides in Corn, Dr. Sara Lancaster, K- State
- 2022 Corn Markets & Cost>Returns, Dr. Dan O'Brien, K-State
- KCGA Policy Achievements and Ambitions – Josh Roe, Kansas Corn

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Free to attend, but please register at [kscorn/schools](https://kscorn.com/schools/) to receive Zoom link.

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Josh Roe, VP of Market Development and Policy, Kansas Corn
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5. K-State Soybean School - Registration is open

K-State Research and Extension will be offering a one-day Soybean School on February 22 at Great Plains Manufacturing, 1525 E. North Street in Salina, KS. The school will start at 8:30 am with registration and presentations will begin at 9:00 am. The presentations will conclude at 2:30 pm with an optional tour of Great Plains Manufacturing immediately following the last presenter. A noon lunch will be provided thanks to sponsorship by the Kansas Soybean Commission.

This event will provide in-depth training targeted for soybean producers and key-stakeholders. Some topics that will be covered include crop production practices, soybean breeding update, Kansas Mesonet tools, insect and disease management, and market outlook.

There is no cost to attend this school. In addition, CCA credits have been applied for. For those interested in the Great Plains Manufacturing tour, please dress for the weather and wear closed-toed shoes.

Please register online at <https://bit.ly/soyschool>. You can also register by calling one of these contacts: Kansas Soybean at 877-577-6923; Jay Wisbey at 785-309-5850; or K-State Extension Agronomy at 785-532-0400



2023



Kansas Soybean School

February 22, 2023
(8:30 am - 2:30 pm, with a tour to the factory)



Central Location, Salina Great Plains Mfg. Inc.
1525 E North Street Salina, KS.

Register at: <https://bit.ly/soyschool>



Or by calling at
K-State Research and Extension- Central Kansas
District, 785-309-5850
Kansas Soybean Office – 877-577-6923

One-hour walking tour to the Great Plains factory will be available following the conclusion of the school. Please dress for the weather and wear closed-toed shoes (required). All other safety gear will be provided.



K-State Research and Extension is committed to providing equal opportunity for participation in all programs, services and activities. Program information may be available in languages other than English. Reasonable accommodations for persons with disabilities, including alternative means for communication (e.g., Braille, large print, audiotape, and American Sign Language) may be requested by contacting the event contact Jay Wisbey two weeks prior to the start of the event or February 8, 2023, at (785)309-5850 or jwisbey@ksu.edu. Requests received after this date will be honored when it is feasible to do so. Language access services, such as interpretation or translation of vital information will be provided free of charge to limited English-proficient individuals upon request.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service.
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