Issue 929

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eUpdate

10/20/2022

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. Management adjustments when sowing wheat late

According to the most recent USDA report released on October 16, about 64% of Kansas wheat has been planted this fall, which is near the 5-yr average of 66%. However, some producers may have delayed planting for different reasons, including harvesting a summer crop during late October or, especially during this growing season, dry soils and waiting for significant precipitation to occur. Planting wheat in late October-early November is within the acceptable range in southeast and far south central Kansas. In other areas of the state, this is later than desirable, and later than the cutoff date for full crop insurance benefits. Although good yields may still be reached when wheat is planted outside the optimal planting window, late-planted wheat is often subjected to colder fall temperatures and has less time to tiller prior to winter dormancy (Figure 1), which can reduce wheat yield potential and increase the risks of winter injury.

Figure 1. Differences in fall growth and development of wheat crops planted in late September (left) versus late October (right) near Hutchinson, in south central Kansas. Photos taken mid-December of the planting year by Romulo Lollato, K-State Wheat and Forage Extension Specialist.

Under these circumstances, some management adjustments can be made to try to compensate for the consequences of late planting. These adjustments include:

Increase seeding rate

Late-planted wheat tends to produce fewer tillers during the fall than wheat planted at the optimal time. Fall tillers are generally more productive than spring tillers, contributing more to the crop's yield potential. Therefore, there is a need to compensate for the reduced tillering by increasing seeding rates. Wheat seeding rates for Kansas vary depending on the precipitation zone, and increase from west to east (Table 1). Likewise, every week planting is delayed from the end of the range of optimal planting date, seeding rates should be increased by about 150,000 – 225,000 seeds

per acre (or 10 to 15 lb/acre) in western Kansas, or 225,000 – 300,000 seeds per acre (15 – 20 lb/acre) in eastern Kansas. Final seeding rate should not be above 90-100 pounds per acre in western Kansas and 120-130 pounds in eastern and central Kansas for grain-only wheat production, as extremely high seeding rates can increase the potential for lodging and increase crop water demand early in the cycle, possibly resulting in more severe drought stress later during reproductive stages (this is referred to as 'haying off').

Table 1. Seeding rates for different Kansas regions when planted during optimum planting dates and in grain-only systems. Upwards adjustments to these rates are needed when planting wheat late.

Region within Kansas	Seeding rate for grain-only wheat production, assuming optimum planting date			
	seeds/acre		seeds/sq. ft.*	
	Min.	Max.	Min.	Max.
Western	750,000	900,000	17	21
Central	900,000	1,125,000	21	26
Eastern	1,125,000	1,350,000	26	31
Irrigated	1,200,000	1,500,000	28	34

*To determine row length needed for one square foot based on row spacing, divide 12 by the row spacing of your field. For example, if row spacing is 7.5 inches, 12/7.5 = 1.6 feet, or 19.2 inches of row are needed to be equivalent to one square foot.

Maintain the optimal planting depth (1 to 1.5 inch deep)

Wheat needs at least 4-5 leaves and 1-2 tillers prior to winter dormancy for maximum cold tolerance. Late-planted wheat will most likely have fewer tillers and leaves than wheat planted at the optimal timing, and therefore will be more susceptible to winter kill. It is important to plant wheat at the normal planting depth (1 to 1.5 inches below the soil surface) to ensure good root development and anchorage, as well as good crown insulation by the soil during the winter, increasing the chances of winter survival. Shallow-planted wheat is at greater risk of winter injury. If the seed is placed too deeply, it may not have enough vigor in cold soils to emerge well.

Place starter phosphorus (P) fertilizer with the seed

Phosphate-based starter fertilizer promotes early-season wheat growth and tillering, which can help compensate for the delayed sowing date. Additionally, P is less available under colder soil temperatures, which can result in P deficiency under cold weather conditions. When planting late, producers should strongly consider using about 20-30 lbs/acre of P fertilizer directly with the seed, regardless of soil P levels. This placement method is more effective at that time of year than other application methods. The later the planting date, the more fall root development is slowed. The closer the fertilizer is to the seed, the sooner the plant roots can get to it. The three situations when in-furrow P is considered "money in the bank" are (i) late-planted wheat crops, (ii) wheat crops planted for grazing, and (iii) wheat planted into acidic soils.

Use fungicide seed treatment or plant certified seed

Late-planted wheat is sown into colder soils, which generally increases the time needed for germination and emergence to occur. As a consequence, there is increased potential for seed and soil-borne diseases that affect seedlings and early-season wheat development. Fungicide seed treatment can protect the seed and seedling during the extended time it is subjected to potential seedling diseases, improving stand establishment under poor growing conditions. It is important that the seed treatment thoroughly coat the seeds to ensure good protection. For fungicide seed treatment options, please refer to the most current version of K-State fungicide seed treatment chart available at: https://www.bookstore.ksre.ksu.edu/pubs/MF2955.pdf

Variety selection

It is probably too late to make any changes as far as which wheat variety to plant this fall. However, a few points to consider when it is known that wheat will be planted late (e.g. when planning to sow wheat following soybeans) are tillering ability and maturity. A variety that has good tillering ability may offset some of the consequences of late planting, as it might still be able to produce one or two tillers during the fall whereas a low-tillering variety may produce none. Some varieties are known for not tillering well in the spring and requiring good fall tiller production (for example, the variety Everest). Avoid planting these varieties in fields that will be planted late. Also, late-planted wheat is typically behind in development going into the winter, which might translate into slower development in the spring. This delay can result in plants being exposed to moisture stress and especially heat stress during grain filling, reducing the duration of the grain filling period. Thus, selecting an early-maturity variety with good yield potential may offset to some extent the consequences of late planting by decreasing the chances of a grain filling period subjected to warmer temperatures. Many K-State wheat variety trials are planted late after a previous soybean crop. A good way to select a variety to perform under these conditions is to filter through the results of these variety trials and select varieties performing well in your region, when planted late.

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2. Replanting decisions for winter wheat

As wheat growers evaluate their wheat stand, some may be considering replanting fields yet this fall. The potential causes of poor or uneven emergence or stand establishment are many and may differ from field to field. The fall of 2022 has been challenging for winter wheat establishment in Kansas and in the US southern Great Plains. Some regions received precipitation in September and growers who took advantage of this moisture generally attained good stand establishment. These growers are now likely concerned with the drought conditions that followed planting as the wheat plants start to show symptoms of drought stress.

For growers that did not plant right after the precipitation – perhaps because it was still too early for their region – fields may be showing some scattered emergence as seeds may have reached moisture in parts of the field but not in other parts. These growers may be considering the replant their crop. If dry soils are the cause of the problem, replanting will not bring many benefits unless the seed has partially germinated and perished before emerging. It is very important to dig into the soil and evaluate the seed to determine the cause of poor emergence. Wheat seeds may still be germinating and emergence may occur in the next few days, depending on temperatures. Thus, if seed are still hard and viable, or if germination started to occur recently and there is a very short coleoptile emerging from the seed (Figure 1), the best advice is to leave the field alone.

Figure 1. Wheat seed with elongating coleoptile visible below ground. Photo by Romulo Lollato, K-State Research and Extension.

When deciding whether to replant wheat fields it is helpful to consider these factors: stand uniformity, percent stand compared to the target stand, replanting date, weed control, and insurance cutoff date.

Stand uniformity

In fields in which topsoil moisture was variable at time of planting, some seeds might have germinated and emerged where soil moisture was sufficient, while others might have started the germination process but perished where soil moisture was too low, while others might not have started the germination process at all. This will cause poor wheat emergence across the field, with sometimes recognizable field patterns associated with the moisture distribution in the soil. In this case, stands might be relatively uniform in poorer-drained areas where moisture might have accumulated, but non-existent in better-drained areas, leading to a high within-field variability. In this case, growers should check for seed viability in areas with poor emergence. If the seed is still viable, then the field should be left alone. If the seeds imbibed water, started to germinate but perished, then these portions of the field should have top-priority for replanting. If a stand is sparse in areas that already emerged, producers should also consider replanting these areas with lower seeding rates to bring final population closer to the desired stand, as discussed below.

Percent stand compared to the goal

In areas with suboptimal and thinner stands than desired, counting the number of emerged plants per row foot and comparing the observed stand to target populations (Table 1) is a good place to start.

The target number of plants per row foot (Table 1) is influenced by seeding rate, seed size, and row spacing, and considering 80% emergence. If seed size is not known, 14,000 to 16,000 seeds per pound can be used for most wheat varieties in Kansas, except those with rather large or small kernels. To determine the average number of plants per foot of row, several random plant counts across the field should be taken, given a more or less uniform emergence throughout the field. If the average number of plants is about 50 percent or more of normal and the stand is evenly distributed, the recommendation is to keep the stand. Wheat's tillering ability can greatly compensate for poor stand provided soil fertility is adequate and the weather is favorable. With less than 40 percent of normal stand, the recommendation is to replant the field. If possible, replanting should be done at a 45-degree angle to the original stand to minimize damage to the existing stand.

Table 1. Target plants per row foot (80% emergence) based on seeding rate, seed size, and row spacing.

Seeding rate	Seed size	Row spacing (inches)				
		6	7.5	8	10	12
lb/ac	seeds/lb	Target plants per row foot (80% emergence)				
45	12,000	5	6	7	8	10
	14,000	6	7	8	10	12
	16,000	7	8	9	11	13
	18,000	7	9	10	12	15
60	12,000	7	8	9	11	13
	14,000	8	10	10	13	15

	16,000	9	11	12	15	18
	18,000	10	12	13	17	20
75	12,000	8	10	11	14	17
	14,000	10	12	13	16	19
	16,000	11	14	15	18	22
	18,000	12	15	17	21	25
90	12,000	10	12	13	17	20
	14,000	12	14	15	19	23
	16,000	13	17	18	22	26
	18,000	15	19	20	25	30
120	12,000	13	17	18	22	26
	14,000	15	19	21	26	31
	16,000	18	22	24	29	35
	18,000	20	25	26	33	40

Replanting date and seeding rate

As of late October, most of the state has passed the optimum sowing date, with the exception of far south-central or southeast Kansas. For portions of the field with no established stand (the entire stand will need to be replanted), producers should plan to increase their seeding rates by 10-15% for every week past the optimum sowing date.

In areas where a partial stand was achieved but for a total of about 50% stand, or parts of the field that did not emerge evenly, or that the seedlings have perished after planting, producers should make the decision about replanting immediately to avoid further compromising the yield potential.

In portions of the field where stand is below optimum, producers can cross-drill at the rate of 30-40 pounds per acre in western Kansas and 40-60 pounds per acre in central and eastern Kansas, using a double-disc opener drill, if at all possible, to minimize damage to the existing stand. If the replanting is done in November or later, increase the seeding rates to 60-75 pounds per acre in western Kansas and 75-90 pounds per acre in central Kansas. If stands are less than 30 percent of normal, increase these seeding rates by 20-30 pounds per acre. The higher seeding rates are needed because the cool soil temperatures encountered by late planted wheat will likely slow emergence, favor seedling diseases and reduce the potential for fall tillering. Using a fungicide seed treatment can reduce the potential for seedling disease and help achieve the target populations.

Weed control – Pay attention to application timing

A thin wheat stand can increase the potential for weed and grass infestations. In fields with a history of severe weed problems, the wheat stand should probably be replanted or thickened. If an herbicide application is preferable to replanting, look for herbicides that contain active ingredients such as bromoxynil, chlorsulfuron, dicamba, fluroxypyr, metsulfuron, MCPA, thifensulfron, tribenuron, and others. The 2022 Chemical Weed Control Guide (bookstore.ksre.ksu.edu/pubs/SRP1169.pdf) contains information, including rates, recommended adjuvants wheat growth stages for application, and crop rotation restrictions about these herbicides and others.

Also, keep in mind that an uneven wheat stand will likely influence herbicide timing in the spring due to different staging of the crop within the same field. For example, 2,4-D should only be applied after full tiller and before early boot to avoid either reduced tillering our improper head development. More-developed plants during the fall often hold the best yield potential; thus, this factor might be considered if a decision needs to be taken between risking some herbicide injury to more developed plants versus those that emerged late in uneven wheat fields.

Insurance cut-off dates

Finally, some producers might also consider insurance cut-off dates, as they need to ensure their crop is planted prior to this date.

For insurance purposes, crops planted before the final planting dates as specified by the USDA are insured with no reduction in coverage or adjustment to premium. The final plant date is already past for parts of western Kansas, which means that producers replanting after this date will have a reduction in 1% coverage per day until the end of the late-planting period. For wheat, the late-planting period often occurs about 15 days after the final plant date.

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3. Managing forages after a hard freeze

Freezing temperatures change plant metabolism and composition, and different forage species respond differently to cold stress as the fall progresses. Still, damaging frosts significantly reduce forage quality in most forage species. Depending on plant species, these changes in metabolism resulting from freezing temperatures can create possible feeding-related animal disorders and therefore there may be a need to alter grazing management.

Prussic acid poisoning

Plants that contain cyanogenic glucosides, such as warm-season annual grasses in the sorghum family, produce larger amounts of cyanide (prussic acid) when damaged by frost. Greater potential for harmful cyanide levels occur in soils high in nitrogen content and low in phosphorus or potassium.

The consumption of large amounts of prussic acid interferes with oxygen utilization, potentially causing animals to die from asphyxiation (respiratory paralysis). Symptoms such as cherry-red colored blood, staggering, difficulty breathing, spasms, foaming at the mouth and excess salivation, falling, and severe convulsions appear rapidly after forage consumption, sometimes leading to animal death within minutes.

It is extremely important to use caution when grazing these species during the fall. Avoiding to graze at night when frost is a good management option, as most toxins are produced within hours from the freeze event. If there is a killing frost, such as the ones observed in most of Kansas this last week, it is advised to avoid livestock grazing these pastures for up to three days after the frost – as the toxin usually dissipates within 72 hours or until plant tissue is dried out. Fresh forage is riskier as cyanide levels will be higher as compared to dry tissue, silage, or hay. After non-killing frosts, we advise to wait 10-14 days with no additional frost action before grazing. This will likely not be the case for Kansas for the remainder of the fall if temperatures continue to decrease.

Prussic acid content decreases significantly when the forage is cut for hay/used for silage, as large amounts are lost as gas during fermentation. Still, it is recommended to delay feeding silage for six to eight weeks following ensiling. Also, producers can consider mixing nonthreatening forages into the diet to dilute any potentially damaging residual cyanide.

Forages with differing potentials for prussic acid production:

- High: sorghum, indiangrass, sorghum-sudangrass hybrids, and forage sorghums
- Intermediate: sudangrass varieties and sudangrass hybrids
- Low: piper sudangrass, pearl millet, and foxtail millet

Other species that have potential to contain toxic levels of prussic acid after frost include: Johnsongrass, chokecherry, black cherry, and elderberry.

Nitrate toxicity

The summer of 2022 was extremely dry in Kansas. Drought-stressed annual and perennial forages can accumulate toxic nitrate levels. This can be worsened after a frost, as freezing damage slows

down metabolism and can result in nitrate accumulation in parts of the plants that are still growing. Examples of forages that may have high nitrate levels include alfalfa, corn, oat and other small grains, sudangrass, and sorghum sudangrass, Johnsongrass, etc. Before feeding or grazing drought-stressed forage, send in a forage sample to a commercial lab to be tested for nitrates. Follow your lab's specific instructions about how to collect and handle the sample. The cost of sampling and analysis is well below that of losing animals.

Managing alfalfa after a hard freeze

If cutting alfalfa for hay, the final cutting should occur right after the first killing freeze, before too many of the leaves have dropped, to reduce losses in nutritive value. Producers should be prepared to enter the fields as soon as soil moisture conditions allow. After a killing freeze, the remaining forage, if any, can be hayed safely. However, the producer should act quickly because the leaves will soon drop off.

If grazing alfalfa fields, the best practice is to wait a few days after the freeze before releasing livestock to the field as frost-damaged alfalfa, while not toxic in terms of prussic acid, does have an increased potential for bloat for a few days. Other forage legumes such as clovers also have the potential to cause bloating after a freeze. Bloat chances decrease once wilting starts or the plant starts growing again. Another option is to swath legume pastures ahead of grazing so that animals graze dry hay instead.

Grazing tall fescue after a freeze

Tall fescue has a waxy layer that reduces the damage caused by frosts, consequently, forage quality remains relatively high when compared to other species and can even result in an increase in sugar content, making tall fescue ideal for stockpiling and winter grazing use.

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4. Fire season outlook for 2022-2023

Fire season 2022 never went away in Kansas. In fact, fire activity has occurred every month this calendar year. Large fires have already occurred this fall, however, the official start of Kansas fire season is typically considered a few days following the first freeze. The beginning of this week (October 16-17) featured the first freeze statewide and most of the vegetation/fuels are now available. Additionally, we need to consider a few factors on the upcoming dormant fire season in Kansas through spring.

Fuel for the fire

The vegetation landscape across Kansas varies by each growing season. The primary fuel (burnable material) of wildfires in Kansas is grass. The amount of growth can vary greatly depending on location, precipitation, soil type, and land management practices. Unfortunately, much of the state was in drought this year. Areas in western Kansas, specifically around Scott County and Rawlins County never observed native grass green-up this summer. Therefore, any fuel residing across the landscape was carried over from last year. Elsewhere, despite sudden onset drought and heat during the summer, the Flint Hills region especially, observed above-normal moisture during the primary growth season of April through June (Figure 1). This has likely resulted in higher than normal fuel loading with more available perennial grass to burn. Therefore, increased fire behavior is possible in this region with any fire activity.

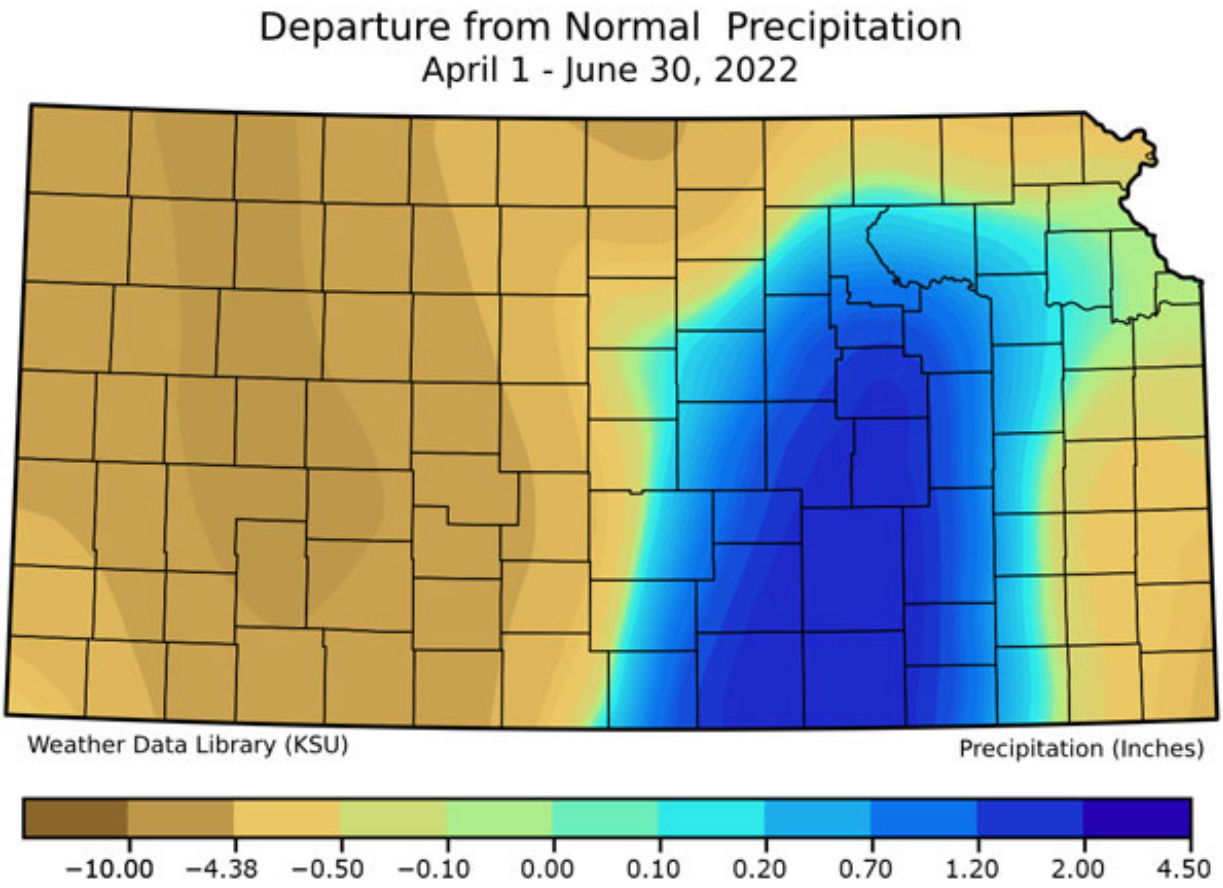

Figure 1. Departure from normal precipitation for Kansas from April 1 - June 30, 2022 from the National Weather Service, CoCoRaHS, and the Kansas Mesonet. Source: K-State Weather Data Library.

The drought has also played a role in the availability of fuel. Drought-stricken fuels have resulted in fires even before a freeze occurred. Due to these drought conditions, fuels that take longer to dry out including logs, timber lines, and grass thatch layers will hold more heat and burn effectively.

These are often sources of catching/slowing a fire down. Right now, they are additional areas that will burn hot and continue to carry fire. On a related suppression note, surface water availability has become limited due to the drought. Water supply may be a challenge for fire suppression.

Lastly, it will take a significant amount of rainfall/precipitation to offset the recent drought conditions. Without a substantial pattern change and weeks of moisture (remember, winter is the driest season of the year), drought will continue into the spring. Even with widespread precipitation, grasses and vegetation are dormant for the winter and can dry out very quickly. Grasses dry out in as little as an hour. Don't let your guard down after a moisture event and be aware of wildfire concerns until spring green-up.

Ignition Sources

Most often, wildfires in Kansas start due to human causes such as escaped prescribed fire, welding, dragging chains, or parking in tall grass to name a few. In the summer of 2022 the state observed, at

a minimum, 40+ lightning ignited wildfires. If these are all reported correctly, this drought year likely set a new record for the most natural started wildfires in a summer. Thankfully, as we move further into late fall and winter, thunderstorms become much less frequent. Lightning is less likely with climatologically low probability of natural ignitions. This means that **most wildfires during the winter dormant season are preventable!** People across the state need to be mindful of their activities and the potential for new fire starts from sparks, embers, and rekindles. Regardless of day-to-day weather, widespread drought and receptive fuels will be problematic for controlling wildfires until spring green up.

Weather Outlook

Last week's eUpdate article went in depth on the fall/winter outlook. As a result of the forecast, combined with drought and above-normal fuel loading in the Flint Hills, concern for an above-normal fire season exists. While the weather pattern thus far in fall has been characterized by lighter winds than normal (Figure 2), early winter is typically a secondary peak in winds. Spring is considered the yearly peak (Figure 3) but both seasonal peaks occur in the typical dormant grass Kansas wildfire season. Unfortunately, with the short-term forecast into the next week or two, it appears winds are going to significantly increase across Kansas. With persistent dry conditions expected to prevail, this will greatly enhance fire weather concerns across the state.

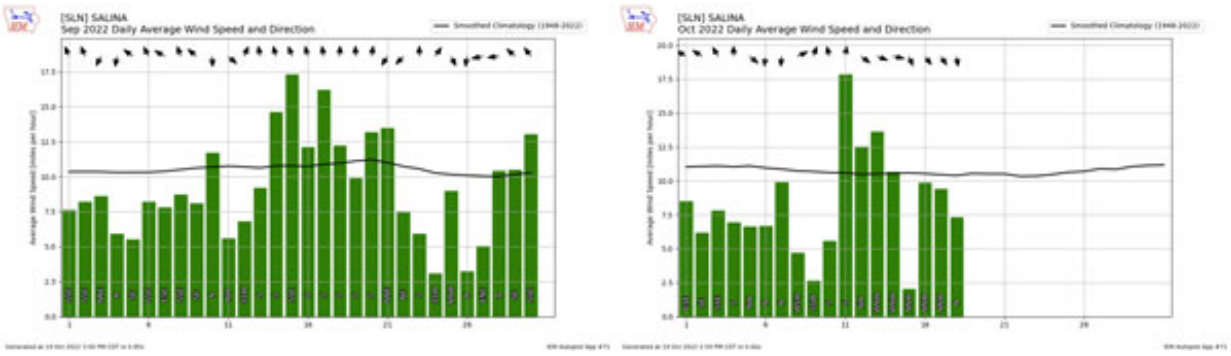

Figure 2. Wind speed compared to the September (left) and October (right) monthly normal (black line) at Salina Airport. Source: IEM Mesonet.

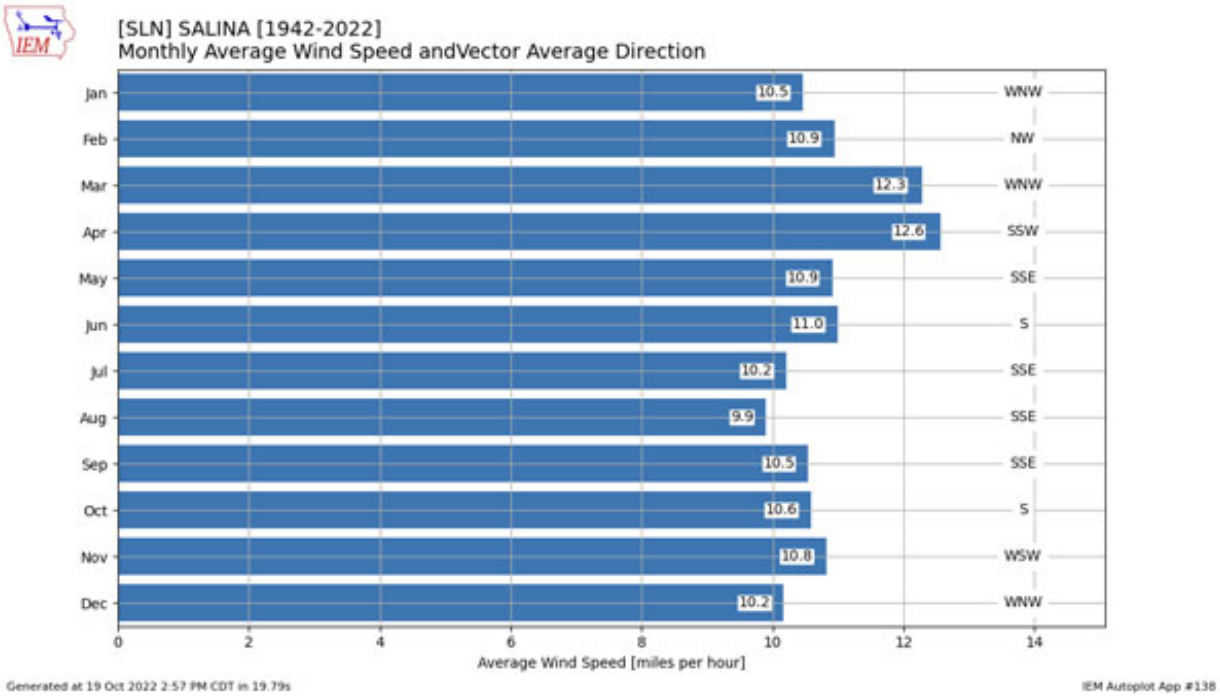

Figure 3. Average wind speed and direction by month for Salina Airport. Source: IEM Mesonet.

The longer term forecast is a bit more complicated. Unfortunately, there isn't a good linkage between fire seasons and triple dip La Niña's because of the rarity and lack of data reporting. However, with a similar pattern to last year, warm/dry conditions are definitely a concern. While last year was initially forecasted to trend towards more ENSO neutral conditions by the end of winter, it didn't verify with the persisting La Niña. With the ENSO forecast again showing the neutral forecast by spring, this brings with it the same concerns as last year's outlook.

A diminishing La Niña has been historically known to favor a more active spring. This provides a progressive jet stream with an increase in storm systems impacting the western US. While not an analog, it is good to reference the previous two triple dip La Niña's end (2001 and 1976) and what occurred during March, often the main focus for Kansas fire season. Those two Marchs favored very different overall weather patterns across the United States. The March of 2021 (Figure 4, left) consisted of upper level low pressure in the eastern US favoring cooler conditions and non-conducive fire weather across the Plains. However, 1976 tells a story of a pattern extremely conducive with a prominent, strong upper level low across the western US. This is often a pattern that brings warm, dry strong winds from the southwest, resulting in large fire potential for Kansas.

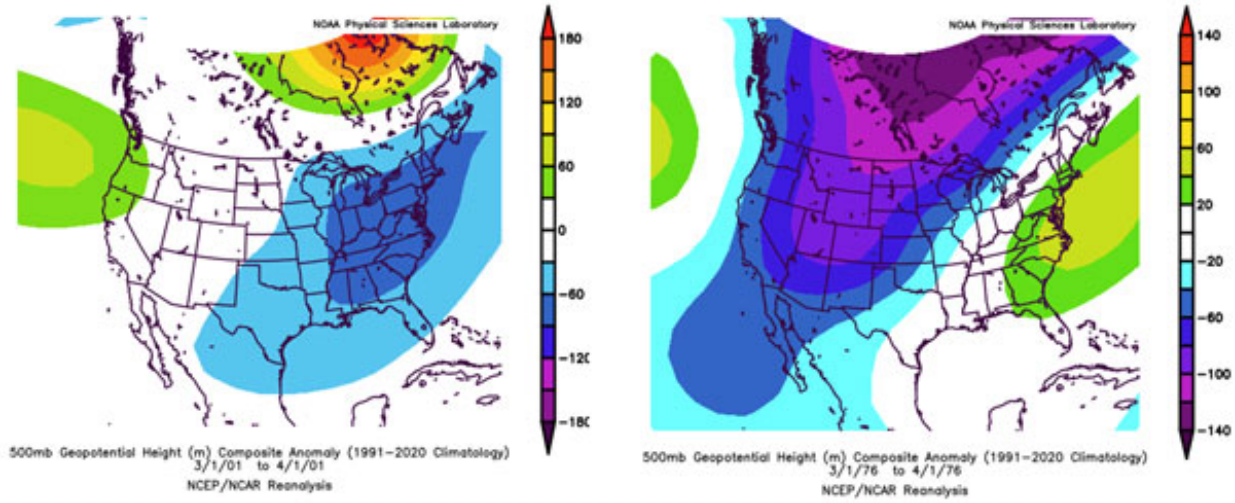

Figure 4. Upper level pattern for March 2021 (left) with blue representing low pressure, green/red high pressure in the upper levels (500mb). March 1976 on the left. Source: NOAA Physical Sciences Library.

The Climate Prediction Center (CPC) just released their new forecasts for the upcoming winter and beyond. These depict a very La Niña-type look to the pattern across the US for late winter focused on March (Figure 5). The equal chances of above/at/below normal temperature place Kansas on the gradient of colder to the north, warmer to the south. Additionally, the CPC favors below normal precipitation for most of the state, trailing from the far southwest US. This would favor the active storm track, more like the 1976 year, and the potential for increased wind events and conducive wildfire conditions across the state for the February through April timeframe.

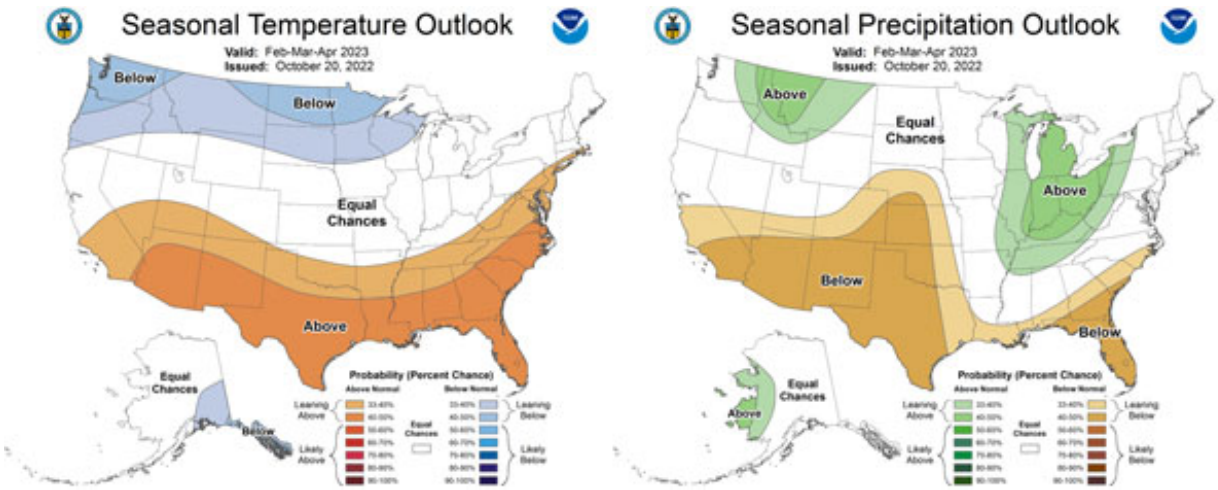

Figure 5. Seasonal temperature (left) and precipitation (right) outlooks for February 2023 through April 2023. Source: CPC.

The Bottom Line

There is a lot of variability in the weather component that is hard to forecast this far in advance. However, due to at/above fuel loading in the Flint Hills region, confidence there is increased for problematic and challenging fire behavior. Additionally, any wildfires there will be harder to suppress under more benign conditions. The Flint Hills is also characterized by continuous fuels with fewer barriers to spread than the remainder of the state. Elsewhere, less 2022 growth will result in reduced behavior, more conducive to suppression. Critical fire weather will be required to obtain extreme fire behavior in these regions. With these factors, above-normal fire activity seems very likely with persistence of winter La Niña weakening in the spring, resulting in an active storm track. When combined with antecedent drought conditions prevailing across the state, this sets the stage for a very long and challenging fire season. Any precipitation that does occur will not mitigate wildfire risk until spring green-up. Most of these fires will be human started. Let's do all we can to avoid ignitions!

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5. Kansas Agricultural Experiment Station Research Reports available online

Kansas State University conducts research in nearly all areas of agricultural production. The Kansas Agricultural Experiment Station (KAES) Research Reports are the published preliminary results of individual research projects. These reports allow researchers to disseminate their work rapidly to Kansas' producers, agricultural industries, and other researchers.

This article aims to highlight the reports by faculty and specialists in, or affiliated with, the agronomy department. Each heading below is linked to its respective webpage housed within the K-State Agronomy website. The homepage for all the agronomy-related research reports is: https://www.agronomy.k-state.edu/outreach-and-services/kaes-research-reports/. In addition to the most current report, you can also access reports going back several years.

Agronomy-related KAES Research Reports

Forage Research

The KAES forage reports include results of yearly trials of hay, sorghum silage, and dual-purpose sorghum silage varieties. These studies are conducted across the state, varying year-to-year.

Fertilizer Research

The KAES fertilizer reports include preliminary results of research conducted on fertilizer use and management practices for crops in Kansas. These studies are conducted across the state, varying year-to-year.

Field Research

The KAES field reports include preliminary results of research conducted on field production and management practices for crops in Kansas. These studies are conducted across the state, varying year-to-year.

Southeast Kansas Research

The KAES Southeast Research and Extension reports include preliminary results of research conducted on field production and management practices for crops in southeast Kansas. These studies are conducted in Parsons, KS, and nearby areas.

Western Kansas Research

The KAES Western Kansas reports include preliminary results of research conducted on field production and management practices for crops in western Kansas. These studies are conducted in the areas of Garden City, Hays, Colby, and Tribune.

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6. 2022 Kansas Soybean Yield and Value Contests

The Kansas Soybean Association is calling all soybean farmers in Kansas to enter their competitive soybean crop into the Kansas Soybean Yield Contest by December 1.

New to the 2022 Yield and Value Contests, the Kansas Soybean Association will sponsor three participants to attend Commodity Classic in March 2023. First place in both contests, as well as one randomly drawn participant who entered both contests, earn the trip.

The Kansas Soybean Commission sponsors a monetary prize for the top three finishers in each district, as well as an additional $1,000 for the overall dryland and irrigated winners and any who top the 114.3 bushel-per-acre record. The amounts per district are that first place receives $300, second receives $200, and third receives $100. All participants receive a T-shirt for entering.

Districts are determined by region, tillage method, and irrigation status, with a total of 18 districts in consideration. No-till on the Plains supplies additional awards in the no-till categories. Farmers may enter multiple categories, but only one entry per field.

Eligible fields must consist of at least five contiguous acres as verified by the Farm Service Agency, GPS printout or manual measurement. A non-relative witness, either Kansas State Research and Extension personnel or a specified designee, must be present at harvest and should ensure that the combine grain hopper is empty prior to harvest. Official elevator-scale tickets with moisture percentage and foreign matter included must accompany entries to be considered.

The statewide Kansas Soybean Value Contest that analyzes protein, oil and other soybean qualities is also open for entries. Entrants submit 20-ounce samples, which are evaluated by Ag Processing, Inc. to determine the value. Monetary awards are also given to the three highest-value entries. Farmers may enter both the yield and value contests.

Results of the contests are to be shared January 11, 2023, at the Kansas Soybean Expo in Topeka.

A full guide of contest rules and regulations, as well as the digital entry form, are available at kansassoybeans.org/association/contests/. Questions may be directed to the Kansas Soybean office by phone at 877-KS-SOYBEAN (877-577-6923) or to local KSRE offices.

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2021 WINNERS

DRYLAND
HBJ Farms, White Cloud
97.61 bu/acre

IRRIGATED
Chad Penner, Inman
111.52 bu/acre

VALUE
Bob Henry, Robinson
$1.37 premium

Increasing soybean yield, protein and oil content generates profit. The Kansas Soybean Yield and Value Contests recognizes outstanding soybean growing practices and the producers able to achieve them.

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