Issue 448

K-STATE Research and Extension

Extension Agronomy

eUpdate

04/04/2014

These e-Updates are a regular weekly item from K-State Extension Agronomy and Steve Watson, Agronomy e-Update 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 Steve Watson, 785-532-7105 swatson@ksu.edu, Jim Shroyer, Crop Production Specialist 785-532-0397 jshroyer@ksu.edu, or Curtis Thompson, Extension Agronomy State Leader and Weed Management Specialist 785-532-3444 cthompso@ksu.edu.

eUpdate Table of Contents | 04/04/2014 | Issue 448

1. Early April wheat conditions in north central Kansas

A look at wheat conditions in north central Kansas this week revealed considerable variation in the condition of the crop in that region. Recent rains in areas north of I-70 and east of U.S. Hwy 281 have perked up most of the wheat in that region.

Figure 1. Wheat growing nicely in Mitchell County on April 3, 2014 after recent rains. This wheat is still at least two weeks behind normal in development, however. Photo by Jim Shroyer, K-State Research and Extension.

There is some winterkill in this region, and not all wheat is growing well at this time, even after the

rains. In some cases, late-planted wheat remains well behind normal in development. Some of this wheat has also suffered some winter injury, especially where it was planted into loose fluffy soils or where the crown did not develop in nice, firm soils a half-inch below the surface.

Figure 2. This field of no-till continuous wheat, planted in late October, does not look good as of April 2. Photo by Jim Shroyer, K-State Research and Extension.

Wheat weakened by winter grain mites, brown wheat mite, or army cutworms is showing some winterkill as well.

Figure 3. No-till wheat in Lincoln County on April 2 with winter damage caused by winter grain mites. The mites weakened the wheat, hence the damage. Photo by Jim Shroyer, K-State Research and Extension.

Jim Shroyer, Crop Production Specialist
jshroyer@ksu.edu

2. Weed control strategies in grain sorghum

Severe grass and broadleaf weed pressure will reduce grain sorghum yields and can make harvest very difficult. Good crop rotation and herbicide selection are essential components of managing weeds in grain sorghum.

In a wheat-sorghum-fallow rotation, it is essential that broadleaf and grassy weeds do not produce seed during the fallow period ahead of grain sorghum planting. It is equally important that winter annual grasses are not allowed to head in spring, before the sorghum is planted. Thus, an effective burndown should be applied prior to winter annuals going into the flowering/heading stages.

An effective burndown prior to planting is essential. Sorghum should always be planted into a weed-free seedbed. The addition of a dicamba product or 2,4-D with glyphosate generally will control broadleaf and grass weeds effectively provided an earlier burndown treatment has been applied in March or April. There is a waiting period of 15 days between application and sorghum planting when using 8 fl oz of Clarity. Current 2,4-D labels do not address a waiting period ahead of planting sorghum; however, for corn or soybeans a 7-day waiting period is required for 1 pint or less of 2,4-D ester when used in the burndown.

In sorghum, the best choice of herbicides will depend on the weed species present. Broadleaf weeds generally can be controlled with a combination of preemergence and postemergence applied herbicides. With the development of herbicide-resistant weeds, however, this is becoming increasingly difficult.

Control of pigweeds in sorghum is an increasing concern across the state. Using a soil-applied chloracetamide herbicide with atrazine (such as Bicep II Magnum, Bicep Lite II Magnum, Bullet, Lariat, Outlook, Degree Xtra, Fultime NXT, or generic equivalents of these products) will greatly enhance controlling pigweeds. Some of the broadleaf escapes producers can expect when using the chloracetamide/atrazine mixtures are devilsclaw, puncturevine, morningglory, atrazine-resistant kochia, and atrazine-resistant pigweeds.

Using a product such as Lumax EZ or Lexar EZ preemergence, which contains mesotrione (Callisto), will help control the triazine-resistant pigweeds and kochia. The addition of 10 oz of Verdict can help control triazine-resistant pigweeds as well as the large-seeded broadleaf weeds. The chloracetamide/atrazine herbicides will do a very good job of controlling most annual grassy weeds.

A weakness of all soil-applied programs is that rainfall is required for activation. Without activation, poor broadleaf and grass control can be expected. Once rain is received, the herbicides are activated and weed control measures are in place. Weed escapes prior to this activation will need to be controlled with postemergence applied herbicides.

Grass control in sorghum can be a difficult task in some cases. If a field has severe shattercane pressure, planting grain sorghum is not recommended. For other annual grassy weeds, it will be important to apply one of the chloracetamide herbicides. Grasses that emerge before the soil-applied herbicides are activated will not be controlled. There are no herbicides currently labeled for postemergence grass control in grain sorghum. Although atrazine and Facet L have grass activity and can control tiny grass seedlings, it's generally not a good practice to depend on these herbicides for grass control. Facet L is the new liquid formulation of quinclorac (previously Paramount 75 DF) and has excellent activity on field bindweed.

Postemergence broadleaf weed control herbicides are available for grain sorghum. These products will be most effective when applied in a timely manner. Weeds that are 2-4 inches tall will be much easier to control than weeds that are 6-8 inches tall, or larger. Controlling weeds in a timely manner will result in less weed competition with the crop compared to waiting too long to control the weeds. Atrazine combinations with Huskie, Banvel, 2,4-D, Buctril, or Aim (or generic versions of these herbicides) can provide excellent broad-spectrum weed control.

Huskie, the newest herbicide registered in sorghum should be applied at 12.8 to 16 fl oz/a with 0.25 to 1.0 lbs of atrazine, NIS 0.25% v/v or 0.5% v/v HSOC (high surfactant oil concentrate), and spray grade ammonium sulfate at the rate of 1 lb/acre to sorghum from 3-leaf to 12 inches tall. Huskie alone, without atrazine, can now be applied to sorghum up to 30 inches tall prior to flagleaf emergence. Huskie is effective on kochia, pigweeds, and many other broadleaf weed species. Huskie is most effective on small weeds. The larger pigweed and kochia get, the more difficult they are to control. Temporary injury to sorghum is often observed with Huskie.

The presence of certain weed species will affect which postemergence herbicide programs will be most effective. See the grain sorghum section in the K-State *2014 Chemical Weed Control Guide* (SRP 1099) to help make the selection:
http://www.ksre.ksu.edu/bookstore/pubs/SRP1099.pdf

The crop stage at the time of postemergence herbicide applications can be critical to minimize crop injury. Delayed applications risk injury to the reproductive phase of grain sorghum, thus increasing crop injury and yield loss from the herbicide application. Timely applications not only benefit weed control, but can increase crop safety. Always read and follow label guidelines.

Curtis Thompson, Weed Management Specialist
cthompso@ksu.edu

3. Start monitoring fields for alfalfa weevils now

Alfalfa weevil larvae were just hatching on March 31 in south central Kansas. They had not even started feeding yet as no pin-prick sized holes in leaves or any nibbled terminals were noted. Fields in north central Kansas were also sampled on March 31, but no larvae were detected.

They are probably hatching by now, April 3, but as long as the average daily temperatures are only in the mid-50's °F, the larval development and consequent feeding will be relatively slow. When temperatures warm alfalfa weevil activity will increase and defoliation will proceed very quickly depending upon infestation levels. So monitoring should start immediately.

Do not be too quick to "pull the trigger" on an insecticide application, however. Generally, waiting until about 33-50% of the stems (1 larva/3 stems or 1 larva/2 stems) have feeding larvae will increase the effectiveness of the application. Also, ensure that there will be at least 3 days of temperatures above 50°F without a moisture event immediately after the application.

For information on rates of registered insecticides, see K-State's *2014 Alfalfa Insect Management Guide*:
http://www.ksre.ksu.edu/bookstore/pubs/MF809.pdf

Figure 1. Pinprick feeding holes caused by early instar larval feeding. Photos courtesy of Holly Davis, K-State Research and Extension.

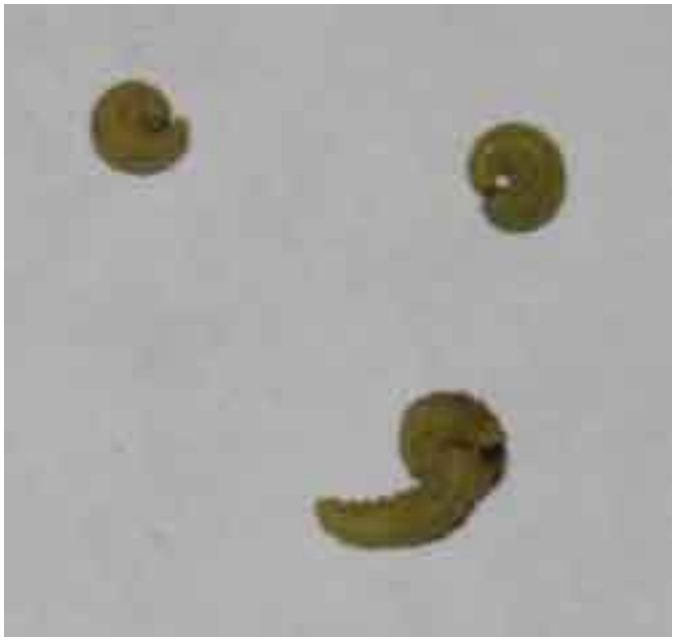


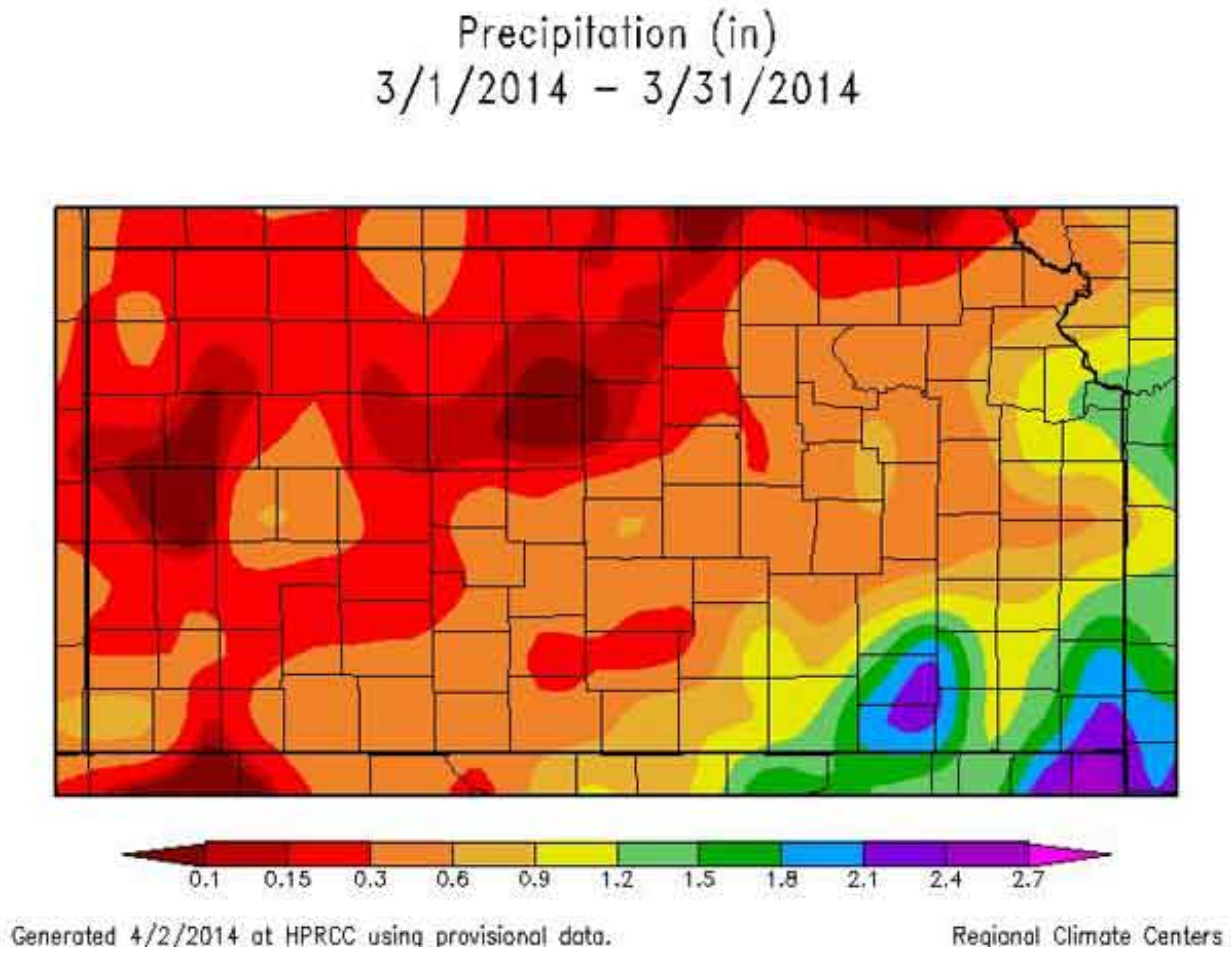
Figure 2. Small alfalfa weevil larvae.

Jeff Whitworth, Extension Entomology
jwhitwor@ksu.edu

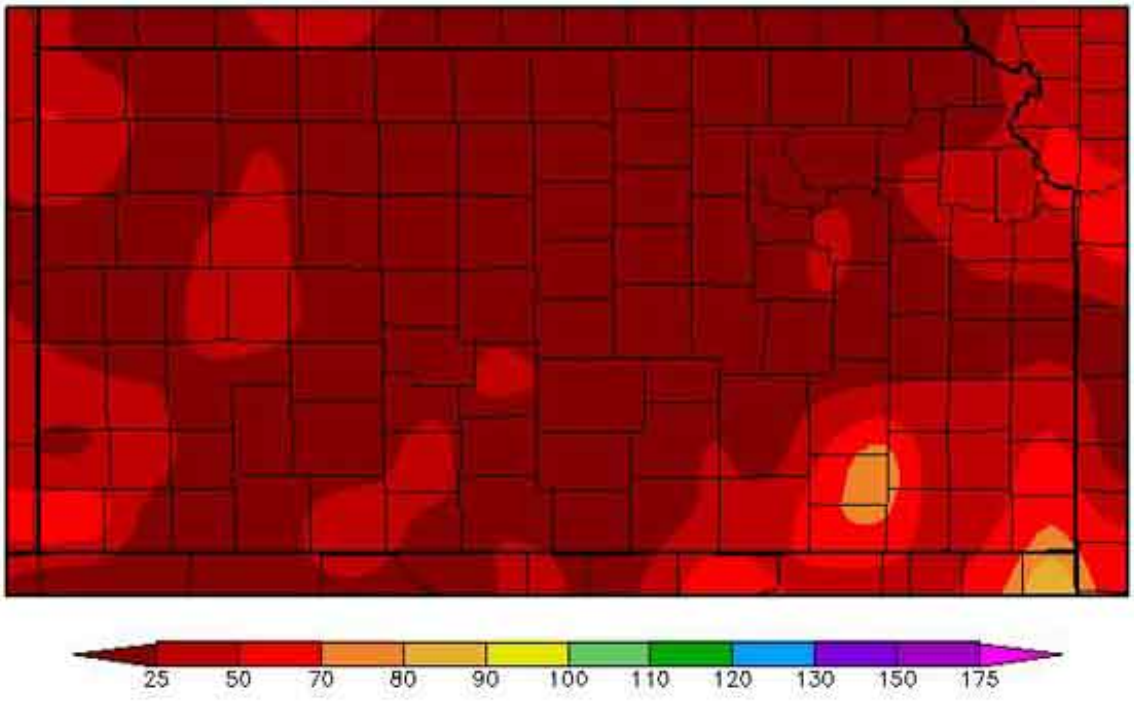
Holly Davis, Research Associate, Entomology
holly3@ksu.edu

4. Kansas weather summary for March: Dry start to spring

Winter weather was a feature both to start and end the month, but overall the month was much drier than average. The statewide average precipitation was just 0.46 inches, which was 19 percent of normal. This ranks it as the 10th driest March since 1895. The heaviest precipitation was limited in area. Snow was a significant portion of the moisture received in parts of the state. The major events occurred on the 3rd of March and on the 24-25th of March.



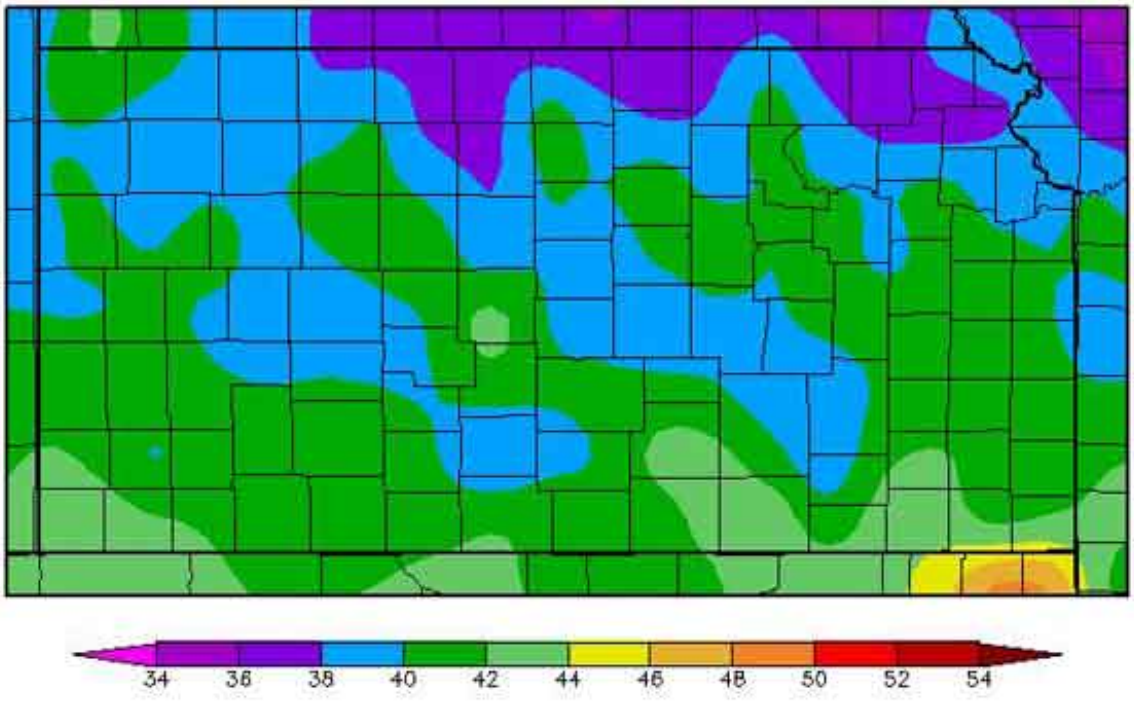
Percent of Normal Precipitation (%)
3/1/2014 – 3/31/2014



Generated 4/2/2014 at HPRCC using provisional data. Regional Climate Centers

Temperatures continued to be colder than average. Statewide, the average temperature was 39.7 oF, which was 3.7 degrees below normal. For the first quarter of the year (Jan-Mar), temperatures have averaged just 32.4 oF which places it as the 23rd coldest start to the year in the last 120 years.

Temperature (F)
3/1/2014 - 3/31/2014



Drought conditions persist across the state. No portion of the state was in near normal condition, and the portion of the state in abnormally dry conditions continues to shrink. Almost 8 percent of the state was in extreme drought at the end of February. By the end of March, that has climbed to over 14 percent of the state. The latest Drought Monitor shows that extreme drought now covers 14.43 percent of the state, with 50.57 percent of the state in severe drought. The latest Drought Outlook indicates drought conditions are expected to continue through June, although improvement is likely in all but the Southwestern division.

The El Niño/Southern Oscillation (ENSO) is expected to remain neutral through the Spring. That means the signal for increased Spring precipitation will also be weaker. The jet stream is expected to shift northward. For April, chances are equally likely for precipitation to be above or below normal statewide. The temperature outlook calls for below-normal temperatures across the northern counties, with equal chances for above or below normal temperatures across the remainder of the state. This does not indicate how much cooler conditions might be, and does not exclude the possibility of warm weather in the period.

Kansas State University Department of Agronomy
2004 Throckmorton Plant Sciences Center | Manhattan, KS 66506
www.agronomy.ksu.edu | www.facebook.com/KState.Agron | www.twitter.com/KStateAgron

Kansas Climate Division Summary

	Precipitation (inches)						Temperature (°F)			
	March 2014			Jan – March 2014					Monthly Extremes	
Division	Total	Dep. [1]	% Normal	Total	Dep. [1]	% Normal	Ave	Dep. [1]	Max	Min
Northwest	0.18	-1.13	13	0.87	-1.43	37	39.2	-1.0	82	-4
West Central	0.17	-1.85	8	1.12	-2.35	31	39.4	-2.2	81	-11
Southwest	0.47	-1.81	20	1.94	-2.27	45	40.9	-3.1	83	-8
North Central	0.16	-1.24	11	0.89	-1.61	34	38.0	-4.2	81	-8
Central	0.21	-2.04	9	1.37	-2.58	34	40.0	-3.7	81	-5
South Central	0.48	-2.17	18	1.67	-3.25	34	40.8	-4.7	83	-8
Northeast	0.23	-1.13	18	0.66	-1.72	27	38.5	-4.0	79	-6
East Central	0.65	-1.98	24	1.60	-3.02	35	39.7	-4.1	81	-6
Southeast	1.36	-1.66	44	2.04	-3.96	33	40.6	-5.2	82	-6
STATE	0.46	-1.66	19	1.34	-2.51	33	39.7	-3.6	83	-11

1. Departure from 1981-2010 normal value

Source: KSU Weather Data Library

Mary Knapp, Weather Data Library
mknapp@ksu.edu