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Research and Extension

## Extension Agronomy

# eUpdate

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*10/02/2017*

These e-Updates are a regular weekly item from K-State Extension Agronomy and Kathy Gehl, 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 Kathy Gehl, 785-532-3354 kgehl@ksu.edu, or Curtis Thompson, Extension Agronomy State Leader and Weed Management Specialist 785-532-3444 cthompso@ksu.edu.

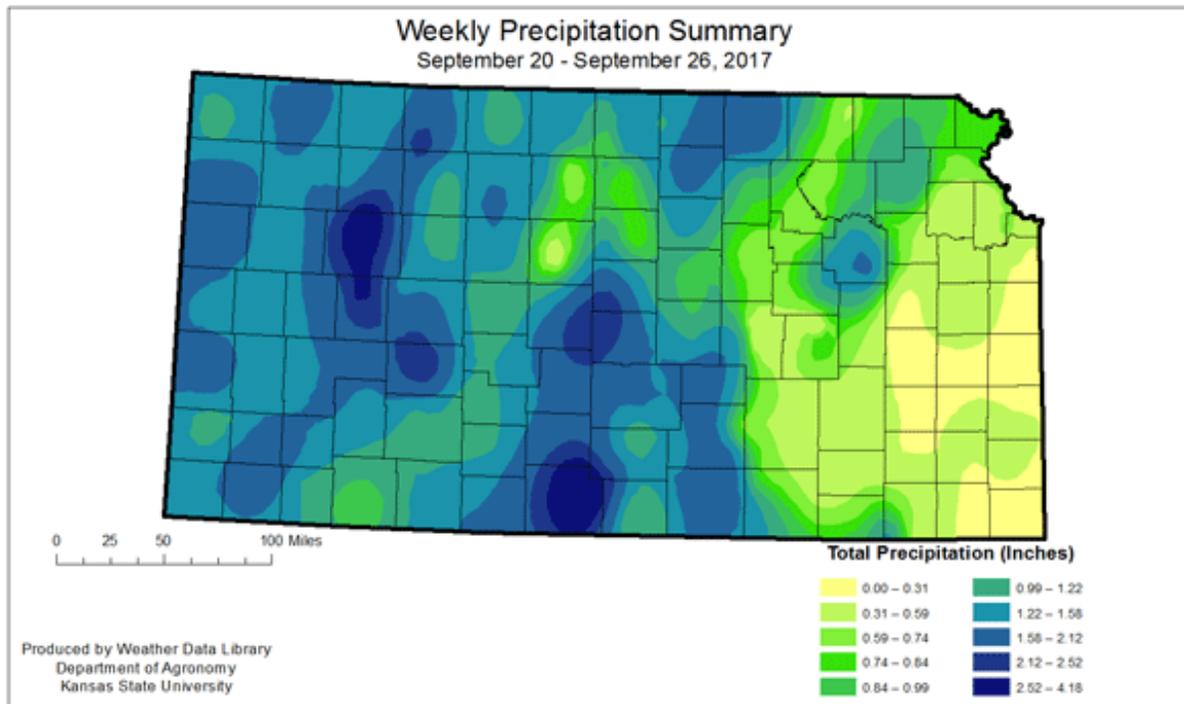
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**1. Wheat planting conditions as of early October 2017..... 3**

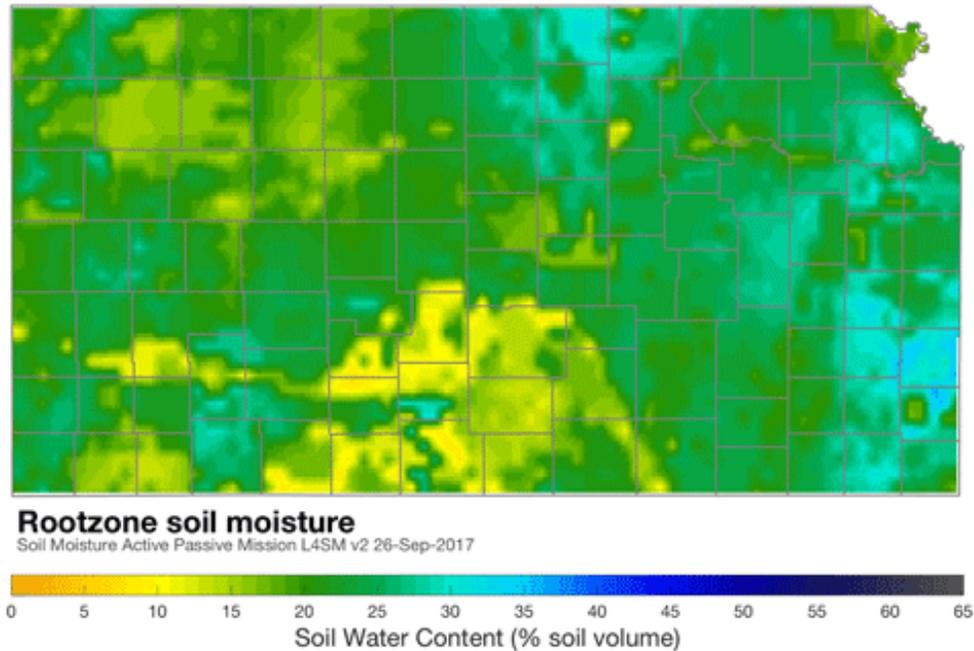
## 1. Wheat planting conditions as of early October 2017

Last week brought much needed precipitation for the central and western portions of Kansas. Cumulative precipitation during the period between September 20 and 26 ranged from no precipitation in southeast Kansas to as much as 4.18 inches in portions of south central and western Kansas (Figure 1).



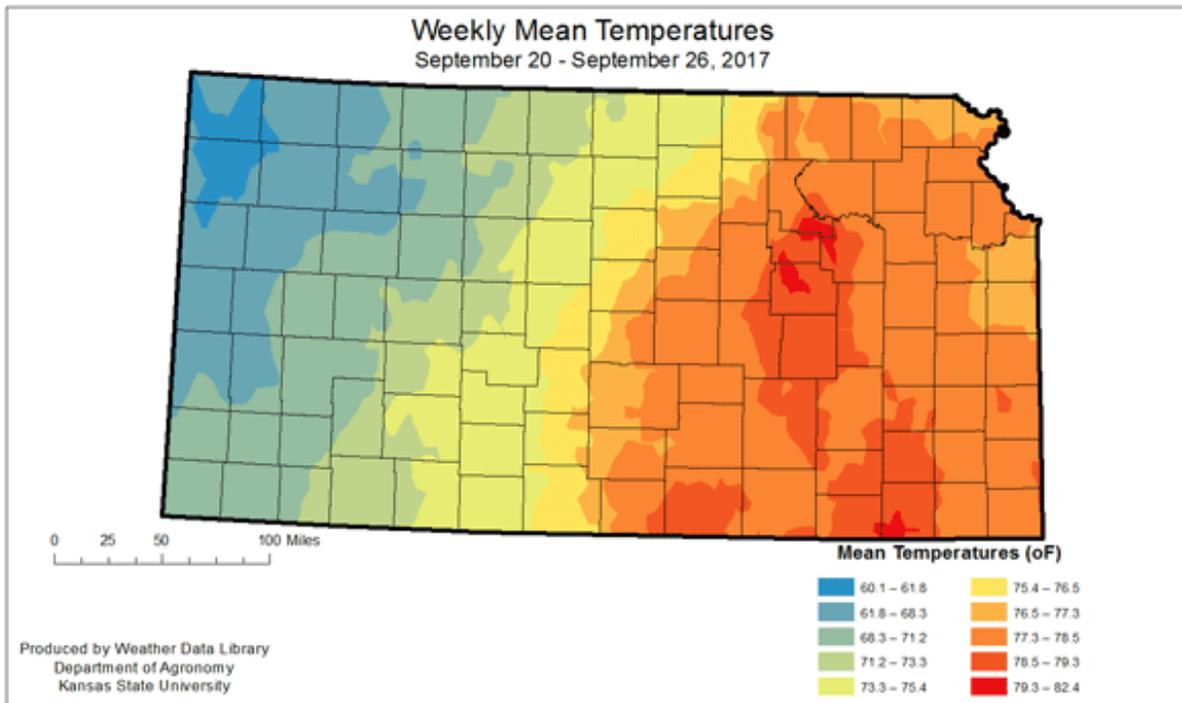
**Figure 1. Cumulative precipitation during the period September 20 – 26, 2017. Map by K-State Weather Data Library.**

This precipitation brought excellent moisture to early-planted wheat fields, and can help ensure a good stand in fields yet to be planted provided producers can re-enter the field in a timely manner to sow during the optimum sowing window. Root zone soil moisture estimates for the state's wheat growing region indicate excellent moisture conditions, particularly in southwest and north central Kansas (Figure 2). Select areas in north central and southeastern Kansas could have excessive soil moisture. While some fields in south central Kansas (particularly those with sandy soils) remain under drought, northwest Kansas gained some rainfall and possibly have good planting conditions. However, drought can develop soon if subsequent rainfall events don't recharge the soil profile in the region.



**Figure 2. Estimated rootzone soil moisture (0-3 ft.) for the state of Kansas as of September 26, 2017. Map by Dr. Andres Patrignani, K-State Soil Water Processes specialist.**

In addition to above-average precipitation, western Kansas also faced below-average temperatures during the latter part of September (Figure 3). As a consequence, there was very limited potential for water evaporation from the soil, which for the majority of fields, remain too wet for any sowing operation.



**Figure 3. Weekly mean temperatures for the period September 20 – 26. Map by K-State Weather Data Library.**

Wet soil provides many operational challenges which often prevent a good sowing operation. Producers should not hurry and sow wheat into extremely moist soils. Planting wheat under wet conditions can present mechanical and/or biological challenges.

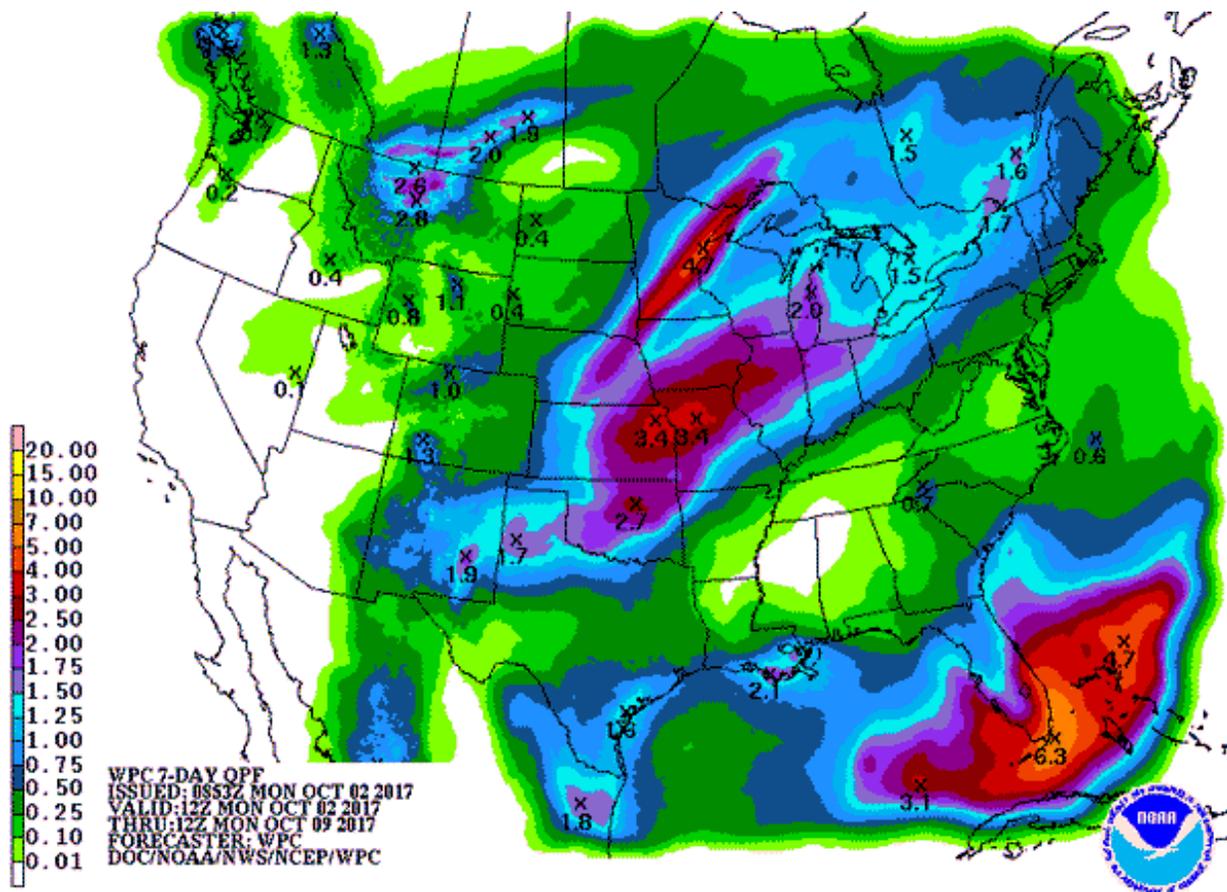
Mechanical challenges:

- Not being able to get the equipment in the field to perform plowing or sowing operations,
- Mudding up the equipment after field operations are started,
- Increased soil compaction due to machinery traffic in moist soils, which can restrict adequate root growth, affecting plant anchorage and decreasing its ability to uptake water and nutrients.

Biological challenges include:

- Delayed crop emergence
- Increased early-season disease problems.

The precipitation forecast also suggests that the next seven days (Oct. 2 - 9) could bring as much as 3.4 inches of rainfall in parts of Kansas (Figure 4), which could result in planting delays.



**Figure 4. Weekly precipitation forecast by the National Weather Service Weather Prediction Center (NOAA). Precipitation probabilities in Kansas for the next 7 days range from 0.5 to 3.4 inches.**

We are still in the beginning of the optimum wheat sowing window for the majority of the state. However, if planting is delayed past optimum sowing time, some management adjustments should be made to compensate for the reduced fall tillering potential and for planting in colder soils. Management adjustments to keep in mind if wheat planting is delayed include:

- Increase seeding rate to compensate for decreased fall tillering potential.
- Maintain the optimal planting depth (1 to 1.5 inches deep) to ensure good root development and anchorage.
- Place starter phosphorus (P) fertilizer with the seed to increase fall tillering.
- Use fungicide seed treatment or plant certified seed as wheat planted in colder soils generally takes longer to emerge.
- Select a wheat variety that performs well when sown late.

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