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Research and Extension

Extension Agronomy

eUpdate

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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, or Curtis Thompson, Extension Agronomy State Leader and Weed Management Specialist 785-532-3444 cthompso@ksu.edu.

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Cattle should be removed from wheat pastures when the crop reaches first hollow stem (FHS).

Grazing past this stage can severely affect wheat yields (for a full explanation, please refer to [eUpdate article "Optimal time to remove cattle from wheat pastures: First hollow stem"](#)).

First hollow stem update

In order to screen for FHS during this important time in the growing season, the K-State Extension Wheat and Forages crew measures FHS of 20 commonly grown wheat varieties and experimental lines in Kansas. The varieties are in a September-sown replicated trial at the South Central Experiment Field near Hutchinson, in cooperation with Gary Cramer, Agronomist-in-Charge of the Field.

Ten stems are split open per variety per replication, for a total of 40 stems monitored per variety. The average length of hollow stem is reported for each varieties in Table 1. As of March 3, none of the varieties had yet reached first hollow stem but all varieties had started to elongate the stem.

Table 1. Length of hollow stem measured March 3, 2017 of 20 wheat varieties sown mid-September 2016 at the South Central Experiment Field near Hutchinson. The critical FHS length is 1.5 cm (about a half-inch or the diameter of a dime).

Variety	Hollow stem length (cm)			
	2/17/2017	2/22/2017	3/3/2017	3/5/2017
1863	0.02	0.26	0.42	0.95
Bentley	0.03	0.17	0.25	0.44
Doublestop CL Plus	0.02	0.16	0.20	0.51
Everest	0.04	0.23	0.38	0.83
Gallagher	0.05	0.33	0.58	0.97
IBA	0.03	0.31	0.38	0.72
KanMark	0.04	0.22	0.34	1.00
KS061193K-2	0.03	0.33	0.34	1.02
KS080448C*102	0.01	0.06	0.33	0.51
Larry	0.03	0.16	0.18	0.57
OK11D25056	0.02	0.18	0.44	0.76
OK12716	0.03	0.20	0.27	0.66
OK12DP22002-042	0.03	0.19	0.40	0.89
Ruby Lee	0.02	0.20	0.27	0.82
Stardust	0.02	0.34	0.53	1.01
SY Flint	0.03	0.30	0.46	0.96
SY Grit	0.02	0.22	0.48	1.06

SY Llano	0.01	0.38	0.60	1.39
Tatanka	0.03	0.18	0.35	0.50
Zenda	0.04	0.30	0.36	1.02

A few varieties are approaching first hollow stem quickly in our trials. SY Llano seems to be the earliest variety, with 1.39 cm of hollow stem (very close to the 1.5 cm threshold). Producers growing SY Llano in the south central Kansas area should likely be starting to remove cattle from their wheat pastures. Additional varieties approaching first hollow stem are KanMark, Stardust, and Gallagher.

Other varieties are elongating the stem at a slower rate and have now about 0.5 cm (Bentley, Doublestop CL Plus, Larry, and Tatanka).

While none of the varieties had yet reached FHS as of March 3, this stage will be achieved within a few days for all of the varieties being evaluated. Producers should closely monitor FHS in their wheat pastures at this time.

The intention of this report is to provide producers a weekly update on the progress of first hollow stem development in different wheat varieties. Producers should use this information as a guide, but it is extremely important to monitor FHS from an ungrazed portion of each individual wheat pasture to help make the decision of when to remove cattle from wheat pastures.

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