



K-STATE
Research and Extension

Extension Agronomy

eUpdate

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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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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” in the Feb. 23, 2018 issue).

First hollow stem update – Plants measured on March 23

In order to screen for FHS during this important time in the growing season, the K-State Extension Wheat and Forages crew measures FHS on a weekly basis in 28 different commonly grown wheat varieties in Kansas. The varieties are in a September-sown replicated trial at the South Central Experiment Field near Hutchinson.

Ten stems are split open per variety per replication (Figure 1), 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 **Friday, March 23**, nine of the varieties had already reached first hollow stem and all varieties were rapidly elongating their hollow stem.



Figure 1. Ten main wheat stems were split open per replication per variety to estimate first hollow stem for this report, for a total of 40 stems split per variety. Photo by Romulo Lollato, K-State Research and Extension.

Table 1. Length of hollow stem measured Feb. 21, Feb. 28, March 6, March 14, March 21, and March 23, of 28 wheat varieties sown mid-September 2017 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). Least significant difference (LSD) between varieties for statistical significance is also shown.

Variety	2/21/2018	2/28/2018	3/6/2018	3/14/2018	3/21/2018	3/23/2018
AM Eastwood	0.19	0.28	0.30	0.52	0.79	2.35
NE10478-1	0.15	0.25	0.24	0.44	0.71	1.11
LCH13-22	0.16	0.21	0.24	0.40	0.65	1.39
LCH14-55*	0.17	0.19	0.25	0.42	0.51	1.12
LCH14-89	0.15	0.22	0.24	0.39	0.58	1.16
LCS Chrome	0.16	0.20	0.25	0.30	0.42	0.81
LCS Pistol	0.17	0.22	0.27	0.41	0.63	1.55
Bentley	0.12	0.22	0.23	0.35	0.58	1.20
Doublestop CL Plus	0.15	0.21	0.26	0.32	0.48	1.17
Gallagher	0.18	0.26	0.30	0.50	0.69	1.64
Iba	0.16	0.20	0.26	0.41	0.53	1.31
Lonerider	0.15	0.21	0.26	0.41	0.74	1.78
OK12716	0.15	0.21	0.28	0.35	0.61	1.36
Ruby Lee	0.13	0.19	0.25	0.46	0.57	1.46
Smith's Gold	0.18	0.27	0.24	0.48	0.89	1.29
Spirit Rider	0.19	0.24	0.31	0.47	0.55	1.65
Stardust	0.18	0.23	0.25	0.43	0.73	1.68
Paradise	0.19	0.23	0.32	0.43	0.78	1.24
Bob Dole	0.19	0.25	0.28	0.35	0.75	1.35
SY Achieve CL2	0.18	0.26	0.25	0.54	1.33	2.52
SY Benefit	0.18	0.26	0.30	0.52	1.02	2.43
SY Rugged	0.13	0.23	0.23	0.39	0.73	1.05
1863	0.21	0.24	0.30	0.63	1.27	1.57
Joe	0.16	0.21	0.27	0.37	0.59	1.18
Larry	0.15	0.22	0.25	0.39	0.58	1.31
Oakley CL	0.14	0.21	0.28	0.37	0.43	0.57
Tatanka	0.12	0.22	0.24	0.38	0.66	1.20
Zenda	0.19	0.23	0.28	0.41	0.54	1.08
Differences among varieties	No	Yes	No	Yes	Yes	Yes
LSD	-	0.04	-	0.33	0.90	0.79

Varieties that already reached FHS as of March 23 were AM Eastwood, LCS Pistol, Gallagher, Lonerider, Spirit Rider, Stardust, SY Achieve SL 2, SY Benefit, and 1863. Hollow stem will continue to develop quickly in the next few days across all varieties; thus, even varieties that had not reached FHS at time of this report should be scouted closely to avoid grazing past FHS.

The intention of this report is to provide producers an update on the progress of FHS 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 take the decision of removing cattle from wheat pastures.

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