



**K-STATE**  
Research and Extension

## Extension Agronomy

# eUpdate

---

*03/14/2017*

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](mailto:swatson@ksu.edu), or Curtis Thompson, Extension Agronomy State Leader and Weed Management Specialist 785-532-3444 [cthompso@ksu.edu](mailto:cthompso@ksu.edu).

Subscribe to the eUpdate mailing list: <https://listserv.ksu.edu/cgi-bin?SUBED1=EUPDATE&A=1>

---

**1. First hollow stem update: March 14, 2017..... 3**

## 1. First hollow stem update: March 14, 2017

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 different 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.

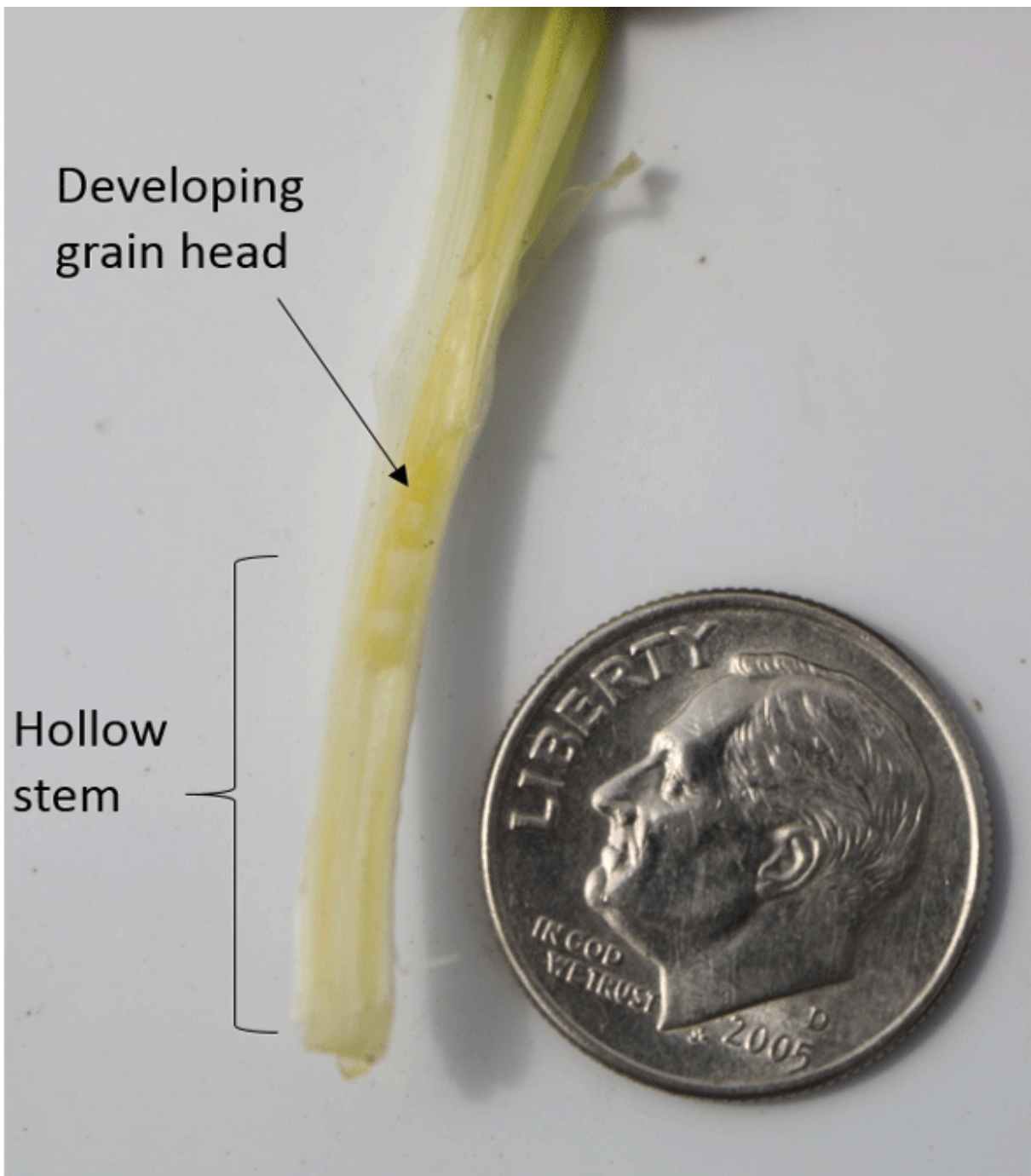
**Table 1. Length of hollow stem measured March 13, 2017 of 20 wheat varieties and experimental lines sown mid-September 2016 at the South Central Experiment Field near Hutchinson. The critical FHS length is 1.5 cm (about a half-inch or the diameter of a dime).**

Variety	Hollow stem length (cm)					
	2/17/2017	2/22/2017	3/3/2017	3/5/2017	3/10/2017	3/13/2017
1863	0.02	0.26	0.42	0.95	<b>1.58</b>	-
Bentley	0.03	0.17	0.25	0.44	0.44	0.59
Doublestop	0.02	0.16	0.20	0.51	0.59	0.77
Everest	0.04	0.23	0.38	0.83	1.30	<b>2.20</b>
Gallagher	0.05	0.33	0.58	0.97	<b>1.53</b>	-
IBA	0.03	0.31	0.38	0.72	1.01	<b>1.57</b>
KanMark	0.04	0.22	0.34	1.00	0.87	1.39
KS061193K-2	0.03	0.33	0.34	1.02	1.04	1.30
KS080448C*102	0.01	0.06	0.33	0.51	0.57	0.77
Larry	0.03	0.16	0.18	0.57	0.56	0.70
OK11D25056 <sup>1</sup>	0.02	0.18	0.44	0.76	0.99	<b>1.74</b>
OK12716	0.03	0.20	0.27	0.66	0.77	1.11
OK12DP22002-042	0.03	0.19	0.40	0.89	1.30	<b>1.56</b>
Ruby Lee	0.02	0.20	0.27	0.82	1.16	<b>2.02</b>
Stardust	0.02	0.34	0.53	1.01	1.13	<b>1.57</b>
SY Flint	0.03	0.30	0.46	0.96	1.12	1.48
SY Grit	0.02	0.22	0.48	1.06	<b>1.53</b>	-

SY Llano	0.01	0.38	0.60	1.39	<b>2.67</b>	-
Tatanka	0.03	0.18	0.35	0.50	0.51	0.95
Zenda	0.04	0.30	0.36	1.02	0.93	<b>1.90</b>

<sup>1</sup> OK11D25056 will be released as “Smith’s Gold”.

Between our previous measurement, taken March 9<sup>th</sup>, and our current measurement of March 14<sup>th</sup>, seven varieties reached first hollow stem (Figure 1), and all varieties are rapidly approaching this stage. Varieties that reached first hollow stem within the last few days include Everest, Iba, Ruby Lee, Smith’s Gold, Stardust, and Zenda. The varieties SY Llano, SY Grit, Gallagher, and 1863 had passed first hollow stem last week. Producers growing these varieties in south central Kansas should have already removed cattle by now, unless intending to graze out the crop (please see accompanying article on wheat grazeout decision [here](#)). Other varieties rapidly approaching first hollow stem are KanMark, KS061193K-2, OK12716, and SY Flint. First hollow stem at this location will be achieved within a few days for all of the varieties being evaluated. Thus, producers should keep a closely monitor first hollow stem in their wheat pastures at this time.



**Figure 1. Depiction of the first hollow stem stage or growth in wheat. Photo by Romulo Lollato, Extension wheat specialist with K-State.**

**How do these values compare to other growing seasons for Kansas?**

Unfortunately, we do not have a history of first hollow stem measurements in Kansas to which we can compare these averages. Our best benchmark is the 2015-16 growing season, which was the first year of these measurements in Hutchinson. During that season, which was also characterized by a mild winter and when we estimated the wheat to be approximately two weeks ahead of its normal growing cycle. During the 2016-17 growing season, all varieties evaluated reached first hollow stem

between March 5<sup>th</sup> and 9<sup>th</sup>. In the current season, only the very early varieties reached this threshold by the same date as last season. Thus, the wheat during the 2016-17 growing season seems to be slightly slower in development as compared to the previous year, but still ahead of what would be normal.

The intention of this report is to provide producers a weekly 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.

Romulo Lollato, Wheat and Forages Specialist  
[lolato@ksu.edu](mailto:lolato@ksu.edu)

Gary Cramer, Agronomist-in-Charge, South Central Experiment Field  
[gcramer@ksu.edu](mailto:gcramer@ksu.edu)

Cintia Sciarresi, Assistant Scientist  
[sciarresi@ksu.edu](mailto:sciarresi@ksu.edu)

Larissa Bonassi, Assistant Scientist  
[bonassi@ksu.edu](mailto:bonassi@ksu.edu)

Guilherme Bavia, Assistant Scientist  
[bavia@ksu.edu](mailto:bavia@ksu.edu)

Jessica Lavorenti, Assistant Scientist  
[laral@ksu.edu](mailto:laral@ksu.edu)