

Wheat Freeze Update
April 2014
Southern Rolling Plains
San Angelo, TX
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April 15, 2014 - Temperatures hovered around 30° F in the early morning and dropped to lows of 24 - 26° F for a couple of hours near 7 am. Damage is apparent 7 days later, April 22nd.



In some fields, not all tillers were affected



Damage varies by growth stage, elevation and location. Cropping practice and variety show very little difference.

Irrigated wheat near San Angelo, TX



Dryland wheat near Eola, TX





The crop was in the boot to just past flowering stages
All stages were affected

Damaged heads are “white”, can be slender, and do not have developing kernals. The head on the far left was frozen just before pollination. It has small white anthers. The head in the middle froze just after emergence from the boot.





The two heads on the left where frozen just before pollination. Notice the off color of the heads and the anthers. Contrast this to the bright yellow of the anthers on the right. Healthy immature anthers (not shown) may also be a bright green.

These kernals where frozen after pollination and during seed growth.



These heads were frozen during grain fill but not all kernels were killed. Notice the difference in size and color of surviving kernels. Dead ones are opened for viewing.



These barley heads were frozen during grain fill but not all kernels were killed. Notice the difference in size and color of surviving kernels. The variety on the right may have less cold tolerance as all are brown.



These kernals survived and will develop to grain



For More Information

- <https://wheatfreezeinjury.tamu.edu/>
- <http://varietytesting.tamu.edu/>
- <http://soilcrop.tamu.edu/>
- <http://publications.tamu.edu/>
- <http://agrilifebookstore.org>

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All photo by David Drake



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The logo for Texas A&M Agrilife Extension is displayed in a white rectangular box. It features the text "TEXAS A&M" in a small, dark serif font at the top. Below it, the word "AGRILIFE" is written in a large, bold, dark serif font, with the letter "A" being significantly larger than the others. At the bottom, the word "EXTENSION" is written in a bold, dark sans-serif font.