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 kernels. The head on the far left was frozen just before pollenation. It has small white anthers. The head in the middle froze just after emergence from the boot.
The two heads on the left were 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 were frozen after pollination and during seed growth.
These heads were frozen during grain fill but not all kernals were killed. Notice the difference in size and color of surviving kernals. Dead ones are opened for viewing.
These barley heads were frozen during grain fill but not all kernals were killed. Notice the difference in size and color of surviving kernals. 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