

NC Cooperative Extension - Perquimans County Center

March 24, 2022

Freeze Damage in Wheat



Unfortunately, the sub 25° F temperatures on March 13th have led to some freeze damage in wheat throughout the county. Any wheat lines that had already jointed are beginning to lose their cold tolerance and can no longer withstand extended periods of time below freezing without injury. Damage will typically show up around 7 days following the freeze event. Early maturing varieties such as USG 3118, SH 7200, AGS 2024, Progeny #Berkeley, AgriMAXX 492, AgriMAXX 502, and Dyna-Gro 9070 were at most risk however I saw damage in a Medium-Early Pioneer 26R59 as well.

Attached you will find a copy of the chapter: [Freeze Injury in Wheat](#) from the North Carolina Small Grain Production Guide, and the [Kansas State information for freezing temperatures on wheat](#). This will help in knowing what to look for when scouting wheat after a freeze event.

Also below are some pictures of damaged wheat that I have found this week. You will see pictures of damaged heads and stems. If heads are damaged, hopefully the heads that are present will make up for some of the yield loss and spring tillers will try to replace the lost heads as well. Spring tillers typically make up about 1/3 of the yield that would've been there with the damaged fall tillers. Stem damage will

result in increased lodging and plants will “fire up” quicker during grain fill if we have dry weather due to the plant’s inability to translocate nutrients and water.

The foliar damage that we’ve seen (yellowing, leaf tips) should not affect yield and with good growing conditions will grow out with time.

If you need assistance with evaluating potential free damage, contact Dylan Lilley at 252-426-5428.



(Damaged head)



(Damaged head)



(Damaged head on left thumb vs healthy on right thumb)



(Damaged stem)







(Freeze damage)



(Head that was not damaged – normally green or white)