

Impact Of Cool Temperatures On Wheat



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The cool temperatures we experienced this spring caused some wheat growers to delay herbicide applications in anticipation of better weather. Stress conditions such as cool temps tend to limit physiological process in plants; therefore, slowing the

response of weeds to the herbicide. The desired level of control may eventually be achieved; however, in some instances the slower activity may allow time for some weeds to recover. The slower activity caused by environmental stress, such as cool temperatures, may also limit wheat's ability to metabolize herbicides, thus resulting in injury.

The immediate forecast doesn't look favorable which prompts growers to ask "Do I spray or wait for better weather?"

The logical choice would be to wait for improved conditions if the size and number of weeds are small. However, if the size or number of weeds dictates to spray, consider an herbicide option that has the greatest margin of safety and is effective on the weeds that are present. Cool temperatures may have less of an impact on controlling weeds that are highly susceptible than those that are marginally susceptible.

• Harmony and Harmony Extra are examples of ALS-inhibitor herbicides that can injure wheat in cool wet soil conditions. Injury may also occur if wide fluctuations of day and nighttime temperatures occur prior to, or soon after, application. It is not clear to what extent, if any, the injury observed for Harmony and Harmony Extra impacts wheat yield. The labels of these

products recommend adding 2,4-D as a tank mix partner to limit the risk of injuring wheat from the ALS-inhibitor herbicides. It is important to recognize the safest time to use 2,4-D in wheat is when plants are fully tillered and prior to jointing.

• Some growers may be tempted to include Clarity, Banvel, or other products that contain dicamba as a tankmix partner with other herbicides to enhance control of certain broadleaf weeds. Avoid using dicamba once wheat begins to joint in order to limit the risk of injuring wheat.

• When controlling wild garlic with Harmony, Harmony Extra, or similar generic products, allow time for plants to develop 2 to 4 inches of actively growing tissue. The new growth emerges from the base of the plants and not from the old leaves that have tip burn from cold temperatures. Δ

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Figure 2. Field of wheat with snow on March 26, 2013