

Lodged Corn May Mean Problems In Wheat



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A significant amount of corn lodged as a result of the strong winds associated with Hurricane Ike. This lodging increases the risk that volunteer corn plants will eventually appear either this fall or next spring.

There is some debate whether volunteer corn is a threat to wheat. One viewpoint is that volunteer plants that emerge in the fall will eventually be killed from fall's freezing temperatures before they can impact wheat. Another opinion is that early-season competition from volunteer corn will impact growth and yield of wheat.

Limited research this past season showed 11 percent lower wheat yield if volunteer corn was not controlled in the fall prior to wheat planting. It is not clear if this trend in yield loss will hold true for every case, but it does show significant economic losses can occur from volunteer corn competition.

The germination pattern of volunteer corn may be uniform or sporadic depending on a number of factors including duration and pattern of rainfall following harvest. Volunteer corn at UKREC germinated uniformly last season due to the rainfall over a six-day period soon after corn harvest and a three-day period approximately two weeks later. The development of volunteer corn was fairly uniform and ranged from 6 to 8½ inches tall at the time of planting wheat in mid October. Sporadic germination patterns that are associated with irregular rainfall may make it difficult to determine the optimum time for controlling volunteer corn. It is possible that implementing control options well ahead of wheat planting will allow for escapes if seed germination is extended over a long period.

Options for managing volunteer corn include preplant tillage or foliar-applied herbicides. Tillage provides immediate results, but may increase the risk of soil erosion and more time relative to using burndown herbicides. While tillage will destroy emerged volunteer corn plants, it may stimulate germination of any remaining seeds that were incorporated in the soil during the tillage process.

Glyphosate controls volunteer corn providing plants do not originate from corn with the 'glyphosate-tolerant' or Roundup Ready trait.

The fact a significant number of corn acres in this region are planted to glyphosate-tolerant hybrids limits the opportunity to use glyphosate. Glyphosate usually requires 7 or more days to kill plants; consequently, it may not be the right choice if immediate control is needed.

Paraquat provides rapid control of vegetation; therefore, it may be preferred over glyphosate if speed of control is desired. Paraquat helps manage volunteers with GMO traits, including glyphosate-tolerant corn. Paraquat alone tends to be inconsistent in controlling corn that orig-



inates from seed that were planted or incorporated in soil. We have seen this when we try to kill corn for replant situations in the spring. However, limited research last fall showed at least 95 percent control for corn plants from seeds that were not incorporated into soil. Our current theory is that the growing points of volunteer corn plants originated from seed on or near the soil surface and were exposed to paraquat and other related stresses.

Finesse was evaluated last fall as an option for controlling volunteer corn. Volunteer corn is NOT listed on the Finesse label. Test results showed that Finesse provided up to 60 percent control of volunteer corn within 7 days after planting no-till wheat. Frost occurred before Finesse reached maximum activity; consequently we were unable to determine if the herbicide would have eventually killed the volunteer plants. Finesse is a premix of ALS inhibitor herbicides and is slow in its activity. The fact that Finesse has soil-residual activity is a potential advantage for controlling later emerging volunteer corn plants as well as Italian ryegrass. The label requires a minimum 6-month interval between application and planting STS soybeans. Δ

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