

**A LITTLE BIT COUNTRY
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Glyphosate Herbicides for Harvest

An unusual amount of growing season rainfall and relatively cool growing conditions so far point to another bountiful harvest. My recent travels around the county show delayed maturity of crops and very likely a later than normal harvest. I am sure many growers will consider some type of herbicide burn down in an effort to begin the harvest season as early as possible and avoid harvest that could possibly extend into late September and early October.

One of the more common herbicides used for this purpose is glyphosate. This is a systemic herbicide and takes from seven to ten days to effectively kill the growing parts of the crop, therefore the dry down process is not immediately visible.

Applying glyphosate too early can reduce yield, test weight and seed germination. Because germination can be affected when applied too early, glyphosate should not be used in fields that will be used for seed or on barley intended for malt.

The optimum time to apply glyphosate pre-harvest is when the crop has reached physiological maturity which for most varieties of wheat occurs at a grain moisture content of about 30 percent. For barley, a moisture content of 20 percent is recommended. At 30 percent moisture content the grain will be in the hard dough stage. If you run your thumb nail across the kernel, the indentation will remain. Not all kernels arrive at physiological maturity at the same time so be sure to sample multiple kernels to avoid spraying too early. Another visual indicator of physiological maturity is when the peduncle, the portion of the stem just below the spike, turns from green to yellow. However, drought or other stresses may mask color changes in the peduncle so it is

advisable to also check the hardness of the grain before spraying. Also, remember pre-harvest applications of glyphosate must be made at least seven days before harvest.

Although paraquat (Gramoxone) is labeled as a pre-harvest desiccant on peas, lentils and chickpeas, it is not labeled as a harvest aid in small grains. I have been told this is in response to the export market.

Herbicides such as 2,4-D, Banvel, and Ally can be used prior to harvest to burn down some broadleaf weeds that may have escaped early growing season weed control practices.

Not all 2,4-D formulations are labeled for pre-harvest applications reference to product labels is necessary. Some labels only allow use on wheat, others allow use on wheat and barley and others allow use on wheat, barley and rye. Ester formulations will give better control and quicker burn down than an amine formulation. Use at least two pints per acre of amine formulations for larger weeds but do not expect much effectiveness against such weeds as kochia, wild buckwheat or large pigweed. Weeds with large stems may not desiccate and may stay green. Banvel can be added to 2,4-D for added impact on these weeds. Ally can be incorporated with 2,4-D and Banvel but remember it has a long residual period and should be used only in a continuous wheat or wheat/fallow rotation.

Specific rates for each of these herbicides or combinations can be found in the 2010 North Dakota Weed Control Guide which can be found on our website www.ag.ndsu.edu/williamscountyextension.