



## The Use of Glyphosate in the Wheat Industry

### What is glyphosate?

Glyphosate is the active ingredient in many “non-selective” herbicide formulations, used to control weeds. Non-selective herbicides control most plants, while selective herbicides are designed to control specific types of plants. Farmers apply non-selective herbicides to control weeds before crop planting.

For more than 40 years, the EPA has determined, through risk assessments and science-based evaluations, glyphosate is non-carcinogenic to humans. Glyphosate-based herbicides have had a long history of safe use in the U.S. and other countries.

### How much wheat receives glyphosate?

Only about 30 percent of the wheat acres in the United States are applied with glyphosate, which has been consistent for the past 3 years. Farmers make most of these applications before the wheat crop emerges.

### How is glyphosate applied?

Applications made when wheat plants are present in the field occur near plant maturity, or “pre-harvest”. The use of pre-harvest applications has remained constant for the last 10 years, around 2 percent of total acres. These applications are made after the wheat plant has shut down, wheat kernel development is complete and the crop has matured.

Cessna et al. (1994) examined levels of glyphosate in harvested wheat treated with glyphosate at different rates and at different times near harvest as grain moisture levels declined. In all cases, glyphosate residue levels measured below residue thresholds set by the EPA, regardless of application rates or timing. These results are consistent with European data collected on glyphosate residues in cereal crops.

### Transition to No-Till

The United States Department of Agriculture (USDA) monitors and collects data on farm management practices in the United States. This data allows the USDA to accurately evaluate the safety of the nation’s food supply, assess risks and benefits, make decisions about product registrations, and quantify the benefits of conservation practices and market commodities internationally. USDA data shows the percentage of no-till wheat acres has increased from less than 5 percent to more than 20 percent of total acres in the northern and central Great Plains since 1989 (Hansen et al., 2012). An increase in no-till acres has been made possible by the increased use of pre-emergence glyphosate in order to manage harmful weeds. No-till farming is a way of growing crops from year to year without disturbing the soil through tillage. No-till is an agricultural technique which increases the amount of water that infiltrates into the soil, thereby reducing soil erosion.