



August 22, 2019

Pesticide Re-Evaluation Division
Office of Pesticide Programs
Environmental Protection Agency
1200 Pennsylvania Ave. NW.
Washington, DC 20460-0001

On behalf of Bayer, I submit the following comments regarding the U.S. Environmental Protection Agency's (EPA) Proposed Interim Decision for glyphosate [Docket ID No. EPA-HQ-OPP-2009-0361]. We appreciate the opportunity to voice our support for the continued registration of glyphosate.

For more than 40 years, farmers, governments, gardeners, and others have depended on glyphosate as an efficient and cost-effective tool that can be used safely to control problematic weeds. Since their introduction in 1974, glyphosate-based products have become the most commonly used herbicides in the world. This widespread adoption is based on three key factors:

- 1. Glyphosate effectively controls a broad spectrum of troublesome weeds**
- 2. Glyphosate offers significant economic and environmental benefits**
- 3. Glyphosate has a strong safety profile and a long history of safe use**

For these reasons, glyphosate was called a "once in a century herbicide" by Dr. Stephen Duke, Research Leader at the United States Department of Agriculture (USDA). Continued access to this important crop protection tool is essential. Indeed, in April 2019, U.S. Secretary of Agriculture Sonny Perdue stated that "If we are going to feed 10 billion people by 2050, we are going to need all the tools at our disposal, which includes the use of glyphosate."

GLYPHOSATE EFFECTIVELY CONTROLS A BROAD SPECTRUM OF TROUBLESOME WEEDS

Glyphosate's versatility has transformed weed control across a wide range of environments around the world. Glyphosate works by inhibiting an enzyme that is essential for plant growth. Without the enzyme, plants can't make the building blocks it needs to grow and the entire plant withers to the ground. Any remaining glyphosate in the environment binds tightly to soil and degrades over time into naturally occurring substances.

In the 1990's, glyphosate-tolerant crop varieties greatly simplified weed control for corn, cotton, and soybean farmers. In agricultural systems where glyphosate-tolerant crops are not available, glyphosate still provides significant benefits by simplifying weed management and reducing the need for tillage. For orchards and vineyards, glyphosate is an essential tool for controlling vegetation beneath trees or vines. In wheat, glyphosate has allowed farmers to adopt no-till practices that help them to conserve soil moisture, thus enabling rotation with more profitable crops. In sugarcane, glyphosate improves harvest quality in addition to controlling weeds.

Outside of agriculture, glyphosate provides effective weed control along highway, railroad, and utility right of ways. In recreational settings, glyphosate is a useful tool for maintenance of landscape function and aesthetics. Glyphosate is an indispensable option for land managers needing to control invasive

weeds and as an aid in restoring native habitats. As an aquatic herbicide, glyphosate provides a non-mechanical option for removing weeds that can impede recreation and navigation.

GLYPHOSATE OFFERS SIGNIFICANT ECONOMIC AND ENVIRONMENTAL BENEFITS

Glyphosate's unique ability to effectively control weeds provides economic and environmental benefits that extend from individual farms to global trade to national parks to golf courses to local governments to gardeners

Continued access to glyphosate is critical to maintain *economic sustainability* in agriculture. Today, glyphosate-tolerant crops form the backbone of many major U.S. row crop businesses, accounting for more than \$33 billion of annual exports. Glyphosate-tolerant crops have enabled farmers to increase their off-farm income because of the reduced labor requirements to grow crops. In non-agricultural settings, glyphosate provides cost-effective weed control along highways, railways, and other rights of way. In an economic analysis of highway median weed control, for example, glyphosate was 275% less expensive than alternative methods that included multiple mowing events and alternative herbicides.

Continued access to glyphosate is also critical to maintain *environmental sustainability* in agriculture. Namely, adoption of glyphosate-tolerant crops is associated with an increased likelihood of adopting conservation tillage, which offers numerous benefits: reduced soil erosion, improved soil and water quality, fewer tractor trips across the field (saving ~1,700 gallons of fuel on a 500-acre farm), and lower carbon dioxide emissions (removing ~4.6 million kg of carbon dioxide from the atmosphere in 2014)

Glyphosate also enables the adoption of cover crops by providing a simple and effective means to eliminate the cover crop just prior to planting a cash crop without raising concerns about plant back restrictions. Cover crops, such as rye, field peas, and clover are key components of a strategy to protect the soil health between rotations of cash crops

GLYPHOSATE HAS A STRONG SAFETY PROFILE AND A LONG HISTORY OF SAFE USE

Bayer agrees with the EPA's April 2019 announcement that "EPA continues to find that there are no risks to public health when glyphosate is used in accordance with its current label and that glyphosate is not a carcinogen. The agency's scientific findings on human health risk are consistent with the conclusions of science reviews by many other countries and other federal agencies."

Glyphosate has a 40-year history of safe use. In evaluations spanning four decades, the overwhelming conclusion of experts worldwide has been that glyphosate, when used per label directions, does not present an unreasonable risk of adverse effects to humans, wildlife or the environment.

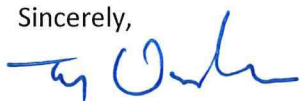
With seven complete regulatory data packages from multiple registrants, glyphosate safety is supported by one of the most extensive worldwide human health, crop residue and environmental databases ever compiled on a pesticide product. The consensus of this comprehensive set of toxicology studies have consistently demonstrated that glyphosate has low oral, dermal, and inhalation toxicity, and shows no evidence of genotoxicity, neurotoxicity, immunotoxicity, disrupting the endocrine system, reproductive or developmental toxicity, and it does not produce malformations.

The conclusions of leading regulators and agencies around the world, including the EPA, European Food Safety Authorities (EFSA), European Chemicals Agency (ECHA), German BfR, and Australian, Canadian, Korean, New Zealand and Japanese regulatory authorities, as well as the Joint FAO/WHO Meeting on

Pesticide Residues (JMPR), continue to support the safety of glyphosate-based products when used as directed and that glyphosate is not carcinogenic. Furthermore, in November 2017, the U.S. Agriculture Health Study, which is the largest study of the real-world use of pesticides and health risks, published new findings showing no connection between use of glyphosate-based herbicides and cancer.

As consumers ourselves, Bayer employees fully support the comprehensive and science-based processes used by the EPA to ensure glyphosate can be used safely. For the reasons outlined above, we strongly support the continued registration of glyphosate. Again, we appreciate the opportunity to voice our support for this one-of-a-kind crop protection tool.

Sincerely,



Ty Vaughn
Global Regulatory Lead
Bayer Company