Impacts of Glyphosate on soil, Crop, Animal, Human and Environmental Health Don M. Huber, Professor Emeritus, Purdue University

The advertised benefits of glyphosate-containing herbicides misrepresent both the safety and necessity of these products. It is well documented that many weeds are resistant to these chemicals and that crops have reduced root growth, lowered nutrient density, increased disease, greater stress susceptibility and the need for more pesticides than crops sprayed with other compounds. The abundance of **weeds resistant to glyphosate based herbicides** complicates our ability to control these pests and adds additional toxic pesticides that our children and pets are exposed to, and that are detrimental in the foods we eat every day.

Contrary to the common claim of safety, a large volume of peer-reviewed scientific information shows that herbicides containing the glyphosate herbicide are chronically toxic to human and animal tissues. They lead to cancer, premature death, kidney and liver failure, infertility, autism, allergies, inflammatory bowel diseases and blood disorders. There are NO peer-reviewed scientific studies showing that glyphosate is safe for human or animal consumption.

Medical data indicates that millions of children and adults are suffering from consuming the chronically toxic glyphosate (Roundup®) and other toxic chemicals that accumulate in soil and plants. Massachusetts Institute of Technology scientists have documented that glyphosate (Roundup®) is the most chronically toxic chemical in our food and environment.

As a patented powerful antibiotic, the herbicide glyphosate is toxic to beneficial microorganisms in the soil and GI tract of humans and animals that are essential for mineral absorption, vitamin production, immunity, tryptophan synthesis in autism, Parkinson's disease, and defense against pathogens such as *E. coli, Salmonella, Listeria*, and *Clostridium*. The increase of 'gut related' diseases are directly correlated with glyphosate residues in food, water and feed products. These include Alzheimer's, autism, birth defects, breast and numerous other cancers, celiac, chronic fatigue, diabetes, *C. difficile* diarrhea, end stage kidney failure, infertility, irritable bowel syndrome, leaky gut, Parkinson's, peritonitis, rheumatoid arthritis, and many others.

The indiscriminate use of one-half billion pounds of glyphosate a year in the U.S. is precipitating a major chronic health and environmental crisis in our children. In Argentina, drift from spraying glyphosate on GMO crops increased birth defects, reproductive failure and cancer in adjacent towns up to 450 %. Other studies show that as little as 0.1 part per billion Roundup® in drinking water increased infertility, breast cancer, kidney failure, liver failure, non-alcoholic fatty liver disease, endocrine hormone disruption and cytotoxicity to cells and tissues.

Much of this pesticide accumulates in food, feed and in the body. The EPA has already approved residue limits 4,000 times higher than previously permitted – all without any safety evaluation! The USDA, EPA, and FDA have NO independent testing on the accumulated pesticide's safety, and rely solely on statements of the companies that the high levels accumulating in soil, food and nature are safe. Scientific studies have consistently shown that they are **not safe**.

Glyphosate-based herbicides are a serious chronic health and safety threat to all humans and to our environment. Future historians may well look back upon our time and write, not about how many pounds of pesticides we did or did not apply, but about how willing we were to sacrifice our children and jeopardize future generations with this massive indiscriminate use of glyphosate, just to benefit the bottom line of a commercial enterprise.

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