

Cancer risk from glyphosate treatment

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At the beginning of last week, the International Agency for Research on Cancer of the World Health Organization published a report in which glyphosate, the world's most widely used herbicide, was classified as carcinogenic to humans and animals. The chemical is a primary ingredient in plant protection products from most of the leading companies in the agricultural sector and has been used for years to combat various weeds in agricultural crops.

The reason for focusing public attention on this herbicide is a one-year assessment by independent experts, free of conflicts of interest, who review all publicly available scientific literature related to the carcinogenicity of glyphosate and form a competent opinion on the use and harm of this specific chemical compound.

European Authorization

According to European legislation, the authorizations for plant protection products are reviewed and renewed every 10 years. The safety of glyphosate was due to be re-evaluated in the European Union back in 2012, but the review was postponed to 2015. The formal deadline of August 13, 2015, for a final decision was moved to the end of October, announced the European Food Safety Authority (EFSA) at its traditional meeting in the city of Parma at the beginning of the month.

What is Glyphosate?

Glyphosate (N-(phosphonomethyl)glycine) is a systemic, broad-spectrum herbicide that acts by blocking an enzyme responsible for creating proteins in plants. The use of glyphosate to kill weeds was patented by Monsanto in 1970, and the company's Roundup brand became the best-selling product.

Health Consequences

Glyphosate-based herbicides have varying levels of toxicity but can be fatal to humans, as claimed in the report. Even lower doses are toxic to human cells, including placental and embryonic cells. There is also evidence that it can disrupt the functions of the human endocrine system, causing irreversible effects at certain life stages, for example, during pregnancy. Part of the glyphosate that enters the human body can degrade into an acid – aminomethylphosphonic acid (AMPA). AMPA has been found to be even more toxic to humans and animals than the dangerous herbicide. One percent of the glyphosate remains in the body one week after exposure. Glyphosate and AMPA have been shown to be "genotoxic" - they interfere with cells' ability to accurately copy DNA and reproduce, leading to potential genetic mutations and an increased risk of cancer.