Since the 1960s uproar over the dangers of widespread agriculture use of the weed killer, DDT, no other herbicide or agriculture chemical has stirred as much widespread opposition as glyphosate. Glyphosate is the main and only publicly disclosed ingredient in the world-leading herbicide, Roundup from Monsanto/Bayer. With fierce opposition from many EU member states, in 2018 owing to a sly maneuver by the former German Minister of Agriculture, the EU Commission ruled to continue allowing the controversial pesticide. Now recent tests have added to the body of evidence that glyphosate is carcinogenic and should be banned immediately.

On February 10, 2019 the scientific journal Mutation Research published the results of a major new study on the possible cancer-causing effects of glyphosate-based herbicides (GBH). The authors noted, “We investigated whether there was an association between high cumulative exposures to GBHs and increased risk of non-Hodgkin lymphoma (NHL) in humans. We conducted a new meta-analysis that included the most recent update of the Agricultural Health Study (AHS) cohort published in 2018 along with five case-control studies. Using the highest exposure groups when available in each study, we report the overall meta-relative risk (meta-RR) of NHL in GBH-exposed individuals was increased by 41%...” The study authors concluded that there was a “compelling link between exposures to GBHs and increased risk for NHL.”
A 41% greater risk of lymphoma is significant.

Rachel Shaffer, a co-author of the study at the University of Washington, stated of the results, “This research provides the most up-to-date analysis of glyphosate and its link with Non-Hodgkin Lymphoma, incorporating a 2018 study of more than 54,000 people who work as licensed pesticide applicators.”

The University of Washington study supports the 2015 conclusion of the WHO International Agency for Research on Cancer, which classified glyphosate as a ‘probable human carcinogen.’ The GMO and related agrichemical industry has done everything imaginable to counter the impact of the independent IARC report.

Roundup today is the world’s most widely used herbicide. Since commercialization of GMO crops in the USA after 1996, the amount of Roundup-bearing glyphosate has dramatically increased worldwide. In the United States alone, usage increased nearly sixteen-fold between 1992 and 2009. What is not often understood, the patented GMO crops are modified to resist the toxic Roundup, nothing else.

In addition to killing weeds on GMO soybeans or corn, Roundup or other GBHs are sprayed again on crops just before harvest to accelerate their dessication, giving the crops a far higher glyphosate residue. Given that at least in the USA GMO crops have permeated the entire food chain, exposure to glyphosate and related toxins has spread as well.

**EU Stalls on glyphosate ban**

Despite decisions by numerous EU member states against use of glyphosate following the 2015 IACR finding, and millions of citizen petitions to the Brussels EU Commission calling to not renew the license for glyphosate, the powerful agrichemical lobby to date is dominant.

The EU has just published results of a 2-year study of effects of GMO corn on rats. It is a response to an earlier shocking study, the first ever over the 2 year normal rat lifetime, of effects of Monsanto GMO corn and of the associated glyphosate-bearing Roundup weed killer. The 2014 Seralini study found very significant chronic kidney deficiencies in the GMO-fed rats as well as cancer tumors and early death among other alarming results. Monsanto and the agrichemical industry launched a de facto war to discredit the damning Seralini study. One result is the of that effort is the EU-funded 2-year study known as G-TwYST that has just been released.

The EU study of the effects feeding rats Mon NK603+Roundup, is misleadingly titled: “Lack of adverse effects in subchronic and chronic toxicity/carcinogenicity studies on the glyphosate-resistant genetically modified maize NK603 in Wistar Han RCC rats.” That makes it sound like they found no problems, unlike Seralini’s group. However, when we take the trouble to actually read the study, buried deep in the text is the following:

“...the mortality rate of the male rats fed the 33% NK603 + Roundup diet was significantly higher than that of the corresponding control group. The most common cause of premature death in both groups was a pituitary pars anterior adenoma, 12 in the control group and 17 in the group fed the 33% NK603 diet. The next most common cause of premature death was a kidney chronic progressive nephropathy, 1 in the control group and 3 in the group fed the 33% NK603 + Roundup diet.”

The EU study ignored this in the conclusion and concluded that no long-term animal studies for risk assessment of GMO plants was needed.

**Fat rats...**

In order to get their benign result, the EU study authors had to explain away the increased mortality in male rats fed Monsanto NK603 GMO corn with Roundup related to pituitary tumors. To do so they claimed that the GMO-Glyphosate fed rats ate more, leading to a "strong increase" in body weight between the 12th and 24th month of the feeding trial, compared with the non-GMO-fed control group.

Significantly they did not ask why GMO+Roundup fed rats were significantly fatter than non-GMO+Roundup fed rats. That could shed light on the causes of the epidemic obesity in USA and EU populations over the past 20 years as glyphosate use has soared. The EU scientists conveniently ignored both increased deaths in the males fed NK603 maize + Roundup, or the increase in body weight in the same animals. GMWatch asks the relevant question: “This misrepresentation of the study findings raises the question of why scientists funded with EU taxpayers’ money would apparently downplay such results, misleading the public and the scientific community.”

In August 2018 a California jury ruled in favor of a school groundskeeper exposed to significant Roundup over years...
who contracted non-Hodgkin lymphoma that he claimed was due to Roundup exposure. The court ordered Monsanto to pay $289 million to Dewayne Johnson. Since then Monsanto has become target of thousands of similar lawsuits and the stock price of parent, Bayer AG, has declined significantly on a negative outlook.

It’s time to ask for more than transparency in government studies of effects of the agrichemicals. The accepted precautionary principle requires government agencies to protect the general health and safety when there is any doubt. That pervasive human and food-chain exposure to glyphosate is associated with higher cancer, obesity, organ damage and other risks is clearly indicated. The prudent response would be calling for total ban unless and until effects are fully and independently determined.

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