

Bad weeds grow tall

The controversy over the pesticide glyphosate has been raging for a number of years. A conversation about studies, carcinogenic substances and the Monsanto company.

Following this interview, EFSA has decided to publish a statement following the internal investigation related to concerns expressed by some stakeholders in relation to the Monsanto paper and influence from industry and observers. This EFSA statement on Glyphosate and Monsanto papers is available at the EFSA web (EFSA, 2017):

<https://www.efsa.europa.eu/sites/default/files/170523-efsa-statement-glyphosate.pdf>

INTERVIEW: JAN HEIDTMANN

Munich – Some people say glyphosate is a blessing, others call it the work of the devil. It's clear that weed killers make farmers' work much easier. It's also clear that weed killers may contribute to the extinction of species and thus destroy the natural habitats of birds and field hamsters. There is above all controversy over the effects of glyphosate on humans. IARC, the cancer research agency of the World Health Organisation, says that it can cause cancer. Other international institutions like the EU's European Food Safety Authority (EFSA) consider the substance to be non-hazardous. In Germany, the Federal Institute for Risk Assessment (BfR) is responsible for the assessment of glyphosate. The BfR considers its use to be risk-free. Roland Solecki is head of the department "Pesticide Safety", which carried out the evaluation.

SZ: Would you drink glyphosate?

Roland Solecki: I generally don't drink any pesticidal active substances.

But millions of people do. Every pint of beer they drink contains glyphosate, for example.

It's true, you can find traces of glyphosate in all kinds of foods. The question is, in what quantity. To stick with the example of beer, you would have to drink about one thousand litres of beer in one sitting to reach a level of glyphosate that could be harmful. But you would have died of alcohol poisoning long before.

Glyphosate was used for the first time 40 years ago by the US company Monsanto and has been on the market ever since. So why is it still not possible to say with certainty whether or not it can cause cancer in humans?

We are of the opinion that this can be scientifically stated: there is no risk of cancer in humans when the substance is used properly in agriculture. This is also the opinion of the authorities in the USA, Canada, Australia, Japan and New Zealand.

Nevertheless, there are major disagreements on whether this substance should continue to be approved in Europe.

We have regularly assessed glyphosate since it's been on the market. This is required in order to take account of the most current state of science and technology. The rotation is approximately every ten years. Our findings have been widely accepted to date.

So why this intense dispute for the last two years?

This can have many reasons. At that time, reports also reached Europe about the use of glyphosate in South America. There it was widely used under, in my opinion, very difficult circumstances. For example, active pesticide substances that were banned in Europe were sprayed alongside glyphosate from airplanes. There was also said to be a connection to deformities due to this massive use, although the causes have not yet been verified. At the same time, the methods for the analysis of food here in Europe have become increasingly efficient, and we are now able to detect extremely small amounts of glyphosate that would previously not have been found.

Whether glyphosate can cause cancer is also quite vehemently disputed among highly regarded scientists. Unlike the BfR, IARC considers glyphosate to be "probably carcinogenic". IARC is, after all, the cancer research agency of the World Health Organisation.

I greatly respect my colleagues at IARC. But more than ten equally highly respected international institutions, the competent body of the World Health Organisation and the Food and Agriculture Organisation of the UN came to the conclusion that, if used appropriately, glyphosate does not cause cancer. And one group has said it is possibly carcinogenic.

Chemistry is seen as a clear-cut science – so what is the reason for the differing assessment?

I've been a scientist for 40 years, and there are always different opinions. This can depend on the stated objective of an assessment process. The task of IARC is to investigate all manner of substances, from red meat to hair colourant, to determine whether they can cause cancer. In the case of glyphosate, IARC only used some of the available studies on this herbicide. The colleagues at IARC carried out a thorough assessment of the data they examined, but this data only represented a section of the existing knowledge on glyphosate.

The IARC study would therefore be worthless. Is this the case?

One effect of the IARC study was that we analysed it in depth and once more critically reviewed our own assessment, as is standard practice in the scientific field. What it also did was to initiate a debate on whether study findings of the industry should also be made accessible to the general public, which we strongly support, provided that the necessary legal requirements are in place.

There is currently also criticism of certain studies that support the continued approval of glyphosate. It is said that the US-company Monsanto influenced authorities and scientists, and that it wrote some studies itself. Do you have any contact with Monsanto?

Yes, I had three e-mail inquiries from Monsanto. They wanted to know to whom they should send additional data. I referred them to the Federal Office of Consumer Protection where the data belong. We had to disclose every single e-mail contact with the company. Incidentally, we did not use any of the studies that were criticised following our assessment and that supposedly favoured the continued approval of glyphosate.

Perhaps not directly. But these studies have been incorporated in the evaluation processes of the European Food Safety Authority (EFSA) and have therefore resulted in the positive assessment of glyphosate.

I can only speak for the BfR. We look at the studies¹ we receive to determine their scientific validity. If they do not satisfy the scientific criteria, we do not use them. By the way, the validity of the few studies that are currently being discussed is low. The assessments of EFSA and the member states are chiefly based on the original studies and the underlying raw data². There are currently no robust indications that scientific opinions funded directly or indirectly by the industry might have influenced the EU risk assessment of glyphosate or even resulted in a positive assessment for glyphosate.

But the lack of trust stems precisely from the fact that the companies commission and supervise the studies themselves, and that you and the European institutions then use these studies as the basis for your assessment.

Yes, it really is the case that legislators in the USA, in Europe and in Germany have stipulated that anyone who wants to bring a car onto the market must provide proof of its safety. By the same token, someone who wants to market a drug also has to prove that it is safe. And if someone wants to bring a herbicide like glyphosate onto the market, then they also have to submit proof of safety. As I said before, the results are then very closely reviewed³. This stipulation also has to do with costs, since some of these studies can cost millions. I would like to hear what people would say if the taxpayer were to pay for the studies performed by private companies.

¹ EFSA, 2017: mandatory guideline studies and on studies published in the open literature, as is the case for all pesticide active substances

² EFSA, 2017: Mandatory guideline studies are paid for by industry and conducted by laboratories certified and audited under 'Good Laboratory Practice' (GLP) standards, an OECD protocol designed to ensure consistency and integrity in chemical safety tests.

³ EFSA, 2017: The findings of each mandatory guideline study for glyphosate were presented in a detailed study report, which allowed EU experts to check the reliability and quality of the results and decide for themselves which aspects to use in the risk assessment. The integrity of the findings and raw data was guaranteed by the fact that the laboratories carrying out the tests were certified and audited under the GLP system.

Nevertheless, the procedure appears very one-sided: the institutions that support the use of glyphosate all base their opinion on studies provided by the companies – while independent sources like IARC are declared to be irrelevant.

These studies are reviewed according to clearly defined official regulations. This process involves hundreds of scientists working in bodies that are independent of one another. These are not people who are all on the payroll of industry. They are highly qualified experts who have a reputation to lose. I am not aware of any institutions that have spoken out in favour of glyphosate in any shape or form; what they have done is to conduct a scientific assessment. All these assessments are based on studies provided by the companies as well as on comprehensive research of the literature. We didn't characterise IARC as irrelevant: the IARC assessment is also based on studies financed by the industry. Unlike the BfR, however, IARC did not have direct access to the original studies but only indirectly via publications.

Wouldn't it be better if official institutions commissioned and monitored the studies and the companies had to pay for it?

There has been intense political debate on this subject for a number of years, but it is the legislator who makes the rules for the evaluation of active substances. This is something we have no influence over. For me as a scientist and assessor, the only thing that counts is the scientific quality of the underlying studies and data and not the source of the information.

That may be valid in scientific terms. But can you understand that people are concerned as a result of the debate over glyphosate?

This is something I can certainly understand. All I can say is that we do everything we can from a scientific point of view to protect people. Active substances in plant protection products are tested more thoroughly than almost any other chemical product. Household chemicals are not tested as thoroughly, not even cosmetics – although people use the latter on their skin every day.



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Biologist Roland Solecki has been Head of the Department "Pesticides Safety" at the Federal Institute for Risk Assessment for three years now. He says the department does everything it can from a scientific point of view to protect human health.