

“Our food has definitely become safer”

Dr. Roland Solecki worked at the BfR and its predecessor institutes for 30 years, testing and carrying out health risk assessments on active ingredients in plant protection products. In this interview, he takes stock – and looks ahead.

Mr. Solecki, after all these years – is it hard for you to hear the G-word?

You are alluding to glyphosate, the active ingredient in plant protection products, which was, and still is, the subject of much controversy, in which we were also involved. However, I can assure you that the G-word has played only a minor role in my entire 30-year career at the Institute. It cannot permanently spoil the fun that I have experienced in my work. I have tried to contribute to making pesticides safe to use and food safer.

Has the debate on glyphosate changed the risk assessment of pesticides?

It had the positive effect to the extent that risk assessment was critically reviewed and further improved. Within this course, the assessment processes have been made even more transparent for the public.

Is there actually a biological alternative to glyphosate?

Definitely, it is one I became familiar with at the age of twelve: picking up a hoe, walking along the rows of turnips and pulling out the weeds. I don't know whether this has a future considering the enormous demand for food. And when I drive a tractor across the field and mechanically remove the weeds or wild herbs, I have a similar effect on biodiversity as using glyphosate, as studies have shown.

What future prospects do you see?

I am confident that we will be able to reduce the use of chemicals in the future using modern technology. My grandson sat on a tractor at Green Week, which shows the driver where there are lots of weeds in the field and where there are fewer. In this way, satellite technology and GPS can be used to spray more or less in a targeted manner and in doing so, plant protection products

can be used more sparingly. I think integrated plant protection is a good compromise – it protects nature, and the use of “chemicals” can be reduced. But they are used when it is justifiable and necessary.

Organic farming also uses pesticides, but these are not supposed to be “chemical or synthetic”. What is the health risk assessment on this?

Organic farming must also ward off pests. For this purpose, a significantly smaller number of active ingredients are approved in integrated plant protection. These are also associated with residues, but normally in significantly smaller quantities. However, it is a misconception that active ingredients from nature are, generally, non-toxic. Furthermore, substances from nature can often only be acquired with the help of chemicals or they are “chemically and synthetically” recreated. It is also possible that natural substances, such as copper, which is used against fungal infestations, are already abundant in our food due to their prevalence in other food and, therefore, there are high levels of natural exposure. Thus, these substances must also be examined for health risks with the same methodology and care.

During your time at the BfR and its predecessor institutes, how has the work of the health assessment authorities for authorising plant protection products changed?

In the beginning, there was an individual assessment by national authorities worldwide, who were unfamiliar with one another. Today, we have come to a common international understanding of risk assessment. The level of assessment is better and the scope has increased. We now also take into account the exposure of local residents, and we have better methods – from detecting pesticide residues to testing toxicity and determining how much is actually ingested.



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Positive perspective: Roland Solecki points out that plant protection products have become safer. Nevertheless, there is still a lot to be done.

What does this mean for consumer protection; has it made the use of pesticides safer?

Our food has definitely become safer with regard to pesticide residues. When I started in 1990, we had more than 1,000 different active ingredients on the European market. These were reduced to about 300 by the introduction of the European approval procedure and a few new, better and less dangerous alternatives also came along. We have also taken a huge step forward in biocides outside of agriculture. I am thinking, for example, of wood protection products, about which we knew very little at the beginning of the 1990s. Biocides are now subject to a standardised assessment throughout Europe and are, therefore, also safer for the consumer.

What do you think are the most important “construction sites” in the health risk assessment of plant protection products? What needs to be addressed now?

We should do even more to ensure that animal experiments are reduced more consistently. Alternative testing methods that can detect health risks with the same

certainty are required. And we need more specific measurements as far as humans are concerned: how many pesticides do they ingest? How do these behave in the body? We also need a better basis of data. In addition to methods that do not involve laboratory animals, computer programs that are capable of learning can be particularly helpful here, which can evaluate our studies and help us to determine a substance’s hazard potential. I see the innovative development of these alternative testing strategies as one of the most important missions of the BfR in the future. And last but not least: the international division of labour and cooperation between authorities should be further intensified because we now get our food from all over the world. ■