Risks of genetically engineered plants: A wake-up call

Results of an international research project to be presented in Berlin

16 January 2020 / The results of an international research project will be presented today in Berlin. The RAGES project (Risk Assessment of genetically engineered organisms in the EU and Switzerland) started in 2016; it investigated in detail the approval processes for genetically engineered plants. The project is completely independent of the interests of the biotechnology industry. Results from the RAGES project show that risk assessors in the EU and Switzerland have failed, and are still failing, to deal with the risks to public health and the environment. The approval process does not take into account all relevant risks but, instead, confines its focus to those risks that can most easily be assessed.

Consequently, current standards of risk assessment are not sufficient to fulfill legal requirements to determine the safety of genetically engineered organisms by applying the "*highest possible standard*" to "*any risks which they present*".

"In short, current risk assessment practice has been set up to fail. Instead of giving sufficient weight to the protection of health and the environment, it gives priority to the interests of industry, which is primarily interested in the global marketing of its patented seeds and harvested products. Political decision-makers have failed to define robust standards for the approval process and failed to require risk research that is performed independently of industry," Angelika Hilbeck summarises the results for ENSSER (European Network of Scientists for Social and Environmental Responsibility).

ENSSER, its Swiss branch CSS (Critical Scientists Switzerland), GeneWatch UK and Testbiotech all contributed to the consortium of the project, which was funded by the Mercator Foundation Switzerland.

In six reports published today, RAGES shows that the European Food Safety Authority (EFSA) has, for example, ignored the fact that the insecticidal toxins produced in genetically engineered plants can be much more toxic and can affect more species than previously thought. Furthermore, for many years, EFSA has only accepted and relied on data from field trials with genetically engineered plants not treated with high and repeated doses of glyphosate, which is current practice in many countries where GM crops are cultivated. Consequently, the approval process has been completely inadequate to deal realistically with the risks posed by consuming products derived from these plants. Furthermore, several potential health impacts on the immune system, and especially potential combinatorial effects, are being discounted and ignored.

"Despite the numerous gaps and failings in current risk assessment being well-known, so far there is little interest in critical evaluation and open-minded scientific debate. Instead we are seeing an increasing number of populist and unfounded statements, including from scientists with close affiliations to industry. For example, there is an implicit 'consensus' in the media that genetically engineered organisms should be considered safe, despite existing evidence to the contrary and many open questions," Christoph Then states for Testbiotech.

The problems revealed by RAGES also include new methods of genetic engineering, such as genome editing' (e.g. utilising CRISPR/Cas). RAGES demonstrates that genome-edited plants and animals require an expanded risk assessment as these techniques can produce new biological characteristics and unintended effects that can impact the environment and food safety.

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Further information:
Overview: the RAGES project
www.testbiotech.org/en/content/overview-rages-project

The reports published by RAGES
www.testbiotech.org/en/content/research-project-rages