Feeding study with genetically engineered maize NK603 does not provide evidence of adverse effects on the health of rats

But the debate continues on how to assess health risks associated with GMOs

17 April 2018 / An EU-funded research project known as G-TwYST conducted a two-year feeding trial with rats using genetically engineered maize resistant to glyphosate (NK603). According to the results which are not yet finally published, the diet fed to the rats did not trigger any clear signs of health effects. The study followed internationally agreed standards. However, it is not fully comparable with a previous rat feeding study using the same maize line: the G-TwYST study used a different rat strain and was designed differently to the original study. In the previous study, the outcome was interpreted as triggering severe health effects in the rats.

In general, this study does not allow any conclusions to be drawn on the safety of food derived from genetically engineered plants; and open questions remain in the specific case of NK03. One of them concerns the specific batch of genetically engineered maize used in the G-TwYST study. Under practical growing conditions, maize is sprayed more frequently and with higher dosages than was the case in this study. This can lead to higher amounts of residues in the harvest and also changes in plant constituents. But the maize as used in the trials showed very low levels of residues from spraying with glyphosate. There is also one very surprising result: The animals in one of the groups fed with the genetically engineered maize showed a significantly higher body weight.

In the EU, around 60 different lines of genetically engineered plants are already allowed for import and use in food and feed; many of them were never tested in short- or long-term feeding studies to investigate health risks. Most of these plants are resistant to not just one herbicide, but have been engineered to be resistant to several herbicides and, in addition, express insecticidal toxins. Many experts have also raised doubts about whether the feeding studies as performed are sensitive enough to examine the risks. Currently, there is no generally accepted method to assess the factual health risks for humans.

Consequently, this feeding trial is of rather limited value when it comes to the overall risks of introducing genetically engineered plants into the food chain.

Further information: See more background [1]

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