What are the true risks of the genetically engineered maize SmartStax?

Two recent publications show that risks to health have been underestimated

Munich, 13.6.2013 Two publications shedding light on the risk assessment of the genetically engineered maize SmartStax came out this week. Scientists in Australia fed a mixture of genetically engineered maize to pigs and found it had significant effects on their health. The feed used in the Australian trial had a similar mixture of residues from spraying with herbicides and insecticidal toxins as SmartStax. It is currently not known if SmartStax could have similar effects. There has, in fact, been no feeding study to investigate effects on health carried out with this maize, which produces a mixture of six insecticidal toxins and was made resistant against two herbicides.

A print version of a scientific publication was made available reporting on unintended effects on human cells caused by insecticidal toxins similar to those produced by the genetically engineered maize SmartStax. The effects were observed at a relatively high concentration. According to data from industry, the content of the insecticidal toxins produced by SmartStax is highly variable and can add up to quite high levels. The data presented on SmartStax so far suffer from flawed methodology, therefore making it impossible to know the true concentration of toxins. The research showing the impact on human cells was supported by Testbiotech, and was published online for the first time in 2012. It was not taken into account in the risk assessment of SmartStax.

The EU authorisation of the genetically engineered maize SmartStax for food and feed was discussed in Brussels on Monday without a conclusive result. Testbiotech is of the opinion that the new publications make it necessary to stop the process of authorisation.

Currently there are only very few researchers who are prepared to critically investigate the risks of genetically engineered plants. There is hardly any financial support for their research. Some of them are under increasing pressure to stop their work altogether. That is why Testbiotech is supporting a petition forwarded to the German Parliament, to support independent risk research.

Publications as cited:

Carman J.A., Vlieger, H.R., Ver Steeg, L.J., Sneller, V.E., Robinson, G.W., Clinch-Jones C.A., Haynes J.I., Edwards J.W. (2013). A long-term toxicology study on pigs fed a combined genetically modified (GM) soy and GM maize diet. Journal of Organic Systems 8 (1): 38-54. Open access full text: http://www.organic-systems.org/journal/81/8106.pdf [1]

Mesnage R., Clair E., Gress S., Then C., Székács A., Séralini G.-E., (2013), Cytotoxicity on human cells of Cry1Ab and Cry1Ac Bt insecticidal toxins alone or with a glyphosate-based herbicide, J. Appl. Toxicol.; 33: 695–699, abstract: http://onlinelibrary.wiley.com/doi/10.1002/jat.2712/abstract [2]

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Further information: Report on flaws in the risk assessment of SmartStax [4]

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[1] http://www.organic-systems.org/journal/81/8106.pdf [2] http://onlinelibrary.wiley.com/doi/10.1002/jat.2712/abstract [3] mailto:info@testbiotech.org [4] http://www.testbiotech.de/en/node/515