

Rise and shine: the GM wake-up call

News that a variety of GM corn produced signs of liver and kidney toxicity in rats should be a wake-up call for better testing and more transparency from biotechs, if GMOs are to be accepted by increasingly sceptical consumers.

3/19/2007

Last week, amid much media fanfare in France and media silence elsewhere, French researchers from CRIIGEN (Committee for Independent Research and Genetic Engineering) based at the University of Caen reported their findings from a 90-day rat study that indicated liver and kidney toxicity in the rats, as well as differences in weight gain between the sexes as a result of eating the transgenic maize, MON863.

MON863 is a transgenic maize genetically modified to express the Bt-toxin (Cry3Bb1) which enables the plant to be insect repellent against the corn rootworm pest. It is different from other GM corns of the market since these express the Cry1Ab toxin which is toxic to the European corn borer.

The research was supported by Greenpeace Germany and published in the peer-review journal Archives of Environmental Contamination and Toxicology.

The scientists also questioned the methods used by Monsanto to initially show the safety and non-toxicity of the corn, saying that the statistical methods used were insufficient to observe any possible disruptions in biochemistry.

And what is Monsanto doing to redress the balance and build confidence? Well, it has remained relatively tight-lipped and has not responded directly to the statements by the French researchers about possible shortcomings in their initial methodology, and suggestions of incomplete data collection. Instead it has stuck to the line "that the overwhelming opinion of expert authorities is that MON863 is safe for human and animal consumption."

But the opinion of these expert authorities was based on data provided by Monsanto, and led to approvals for the maize for animal and human consumption in, to name but a few, Australia, Canada, China, the EU, Japan, Mexico, New Zealand, the Philippines and the USA.

And according to the French researchers, this data does not stand up to rigorous scrutiny, with doubts raised over the statistical protocols used, questions over why no sufficient analysis of animal weight was performed, and why "crucial" data from urine tests were allegedly concealed in Monsanto's own publications.

Does this mean we should now condemn all GM foods and require that all authorised GMOs undergo a reanalysis of their safety, like Greenpeace and other environmental groups want?

I would hope not. What it should do is spur the biotech companies to be more rigorous in the studies and ensure that their data stands up to scrutiny.

Food authorities should also demand more complete data from biotech companies before approving any crop. It's all a question of transparency.

In the past I have taken a "let's wait and see" approach to GMOs, refusing to pitch my tent in either camp until I had seen more science, but this latest study has raised some serious doubts. Not about GMOs in general, but about GMOs engineered to contain these Bt-toxins.

The European Food Safety Authority (EFSA) has revealed that it will review the new data at the end of this week, and also revealed that this was not the first time that such concerns have been raised about this variety of corn.

Campaigners in New Zealand have demanded a removal of the corn from the market and a re-analysis of how such crops are approved.

If such reviews lead to banning of MON863, expect increased pressure to re-evaluate other crops, expect decreased consumer confidence, and expect an increase in anti-GM protests.

Monsanto needs to address these concerns, prove to us all that its methodology is sound for this and other varieties, if it is to win the hearts and minds of consumers.

If not, the benefits that GMOs promise - increased yields, better pest resistance, increased nutritional contents, ability to grow in unproductive soils and all the rest - will be irreparably damaged

A wide-sweeping knee-jerk reaction is not what is needed, but in an area with such polarised opinions, will we get the perspective needed?

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