Frequently asked questions about food and feed derived from genetically modified organisms (GMOs)

Updated BfR FAQ, 20 May 2012

The placing on the market of genetically modified organisms (GMOs) for food and feed use is governed by Regulation (EC) No. 1829/2003 on genetically modified food and feed which came into force on 18 April 2004 and is binding on all EU member states. This regulation requires a centralised testing and approval procedure. The European Food Safety Agency (EFSA) is responsible for safety assessment. The competent authorities of the EU member states can contribute to the safety assessment by providing EFSA with their comments. Taking into account the opinion of EFSA, the European Commission prepares a draft decision; for it to be approved it requires a qualified majority of the Member States.

Approval can only be granted if the safety assessment has shown that the genetically modified food and feed do not have any negative effects on the health of humans, animals and the environment and that consumers are not mislead. In addition, the products must not differ from comparable products, which they are supposed to replace, in such a way that their normal consumption results in nutritional deficiencies for humans or animals.

Who is responsible for safety assessment in Germany?

In accordance with Paragraph 1 Section 1, No. 4 of the Law on the “Implementation of Regulations of the European Community in the Area of Genetic Engineering and Modification of Novel Food and Feed”, the Federal Office of Consumer Protection and Food Safety (BVL) is the competent German authority for transmitting national commentaries on safety assessment to the EFSA. The commentaries are drawn up in consultation with the Federal Agency for Nature Conservation (BfN) and the Robert Koch Institute (RKI). In addition, the BVL procures opinions from the BfR and the Julius Kühn Institue (JKI).

Does the process ensure consumer safety?

In order to meet the approval criteria, the applicants must prove that the food and feed produced from genetically modified organisms (GMOs) are as safe as comparable conventional products. For this purpose, studies on the characterisation of genetic modification and the resulting new proteins must be conducted to see if those new proteins have any allergenic or toxic potential. In addition, comparative analyses of the nutrients and anti-nutritional, toxic or allergenic ingredients of the GMO and the conventional parental organism are required. In that way, it is possible to establish whether the genetic modification has triggered any unwanted changes. If differences are found, it must be decided, in dependence of their nature and significance, what further studies are necessary to prove that the products are safe from a health point of view.

If new results are available which suggest that a lawfully marketed genetically modified food or feed poses a serious risk for the health of humans or animals or for the environment, the trade with this product can be suspended indefinitely or special conditions may be imposed. A Committee appointed by the European Commission will assess whether the available results require an extension, change or discontinuation of the implemented measures.

Are retailers legally required to identify food and feed from genetically modified organisms as such?

According to Regulation (EC) No. 1829/2003, all food and feed produced from genetically modified organisms (GMOs) must be identified with the label “genetically modified” or “made

from genetically modified ... (e.g. corn)". This applies irrespective of the verifiability of the genetic modification. Only products which by accident or for technological reasons contain unavoidable traces of up to 0.9 % GMO material are exempt from the labelling obligation. This exception does not apply to food with traces of genetically modified organisms which are not permitted within the EU.

Foods such as fish, eggs, and milk which are derived from animals that were given feed made from genetically modified organisms are not subject to the labelling obligation.

How is labelling and traceability controlled and who is in charge of it?
According to Regulation (EC) No. 1830/2003 on Traceability and Labelling, procedures on sampling and detection of genetic modification in food and feed as well as reference material on the evaluation of the detection procedure must be submitted together with the approval application.

Testing and validation of the method, suggested by the applicant, for detecting and identifying genetic modification is incumbent upon the *Joint Research Centre* of the Commission which is supported by a *European Network of GMO Laboratories*. The BfR whose employees have been involved with the development of detection methods for genetically modified food since 1995 is one of the founding members of this network.

Task forces of the German and European institutes for standardisation, DIN and CEN, as well as the International Standards Organisation (ISO) are concerned with the standardisation of methods for the detection and quantification of genetic modification in food. They are headed and or supported by employees of the BfR.

In coordination with the Federal Office of Consumer Protection and Food Safety (BVL), the inspection authorities responsible for food control draw up investigation plans which take into account both the selection of goods being sold in the marked and the production sites. According to these plans, the food safety authorities of the federal states take random samples to check compliance with the labelling regulations and / or to prevent the distribution of prohibited food and feed produced from genetically modified organisms.

With these plans, the basis was created within the European Union for controlling compliance with the labelling regulations and for the observation of environmental effects which will be a legal requirement for GMO in the future. If necessary, the plans also provide the framework for recalling food and feed made from GMO from the market.