Safety Assessment RP652 Genetically Modified MIR162 Maize

Area of research interest: Research projects
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Project code: RP652
Conducted by: Regulated Products Risk Assessment Unit FSA and Risk Assessment Team FSS
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Summary

Following the submission of application RP652 to the Food Standards Agency (FSA) under assimilated Regulation (EC) No. 1829/2003 from Syngenta Crop Protection NV/SA, represented by Syngenta Limited (Bracknell, UK), FSA/FSS (Food Standards Scotland) have undertaken a safety assessment on genetically modified MIR162 maize. To support the safety assessment by FSA/FSS, the Advisory Committee on Novel Foods and (ACNFP) provided advice to FSA/FSS on the data submitted for the renewal of authorisation for the genetically modified maize MIR162, as outlined in this document. The advice of the ACNFP has been taken into account in this safety assessment which represents the opinion of FSA/FSS on the safety of genetically modified MIR162 maize.

MIR162 maize is modified to express the Vip3a20 and PMI proteins; Vip3Aa20 – a variant of a protein from the soil bacterium Bacillus thurigiensis – is an insecticidal protein, active against certain lepidopteran pests of maize, including Spodoptera frugiperda (Fall armyworm) and Helicoverpa zea (Corn earworm). PMI (phosphomannose isomerase – from E. coli strain K-12) catalyses the reversible interconversion of mannose and fructose, and enables the plant to use mannose as a primary carbon source. It is used as a selectable marker in the development of MIR162 maize.

MIR162 maize has previously been authorised for food and feed uses and is most commonly used as animal feed. The scope of this application is for the renewal of the authorisation for placing on the market of food and feed products containing, consisting of, or produced from genetically modified MIR162 maize. This also includes products other than food or feed. The application does not cover cultivation and therefore no MIR162 maize will be grown in the UK.

In providing its advice on the safety of MIR162 maize for food and feed, the ACNFP considered data provided as part of application RP652 (post-market environmental monitoring reports, evaluation of systematic literature searches, additional studies performed by or on behalf of the applicant, and updated bioinformatics analyses), additional information provided by the applicant, and analyses and reports from outside contractors. The ACNFP assessed these data for possible new hazards, modified exposures, or new scientific uncertainties identified during the authorisation period and not previously assessed in the context of the original application (EFSA GMO Panel 2012).

FSA/FSS concludes, based on ACNFP advice, that there is no evidence in the renewal application RP652 for new hazards, modified exposures, or new scientific uncertainties that would change the conclusions of the original risk assessment on genetically modified maize MIR162 (EFSA GMO Panel 2012).

Safety assessment

PDF
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