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## **ENVIRONMENTAL RISK ASSESSMENT OF GLYPHOSATE TOLERANT H7-1 SUGAR BEET**

**Evaluation des risques environnementaux de  
betteraves sucrières H7-1 tolérantes au glyphosate /  
Umweltrisikobewertung Glyphosat-toleranter H7-1 Zuckerrüben**

### **ABSTRACT**

The Federal Office of Consumer Protection and Food Safety (BVL) is the German Competent Authority in accordance with Directive 2001/18/EC on the deliberate release of genetically modified organisms. After careful evaluation plus consulting several Federal authorities and the German Biosafety Committee, BVL concluded in 2010 that no direct adverse effects on human and animal health and the environment are to be expected from the cultivation of sugar beet H7-1. In its assessment of the effects from specific cultivation, management, and harvesting techniques BVL has identified the following potential indirect effects of the application of glyphosate in H7-1 sugar beet: (1) The development and spread of glyphosate resistant weeds; (2) Changes of the temporal distribution of weed coverage during the vegetation period and changes of weed seed production; (3) Weed community shifts; (4) Follow-up effects of (2) and (3) on weed-associated fauna and higher trophic levels. BVL recommended that the risk of development and spread of glyphosate resistant weeds should be mitigated by implementing the principles of integrated pest management when applying glyphosate for weed control on H7-1 sugar beet. Whether the changes described above under (2) and (3) would result in adverse impacts on the environment – in particular on biodiversity - compared to the environmental impacts of weed control methods that are currently used in sugar beet in the EU will depend on the way herbicides will be used in H7-1 sugar beet and in other crops grown in rotation with H7-1. Management should be implemented on a national level in line with the provisions of the EU regulations on the authorisation and use of plant protection products. Management measures could include restrictions of the amounts and/or frequencies of the application of herbicides in H7-1 as well as in other GM and in non-GM crops grown in rotation with H7-1. Furthermore, the BVL recommended several environmental monitoring measures. However, the application for cultivation of H7-1 sugar beet in the EU was withdrawn in 2013 before EFSA finalized its risk assessment, and thus there is currently no attempt to continue the authorization procedure of this crop.