

GMO environmental impact monitoring

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When new technologies are introduced and uncertainties for risks exist, appropriate environmental monitoring of potential hazards is needed (EEA 2001). This also applies to genetically modified organisms (GMO). European regulations foresee an environmental monitoring for every GMO imported, processed, used for food or feed, or cultivated (EC 2001). The aim of post market environmental monitoring (PMEM) is to serve as an early warning system to facilitate early and appropriate mitigation measures (EC 2002).

To reach this objective, specific monitoring strategies are needed. Incompleteness of knowledge and uncertainties about environmental impacts of GMOs as well as the wide range of potential ecological effects pose big challenges for the development of PMEM. At present no routine environmental impact observation procedure for GMOs exists. Current PMEM plans and reports (e.g. MON810, Amflora) reveal fundamental shortcomings concerning objectives, design and methodology (BfN, EEA, BAFU 2011).

With the present focal section of BioRisk we want to contribute to the improvement of PMEM. Bearing in mind that science-based methodology is a premise for appropriate and reliable monitoring data and sound monitoring results, the contributions here aim at filling gaps for suitable and harmonized monitoring protocols for PMEM. The papers present the work of experts, who developed standardized methods for different aspects of the monitoring of genetically modified organisms, in cooperation with the Association of German Engineers (VDI) and the Federal Agency for Nature Conservation (BfN). The final products are technical standards (VDI guidelines)

for PMEM. They are published in German and English, and therefore accessible to all European stakeholders (www.beuth.de).

References

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