

Updated: June 2024

Advisory Committee on Releases to the Environment

Advice on applications for import and processing of oilseed rape with tolerance to glufosinate ammonium and/or glyphosate herbicides

Advice of the Advisory Committee on Releases to the Environment (ACRE) under S.124 of the Environmental Protection Act 1990 (Part VI) to UK ministers and ministers in the Devolved Administrations

General advice on the import and processing of genetically modified oilseed rape with tolerance to glufosinate ammonium and/or glyphosate herbicides

Product: Genetically modified oilseed rape with tolerance to glufosinate ammonium and/or glyphosate herbicides

Scope: For the import and processing of seed /grain derived from these crops. Scope excludes cultivation in the EU and use as food or feed.

This advice applies to the applications listed below. These applications are for the import and processing of seed/ grain derived from genetically modified oilseed rape with tolerance to glufosinate ammonium and/or glyphosate herbicides

ACRE is satisfied that in the UK, the import and processing of the GMOs listed below does not pose a greater risk to the environment or human health than their non-GM counterparts

All of these applications include food and/or feed use within their scope. As such, they will not be authorised unless the applicant has demonstrated that the GMOs in question are as safe as their non-GM equivalents in terms of food/feed safety. Although it is not within ACRE's remit to consider food/ feed safety, it is our responsibility to assess the potential environmental impacts. Consequently, this advice concerns the environmental risk assessment and post-market environmental monitoring (PMEM) components of the applications listed below.

Comment

Scope

This advice concerns applications submitted under Regulation (EC) 1829/2003 (the GM Food and Feed Regulation) to import and process seed/grain derived from genetically modified oilseed rape with tolerance to glufosinate ammonium and/or glyphosate herbicides. Oilseed rape which is modified for other traits will be considered separately.

The applications (and the GMOs that they concern) submitted under Regulation (EC) 1829/2003 to which this advice applies are listed below. We have considered each of the applications on a case by case basis before deciding on whether this advice reflects the conclusions of our specific risk assessment. This advice is relevant to the UK only and ACRE recognises that the situation regarding use of the herbicides in semi-natural environments and location of crushing and processing plants may be different in other EU countries.

Environmental risk assessment

The environmental risk posed by a GMO is a function of any hazards it presents to the environment and the exposure of the environment to these hazards. ACRE is satisfied that in the UK, the import and processing of oilseed rape, genetically modified for tolerance to glufosinate ammonium and/or glyphosate herbicides, would not pose a greater risk to the environment or human health than non-GM varieties of oilseed rape. This is based on the following:

oilseed rape has the potential to grow and flower in the UK if spillage of seed/grain occurs during transportation and processing. However, feral oilseed rape populations in the UK are not self-perpetuating and therefore will decrease over time unless the grain is replenished through further spillage¹.

herbicide tolerance provides a potential selective advantage only in the presence of the herbicide. In the UK, the use of glufosinate ammonium and glyphosate herbicides is not significant in semi-natural environments. In the absence of the herbicide, ACRE does not consider that herbicide tolerance in oilseed rape or compatible relatives would result in a selective advantage or an increase in persistence and invasiveness

in the UK, crushing and processing plants are located at receiving ports. Only non-living material will be transported inland. As a result environmental exposure due to any spillage of oilseed rape grain during import and processing will be limited.

Each of these factors act independently to safeguard the environment. Together they provide three layers of control. ACRE does not, therefore, consider that tolerance to

1. ¹ Devos et al 2011. 'Feral genetically modified herbicide tolerant oilseed rape from seed import spills: are concerns scientifically justified?'
Transgenic Res 10.1007/s11248-011-9515-9

glufosinate ammonium and glyphosate herbicides would increase the ability of oilseed rape to establish and persist under UK conditions as a result of import and processing of grain.

Post-market environmental monitoring plans

Applications for the import and /or cultivation of live GMOs must include a PMEM plan. There are two components to PMEM that the applicant must address. The first is case-specific monitoring. The aim of case-specific monitoring is to confirm that any assumption in the environmental risk assessment regarding the occurrence and impact of potential adverse effects of the GMO or its use in the environmental risk assessment is correct. ACRE considers that for applications covered by this advice there is no requirement for case-specific monitoring in the UK.

The second component of a PMEM plan is general surveillance. The objective of general surveillance is to identify the occurrence of adverse effects of the GMO or its use on human health and the environment which were not anticipated in the environmental risk assessment. ACRE recommends that PMEM plans for import and processing, should include: (1) precisely who will be requested to provide information; (2) what type of information will be requested and the frequency of requests and (3) how the applicant will ensure participation to ensure a robust assessment.

In addition, ACRE recommends that in all cases applicants provide clear guidance to operators to ensure that environmental exposure is further minimised. The guidance should specify that good port practice needs to be employed to minimise spillage of imported seed and clean up spillage should it occur. It should also provide information on how to identify and control any volunteer plants occurring within port and processing areas. It should be specifically stated that control must not include the use of the herbicide to which imported oilseed rape is tolerant. This is in line with existing schemes, based on Hazard Analysis of Critical Control Point (HACCP) principles, which are currently implemented by operators.

Table: applications

Reference	Event	Applicant	Advice agreed by ACRE
EFSA/GMO/UK/2005/25	T45 Glufosinate ammonium tolerance	Bayer Bioscience	4 June 2008
EFSA/GMO/NL/2010/87	GT73 Glyphosate tolerance	Monsanto	28 October 2013 (see note 1)
EFSA/GMO/BE/2011/101	MON88302 Glyphosate tolerance	Monsanto	4 August 2014
EFSA/GMO/NL/2009/68	Ms8 x Rf3 x GT73 glufosinate-ammonium- and glyphosate-tolerant	Bayer CropScience and Monsanto	10 June 2016
EFSA/GMO/NL/2013/119	MON 88302 x MS8 x RF3 glufosinateammonium- and glyphosate-tolerant	Monsanto Company and Bayer CropScience	22 May 2017
EFSA-GMO-BE-2016-138	MS11 glufosinate-ammonium	Bayer CropScience	11 June 2020

Table notes

1. The scope of this application covers placing on the market food or food ingredients produced from GT73 oilseed rape, including its pollen and the accidental presence of viable seeds.