Advisory Committee on Releases to the Environment

Advice on applications to market genetically modified (GM) oilseed rape with tolerance to glufosinate ammonium and/or glyphosate and/or dicamba herbicides in England

This advice applies to the applications listed below. The applications are for the consumption, importation and/or processing of food and/or feed consisting of, made from, or containing GM oilseed rape with tolerance to glufosinate ammonium and/or glyphosate and/or dicamba herbicides in England.

As the applications are for GMOs to be used as food, or feed products, 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 and feed safety. However, it is not within ACRE's remit to consider food/ feed safety; this is the responsibility of the Food Standards Agency. It is ACRE's responsibility to assess the potential environmental impacts of the GMOs rather than food or feed processed from them. Consequently, this advice concerns the environmental risk assessment and post-market environmental monitoring components of the applications listed in Table1.

Environmental risk assessment

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 spillage[1]

Herbicide tolerance provides a potential selective advantage only in the presence of the herbicide. In the UK, the use of glufosinate ammonium glyphosate and dicamba 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.

[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.

Each of these factors acts independently to safeguard the environment. Together they provide three layers of control. ACRE does not, therefore, consider that tolerance to glufosinate ammonium and/or glyphosate and/or dicamba herbicides would increase the ability of oilseed rape to establish and persist under climatic conditions in England as a result of import and processing of grain.

Post-market environmental monitoring plans

Applications to market GMOs must include a post-market environmental monitoring (PMEM) plan of which there are two components.

1. Case-specific monitoring: the aim of this 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 is correct. Due to the lack of any significant environmental exposure, ACRE considers that for applications covered by this advice there is no requirement for case-specific monitoring in England, unless specifically stated in Table 1.

2. General surveillance: the objective is to ascertain the occurrence of adverse effects of the GMO or its use on human health and the environment that were not anticipated in the environmental risk assessment. Unless stated in Table 1, ACRE recommends that PMEM plans 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 any spillage should it occur. The applicant should also provide information on how to identify and control any volunteer plants occurring within port or 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 1

Application reference	Event	Applicant	Advice and date
RP1372	DP 073496-4[2]	Pioneer Hi Bred International	No safety concerns identified 25 July 2023
RP307	MS11xRF3[2]	Pioneer Hi Bred International	No safety concerns identified 25 July 2023
RP1869	MON94100[3]	Bayer Agriculture BV	No safety concerns identified 7 Nov 2023

Date: January 2024

[2] Tolerance to glufosinate ammonium and/or glyphosate

[3] Tolerance to dicamba herbicides