

QUESTIONS & ANSWERS ON LICENCE DECISION DIR 078/2007: LIMITED & CONTROLLED RELEASE OF GENETICALLY MODIFIED SUGARCANE

What is this licence for?

The University of Queensland has obtained approval to trial, under limited and controlled conditions, up to 3000 sugarcane lines that have been genetically modified (GM). The release will take place at fifteen sites in the local government areas of Burdekin, Moreton Bay, Hinchinbrook, Cairns, Bundaberg and Mackay in Queensland, on a total area of up to 65 hectares between 2008 and 2014.

What is the purpose of the trial?

The purpose of the trial is to conduct proof of concept experiments with the GM sugarcane to assess agronomic properties including disease susceptibility under field conditions and to analyse sugar production and quality. Promising lines will be selected for propagation for possible future commercial development (subject to additional approvals) and some lines will also be crossed with non-GM sugarcane under controlled conditions to evaluate the feasibility of using them in future breeding programs. The GM sugarcane plants from this trial (including those crossed with non-GM sugarcane) will not be used for either human food or animal feed.

How have the GM sugarcane lines been modified?

Each sugarcane line contains one of two genes derived from common bacteria. Expression of the introduced gene is expected to produce sugars similar to sucrose, which could be used as alternative sweeteners. Some of the proteins will also contain extra protein segments that may help to stabilise their production inside the plant. Similar proteins occur naturally in a range of organisms, including plants widely consumed by people and animals.

All of the GM sugarcane lines also contain one or both of two antibiotic resistance selectable marker genes, which were used to identify transformed plants during initial development of GM plants in the laboratory. Each of these genes was derived from common gut bacteria.

What controls have been imposed on this release?

The finalised Risk Assessment and Risk Management Plan (RARMP) that was prepared for this limited and controlled release and formed the basis of the Regulator's decision to issue the licence, concluded that the proposed release poses negligible risks to people or the environment. However, a range of licence conditions have been imposed to limit the release to the size, locations and duration requested by the applicant as these were important considerations in the evaluation process. Control measures to restrict the spread and persistence of the GMOs and the introduced genes include ensuring that transport and storage of the GM plant materials are in accordance with OGTR guidelines, and monitoring for, and destroying, any volunteer plants on the release site for at least twelve months after final harvest and until no volunteers are detected for the last six months of the monitoring period.

Want more information?

A number of documents relating to this decision are available on the OGTR website (<<http://www.ogtr.gov.au>> under "What's new") or via Freecall 1800 181 030. These documents include the finalised RARMP, an Executive Summary, a Technical Summary and a copy of the full licence.