

QUESTIONS & ANSWERS ON LICENCE DECISION DIR 085/2008 FOR LIMITED & CONTROLLED RELEASE OF GENETICALLY MODIFIED COTTON

What is this licence for?

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) has gained approval to trial, under limited and controlled conditions, one cotton line genetically modified for altered fatty acid composition of the cottonseed oil. The field trial will take place on up to 2 ha from 2008-09, at one site in the New South Wales local government area of Narrabri.

What is the purpose of the trial?

The purpose of the trial is to conduct proof of concept experiments to assess a range of agronomic characteristics of the GM cotton line, when grown under natural field conditions, including seed germination rate, fibre yield and quality, seed yield, oil content and fatty acid composition. The purpose of changing the fatty acid profile of the cottonseed oil, in the GM cotton line, is to increase the stability of the oil for food industry applications and improve the health effects of cottonseed oil. None of the GM plant material from this trial would be used in human food or animal feed.

How has the GM cotton line been modified?

The GM cotton line contains partial sequences of three cotton genes. These partial gene sequences are intended to alter the fatty acid composition of the cottonseeds by either reducing or switching off the expression of the corresponding genes in the cotton plants. The genetic modification has been shown to alter the ratio of naturally occurring fatty acids in the cottonseeds and is not expected to introduce any new types of fatty acids into the cottonseed oil. The introduced partial gene sequences are expected to be expressed only in the seeds of the modified cotton plants.

The GM cotton line also contains an antibiotic resistance selectable marker gene, which was used to identify transformed plants during initial development of GM plants in the laboratory. This gene was derived from a common gut bacterium.

What controls have been imposed on this release?

The Risk Assessment and Risk Management Plan (RARMP) for this application concluded that the release poses negligible risks to people and the environment. However, licence conditions have been imposed to restrict the release to the size, location and duration requested by the applicant as these were important considerations in the assessment process. As well as limits on the scale of the release, control measures have been proposed to restrict the spread and persistence of the GMO and the introduced genetic material. These include ensuring that the GM cotton plants in the field are surrounded by a pollen trap; that transport and storage of the GM plant materials are in accordance with OGTR guidelines; and monitoring for, and destroying, any cotton plants on the release site for at least twelve months after harvest and until no volunteers are detected for at least six continuous months.

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.