

## **QUESTIONS & ANSWERS ON LICENCE APPLICATION DIR 067/2006: LIMITED & CONTROLLED RELEASE OF GENETICALLY MODIFIED COTTON**

### **What is this application for?**

CSIRO has obtained approval to undertake a small scale release of up to 30 cotton lines, that have been genetically modified (GM) to provide tolerance to waterlogging. The trial will take place at one site in the shire of Narrabri, New South Wales on a maximum total area of 0.1 ha during each of the three summer growing seasons of 2006/07, 2007/08 and 2008/09.

### **How has the GM cotton been altered?**

The GM cotton lines proposed for release contain a gene derived from thale cress (*Arabidopsis thaliana*), a common plant of the mustard family, which is expected to provide tolerance to waterlogging. Variants of this gene occur naturally in many plant species including cotton. The proteins expressed by such genes are common in food plants such as barley, maize, wheat, rice, soybean and tomato. The GM cotton plants also contain an antibiotic resistance marker gene from a naturally occurring and widespread bacteria. This marker gene was used to identify and select modified plants during their development in the laboratory.

### **What are the effects of the genetic modification?**

The genetic modifications are intended to enable the GM cotton plants to grow normally under waterlogging conditions which can occur due to slow-draining soils and heavy rainfall and result in reduced production.

### **What is the purpose of the release?**

The aim of the trial is to conduct early stage ('proof of concept') research to evaluate the potential of the introduced gene to enable the GM cotton lines to tolerate waterlogging and to conduct a preliminary assessment of their agronomic performance under field conditions. Seed will be collected from the GM cotton lines for further studies and possible future trials of promising lines (subject to separate applications and approvals).

### **What controls have been applied to this release?**

The Risk Assessment and Risk Management Plan (RARMP) that was prepared for this application, and formed the basis of the Regulator's decision to issue the licence concluded that the proposed release posed negligible risks to people or the environment. However, a range of licence conditions have been imposed to limit the release to the size, location and duration proposed by the applicant as these were important considerations in the assessment process. They include measures to restrict the spread of the introduced genes; ensuring 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. In addition, none of the GM plant materials are permitted to be used as human food, animal feed or in the production of fabrics and/or other cotton products.

### **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 complete RARMP (containing a summary of the submissions received through the consultation process with prescribed experts, agencies and authorities and the public), an Executive Summary, a Technical Summary and a copy of the full licence.