

## **QUESTIONS & ANSWERS ON LICENCE DIR 070/2006 FOR LIMITED & CONTROLLED RELEASE OF GENETICALLY MODIFIED SUGARCANE**

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

BSES Limited has obtained approval for a limited and controlled field trial of 2500 GM sugarcane (*Saccharum* spp. hybrid) lines. The release will take place at up to 3 sites of no more than 2 ha during each of the 3 cropping cycles between February 2007 to November 2010 (ie a total maximum area for the trial of 18 ha) in the local government areas of Bundaberg, Caboolture and/or Cairns, Queensland.

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

Up to 1900 of the GM sugarcane lines have been modified with 18 genes, either alone or in combination, to alter plant size and shape, enhance water use efficiency (WUE) or improve nitrogen use efficiency (NUE), and an antibiotic resistance selectable marker. The remaining 600 GM sugarcane lines contain only the introduced antibiotic resistance selectable marker and/or visual marker genes. The introduced genes are derived from the plants rice, sugarcane, barley, bean, thale cress, apple, maize and the common gut bacterium *Escherichia coli*.

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

The introduced genes that are intended to alter plant size and shape, enhance WUE or improve NUE regulate different biochemical pathways in the sugarcane plants and may result in increased agronomic performance, including sugar yield. The selectable and visual marker genes were used to identify successfully transformed plants in the laboratory.

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

The purpose of the trial is to conduct early stage ('proof of concept') research to compare different genetic modification methods, and to evaluate the agronomic performance of GM sugarcane lines in the field, including under different irrigation and fertilizer treatments. Promising lines may be selected for further development, subject to future approvals. No GM plant materials from the release will be used for human food, animal feed or for the production of other sugarcane products.

### **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 locations, size 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; requiring that transport and storage of the GM plant materials are in accordance with OGTR guidelines; and monitoring for, and destroying, any sugarcane plants on the release site until it has been clear of such volunteers for at least 6 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 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.