

## **QUESTIONS & ANSWERS ON INCLUSION OF DEALINGS WITH GENETICALLY MODIFIED CARNATIONS ON THE GMO REGISTER - REGISTER 001/2004**

### **What has the Regulator determined?**

The Gene Technology Regulator (the Regulator) made a determination to include dealings with four genetically modified (GM) carnation (*Dianthus caryophyllus*) lines on the GMO Register (Register 001/2004). This is the first entry on the GMO Register.

The dealings are the same as those authorised by licence DIR 030/2002, which permitted the propagation, growth and distribution of GM plants and cut flowers Australia-wide.

### **What is the GMO Register?**

Licensed dealings with genetically modified organisms (GMOs) may be placed on the GMO Register if (a) any risks posed by the dealing are minimal and (b) the Regulator is satisfied that the dealings are sufficiently safe to be undertaken by anyone without the need for a licence. The Regulator will be satisfied that the risks are minimal if the risk estimates of identified risks are low or negligible, or if there are no identified risks.

### **How have the GM carnation lines been modified and what is the effect?**

The flower colour of the carnations has been genetically modified by the insertion of two genes (from petunia or pansy) involved in making blue flower pigments. As a result of the genetic modification, the four carnation lines (Moonlite™ Moonshade™ Moonshadow™ and Moonvista™) have violet/mauve/purple flowers.

All four GM carnation lines contain a marker gene that confers a herbicide tolerance trait that was used for selecting modified plants in the laboratory.

### **Have the risks associated with the dealings with the GM carnations been assessed?**

Yes. The carnation lines have over 10 years of history of safe use starting with field trials under limited and controlled conditions dating back to 1992. In September 1995 the four GM carnation lines were authorised for commercial release under the former voluntary system that was overseen by the Genetic Manipulation Advisory Committee (GMAC). Risks to people and the environment were again assessed under the current regulatory system prior to issuing licence DIR 030/2002 in 2003 for the on-going, commercial release of the same GM carnation lines.

Following the receipt of this application, the Regulator obtained additional data from the company, reviewed the latest scientific literature, and sought advice from the public, the Gene Technology Technical Advisory Committee, relevant Australian Government agencies, and State and Territory Governments on any risks to human health and safety or the environment that may be posed by the dealings. No risks to human health and safety or the environment were identified during this process and in November 2006, the determination was tabled in the Australian Parliament.

### **Have there been any adverse effects from the commercial release of the GM carnations?**

No. Commercial scale dealings with the GM carnation lines have been occurring in Australia since 1995. As of 2007, around 4.5 million GM carnation flowers have been sold and no adverse effects on human health and safety or the environment have been reported either in Australia or from extensive cultivation and distribution overseas.

### **Where can I obtain more information?**

The Risk Assessment for Register 001/2004, documents relating to Licence DIR 030/2002, and the revised 'Biology and Ecology of *Dianthus caryophyllus* L.' can be obtained on-line from the [Office of the Gene Technology Regulator's website](#) or requested via telephone 1800 181 030.