

## **Questions & Answers on licence DIR 143 – Commercial release of genetically modified cotton**

### **What does this licence allow?**

Bayer CropScience Pty Ltd (Bayer) has received approval for the commercial release of two types of genetically modified (GM) cotton: GlyTol<sup>®</sup> cotton, modified for herbicide tolerance and GlyTol TwinLink Plus<sup>®</sup> cotton, modified for both insect resistance and herbicide tolerance. The GM cottons and their products can enter general commerce, including use in human food and animal feed.

### **What other regulatory approvals are required?**

Food Standards Australia New Zealand has approved the use of material derived from these GM cottons in food. The GM cottons would also be subject to regulation by the Australian Pesticides and Veterinary Medicines Authority (APVMA), which assesses all herbicides and insecticidal products used in Australia and sets their conditions of use. Bayer will need to seek approval from the APVMA for the use of GlyTol TwinLink Plus<sup>®</sup> to control insects in cotton crops and for the use of the glyphosate and glufosinate herbicides on the GM cotton.

### **Where will this cotton be grown?**

The GM cotton may be grown anywhere in Australia, subject to restrictions in some Australian States and Territories for marketing reasons. The main cotton growing areas of Australia are in central to northern New South Wales and southern to central Queensland. Small amounts of cotton are also grown in north western Victoria, northern Queensland and northern Western Australia.

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

GlyTol<sup>®</sup> cotton contains one introduced gene for glyphosate herbicide tolerance. Thus, farmers can use this herbicide for weed control without damaging their cotton crop. The gene was sourced from maize.

GlyTol TwinLink Plus<sup>®</sup> cotton contains the glyphosate tolerance gene, and two copies of an introduced gene that confers tolerance to glufosinate herbicides. This gene is sourced from a common bacterium. It also contains three bacterial genes that confer insect resistance. The genes encode proteins that are toxic to specific pest insects that cause major yield losses in cotton crops. Combining three different insecticidal genes is expected to reduce the chance of the insect pests developing resistance.

The GM cottons also contain a selectable marker gene derived from a common bacterium. This gene confers antibiotic resistance. It was used to select the plants during laboratory development of the GM cottons and does not have any function when plants are grown in the field.

### **How is this GM cotton different from existing commercial GM cotton?**

Almost all cotton currently grown in Australia is genetically modified. The majority of the GM cotton currently grown contains a similar glyphosate herbicide tolerance gene as the one included in GlyTol<sup>®</sup> and GlyTol TwinLink Plus<sup>®</sup> cottons. The glufosinate ammonium herbicide tolerance gene has also been used in some GM cotton commercially grown in Australia. One of the insect resistance genes is used in cotton approved for commercial release in Australia. The other two genes are from the same common soil bacterium.

### **What controls have been imposed for this GM cotton?**

The licence is for an ongoing commercial release. The Regulator has not imposed any specific measures to manage risk, as the risk assessment concluded that this release of GM cotton poses negligible risks to the health and safety of people or the environment. However, general conditions have been imposed to ensure that there is ongoing oversight of the release.

### **Want more information?**

A number of documents relating to this decision are available on the [DIR 143 page](#) of the OGTR website or via Freecall 1800 181 030. These documents include the finalised RARMP, a summary of the RARMP and the licence.

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