Questions & Answers on licence DIR 128 – Field trial of genetically modified (GM) wheat and barley

What does this licence allow?
The University of Adelaide has received approval to trial, under limited and controlled conditions, wheat and barley plants that have been genetically modified for either abiotic stress tolerance or micronutrient uptake. The field trial may take place between August 2014 and December 2019 at five trial sites, two in South Australia and three in Western Australia. The collective maximum area for the trial is 2.5 hectares per year.

What is the purpose of the trial?
The purpose of the field trial is to assess whether the introduced genes affect yield potential in wheat and barley under field conditions. The GM wheat and barley will not be used in human food or animal feed.

How has the GM wheat and barley been modified?
The GM wheat and barley has been modified by the introduction of genes that are expected to confer either abiotic stress tolerance or enhanced micronutrient uptake. The specific abiotic stress tolerances that are being examined are drought tolerance, salt tolerance, metal tolerance and nitrogen use efficiency. Those plants that have been modified with respect to micronutrient uptake are anticipated to have increased levels of iron in their grain. Additionally, the GM plants contain one or both of two selectable marker genes that were used to identify genetically modified plant cells and plants during initial development of the GM plants in the laboratory.

What controls have been proposed for this release?
The Risk Assessment and Risk Management Plan (RARMP) for this application concluded that the proposed release poses negligible risks to people or the environment. However, a range of licence conditions have been imposed to limit the size, locations and duration of the release, as well as restrict the spread and persistence of the GM wheat and barley, and the introduced genetic material. Control measures include conditions to isolate trial sites from other wheat and barley crops, cleaning of equipment used with GM plant materials, secure transport and storage of GM plant materials, and post-harvest monitoring at trial sites to ensure all GM plants are destroyed. Full details of the draft licence conditions are set out in the RARMP.

Want more information?
A number of documents relating to this decision are available on the DIR 128 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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