Questions & Answers on licence application DIR 186 – field trial of genetically modified (GM) wheat and barley

What is this application for?

The University of Adelaide is requesting a licence to grow GM wheat and barley modified for yield enhancement and improved abiotic stress tolerance. The field trial would be conducted on a maximum of two sites per year, with a combined total of 2 hectares across both sites in any year. The trial sites are located in Light Regional Council in South Australia, and the Shire of Merredin in Western Australia. The trial would run from April 2022 to January 2027.

How has the GM wheat and barley been modified?

The GM wheat and barley contain introduced genes for yield enhancement and abiotic stress tolerance. The genes come from plants – one that is commonly used as a model plant in research and two that are common food crops. The genes are expected to enable plants to survive periods where conditions are very dry and to produce good yields following drought or similar stress.

The GM wheat and barley also contain selectable marker genes from common bacteria and a coral. The genes confer antibiotic resistance, tolerance to glufosinate herbicides and a red fluorescent marker protein. The antibiotic resistance markers and red fluorescent marker protein were used during laboratory stages to be able to identify the GM plants. The glufosinate tolerance gene is only used for GM plant selection during development of the GM lines in the laboratory.

What is the purpose of the trial?

The trial is to assess the performance of the GM wheat and barley under field conditions. The GM wheat and barley grown in this field trial would not be used in human food or animal feed.

What controls are proposed for this release?

The consultation Risk Assessment and Risk Management Plan (RARMP) prepared for this application concluded that the field trial poses negligible risks to people or the environment. However, as this is a field trial under limited and controlled conditions, a number of licence conditions have been drafted to restrict when and where the trial can take place, limit the size of the trial, and stop the GM wheat and barley from spreading outside the trial sites. For example, there are conditions to isolate trial sites from other wheat and barley crops or sexually compatible species, to securely transport and store the GMOs, and to inspect the sites at the end of the trial to check that all GM plants are destroyed. Full details of the draft licence conditions are available in the consultation RARMP.

How can I comment on this application?

The full consultation RARMP and a summary of the RARMP for application DIR 186 are available on the OGTR website or via the contacts listed below. You are invited to submit your written comments (including email) on the consultation version of the RARMP, related to any risks to the health and safety of people or to the environment from the proposed release. Comments must be received by the close of the consultation period on **14 January 2022**.

What are the next steps in the evaluation process?

The RARMP will be finalised, taking into account submissions related to the protection of people or the environment. A de-identified summary of all comments received and consideration of those comments is included in the Appendices to the final RARMP. The finalised RARMP will inform the Regulator's decision on whether or not to issue a licence.

The Office of the Gene Technology Regulator

OGTR Website

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