

Questions & Answers on licence DIR 151 – field trial of genetically modified (GM) wheat

What does this licence allow?

CSIRO has received approval from the Gene Technology Regulator to trial, under limited and controlled conditions, wheat plants that have been genetically modified for disease resistance, drought tolerance, altered oil content and altered grain composition. The field trial is permitted to take place at two sites of up to 1 hectare each at Boorowa Experiment Station, NSW and Ginninderra Experiment Station, ACT, for a period of five years.

How have the GM wheat plants been modified?

The GM wheat plants will each contain up to three introduced genes out of a total of 37. The majority of the introduced genes are derived from wheat, with the other introduced genes derived from organisms that are routinely used in food and feed or that are widely present in the environment, such as barley, maize or rice. Twenty-two of the introduced genes are intended to give the GM wheat tolerance to biotic (stem, leaf and/or stripe rust disease) or abiotic (drought) stresses. The other fifteen introduced genes are intended to alter the starch, oil or dietary fibre content of GM wheat grain and/or leaves.

What is the purpose of the trial?

The purpose of the field trial is to assess the agronomic characteristics of the GM wheat plants under field conditions, as well as the nutritional characteristics of flour derived from the GM wheat under laboratory conditions.

Flour derived from the grain of GM wheat lines with altered grain composition is proposed to be used for a range of carefully controlled, small scale animal and human nutritional trials under the oversight of CSIRO Human Nutrition Animal Ethics Committee and CSIRO Human Nutrition Research Ethics Committee, respectively. The GM wheat lines would not be permitted to enter the commercial human food or animal feed supply chains.

What controls are imposed on 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 will limit the size, location and duration of the release, as well as restrict the spread and persistence of the GM wheat and the introduced genetic material. Control measures include conditions to ensure secure transport and storage of the GMOs, and at the end of the trial, require inspection of the site for wheat volunteers to ensure all GM plants are destroyed. A full list of the control measures is detailed in the licence.

Want more information?

A number of documents relating to this decision are available on the [DIR 151 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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