



FACT SHEET

GM wheat field trial approvals

Regulation of gene technology in Australia

All dealings with genetically modified organisms (GMOs) are regulated under the *Gene Technology Act 2000*¹.

The intentional release of a GMO into the Australian environment must be licensed by the Gene Technology Regulator (the Regulator), and can only be licensed if risks can be managed so as to protect the health and safety of people and the environment. Marketing issues are not part of the Regulator's consideration, and are matters for industry and the states and territories.

The Australian regulatory scheme uses a science-based approach and robust risk analysis. The risk analysis methodology is based on key international standards and is widely respected nationally and internationally as representing best practice².

GM wheat

There has been no commercial release of GM wheat in Australia, and no licence applications for the commercial release of GM wheat have been received.

Since 2005, the Regulator has approved eleven small GM wheat field trials, and only after conducting a rigorous science-based risk assessment and extensive public and expert consultation for each³, ten of which are still current (see table 1). These field trials relate to early stage research on GM wheat with traits such as salt tolerance, drought tolerance, altered starch content or improved nutrient use efficiency, and are being conducted by the CSIRO, the University of Adelaide and the Victorian Department of Primary Industries.

Each trial is limited in size and duration, ranging in size from 0.1 to 2 hectares per year for up to 5 years. Details of field trial locations are publically available on the OGTR website⁴.

GM wheat from these trials is not permitted to enter the commercial human or animal food supplies.

¹ For more information, see the Fact Sheet *Overview of the Gene Technology Regulatory System* available at <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/factbulletin-1>

² For more information, see the Regulators' Risk Analysis Framework, available on the OGTR website at <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/riskassessments-1>

³ All of the assessments and licences are available on the OGTR website at <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/ir-1>. Also see the Fact Sheet *Application assessment process for dealings involving intentional release (DIR) of a GMO into the environment* available at <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/factbulletin-1>

⁴ See the field trial site map page on the OGTR website at <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/map>

The field trials are subject to strict containment conditions to minimise the potential spread and persistence in the environment. The Office of the Gene Technology Regulator actively inspects trials for compliance with licence conditions. There have been no breaches of containment with any of these field trials.

Two licences held by CSIRO authorise animal nutritional studies (DIR 092 and DIR 093); one of these also authorises experimental human nutritional studies (DIR 093). These studies are subject to approval by animal- and human- ethics committees, and will use products made from GM wheat with altered grain starch aimed at improving nutritional properties such as glycemic index.

Table 1: Current Licences for limited and controlled release (field trial) of GM wheat

Licence No	Licence holder	Modified Trait	Issued	Licence status	Field trial site status
DIR 102	University of Adelaide	Abiotic stress tolerance	June 2010	Current	1 in PHM*
DIR 100	CSIRO	Enhanced carbon assimilation in drought and heat prone environments	June 2010	Current	0
DIR 099	CSIRO	Altered grain composition & nutrient utilisation efficiency	June 2010	Current	1 in PHM 2 current
DIR 094	CSIRO	Enhanced nutrient utilisation efficiency	July 2009	Current	2 in PHM
DIR 093	CSIRO	Grain starch composition	June 2009	Current	2 in PHM
DIR 092	CSIRO	Grain protein or carbohydrate composition	May 2009	Current	1 in PHM 1 current
DIR 080	Victorian Department of Primary Industries	Drought tolerance	June 2008	Current	1 signed off 1 in PHM
DIR 077	The University of Adelaide	Enhanced tolerance to abiotic stressors, including soil boron and drought, and increased beta glucan levels	June 2008	Current	1 in PHM
DIR071	Victorian Department of Primary Industries	Drought tolerance	June 2007	Current	2 signed off
DIR 054	CSIRO	Altered grain starch and Antibiotic resistance	13 April 2005	Current	1 signed off

* PHM = post harvest monitoring, meaning the GM crop is no longer being grown but the licence holder is monitoring the site to ensure no GM plants remain.