

**Economics Legislation Committee**  
**ANSWERS TO QUESTIONS ON NOTICE**  
Industry Portfolio  
Supplementary Budget Estimates Hearing 2014-15  
23 October 2014

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**AGENCY/DEPARTMENT:** Commonwealth Scientific & Industrial Research Organisation

**TOPIC:** GM Research

**REFERENCE:** Written Question – Senator Edwards

**QUESTION No.:** SI-74

1. Are you able to update the committee on the revenue generated through the sale of CSIRO developed GM cotton, particularly Ingard and Bollgard II?
2. Is this seen as a responsible and profitable development programme which fills the organisations social charter?
3. Are there projects being conducted to develop similar GM products including food and grain products?

**ANSWER**

1. In the period 2000-01 to 2013-14 (14 years), CSIRO has received a total of \$129.49m in net royalties from cotton sales and technology fees, for sales in Australia and internationally.
2. CSIRO's objectives in this research area date back to 1989 with the major purpose to reduce the industry's reliance on pesticides, and achieve improvements in the industry's environmental footprint and sustainability. Whilst CSIRO did not develop GM cotton, from 1991 CSIRO liaised with multinational Biotech companies Monsanto and Bayer to obtain licences to include GM traits into CSIRO elite germplasm. CSIRO has also undertaken a large amount of research on regulatory questions posed by Genetic Manipulation Advisory Committee (GMAC) and Office of the Gene Technology Regulator (OGTR).  
The release of Ingard® and Bollgard II® cotton containing Bt genes has resulted in an estimated 86% reduction in insecticide application across the industry. This has provided a range of environmental, social, occupational health and production benefits to the cotton industry, employees and supporting communities, which has enabled the cotton industry to maintain its social licence to operate.
3. CSIRO currently has GM based projects involving wheat and barley, safflower, and canola. A description of each of these areas follows.

Wheat and barley research: There are three traits currently being trialled in small plots in the ACT approved by the OGTR:

1. Increasing yield – for greater food production capability and food security.
2. High fibre wheat – to increase dietary fibre.
3. Developing durable rust resistance.

These trials are still in the research phase and if successful the earliest projected commercialisation would be 2020.

Safflower: Trials of GM safflower (approved under Dealings involving Intentional Release (DIR) 121) have been planted in the field in the ACT (2013-14), Kununurra, WA (2014) and Narrabri, NSW (2014-2015). This experimental safflower has been modified to produce high levels of oleic acid, as part of research to develop Australian crop sources of renewable industrial feedstocks.

Canola: CSIRO is a partner with Nuseed Ltd and the Grains Research and Development Corporation (GRDC) in a research collaboration that aims to develop land plants that contain omega-3 fatty acids. Approval from the OGTR was issued to Nuseed on 13 November 2013 under DIR123 for field trials on canola with an altered oil content. The primary purpose of the field trials is to evaluate the agronomic characteristics, oil content and stability of the canola under field conditions. Further work on the development of research and regulatory data will be conducted under three Notifiable Risk Dealing (NLRD)s issued by the Nuseed IBC, namely OGTR NLRD No. 4804 (001/2011), 6031 (004/2013) and TBA (005/2014).