How private funding influences GM research

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The private sector has driven GM research – but in whose interests? Credit: International Maize and Wheat Improvement Center/Flickr, CC BY-NC-SA

Most of the debate around genetically modified (GM) foods has focused on health and nutrition, or the potential impact on the Australian agricultural industry. There has been less attention to the role of private, profit-driven investment in shaping GM and biotechnology.

Research into GM crops has always been largely driven by the private sector, even though a 2000 report from the Commonwealth Biotechnology Ministerial Council emphasised the need for government support for an emerging, and potentially lucrative, industry.

The report noted high levels of private investment in biotechnology in North America, Canada and Japan, and calls for government support to help Australia compete. According to the authors this should include intellectual property protection, and work to "build community confidence in biotechnology" as well as increase funding.

Subsequent governments have largely followed these recommendations. In 2009, in the wake of the global financial crisis, the Labor government spent A$390 million on research and industrial support, noting the importance of the industry to Australia's economy.

Teaming up

Much of the research into biotechnology carried out by academics, public research institutions and even non-profit organisations is shaped by the push towards "public-private partnerships".

The CSIRO, for example, is required to raise a significant proportion of its own funding from royalties, "sales of goods and services", and private partnerships (as outlined in the latest budget statements), and has been working closely with biotechnology companies including Monsanto.

Defenders of GM crops position critics as irrational and anti-science, implying that they either don't understand the technology or are driven by shadowy motives. But if a proponent of GM crops can question the motives of activists because they receive funding, it is reasonable to ask similar questions about how private funding affects biotechnology research as well.

This is particularly the case given the effort going into public relations around GM crops in Australia and overseas. CSIRO even briefly and controversially hired a former tobacco industry lobbyist as Director of Communications.

How green was the Green Revolution?

In order to more fully understand the importance of seeing biotechnology primarily as an industry, it's useful to look at alternative models of agricultural research. The "Green Revolution" is the most obvious example.

The Green Revolution took place after World War II, and was driven in large part by the hope that increased food security would stop the spread of communism. Public funding and national security considerations played a key role in shaping the technology.

There are important criticisms of Green Revolution agriculture, including its impacts on the water table, soil fertility and social inequality, but it does demonstrate that different political contexts lead to different outcomes. The focus during the Green Revolution was on increasing yields for cereal crops, such as wheat and rice.

In contrast, the priority for current biotechnology research – particularly into GM – is generating profits.

Even Golden Rice, which is usually held up as the poster-child for benevolent GM research for the public good, will be sold commercially through public-private partnerships.

Profits and public interest

Private investment does not guarantee poor outcomes, but we should also be sceptical of claims that it has no effect on technological development. The drive for profits encourages:

- a reliance on monocultures
- a focus on cash crops rather than food crops
- legislation against comprehensive food labelling
- restrictive intellectual property regimes.

This is happening at a time when the world needs resilient, sustainable food systems that preserve crop biodiversity, responsive democratic legislation and a massive overhaul of restrictive national and international intellectual property law.

We can't simply accept at face value claims that private interests will align neatly with public needs.

Any realistic and rational evaluation of technologies must take into account the political and economic context from which they emerged. Technologies exist as part of systems, and their impacts often have unintended consequences which we can only begin to understand once we move beyond a narrow view of science as somehow existing outside of society.

Source: The Conversation