



understanding attitudes towards GM technology

Genetic modification (GM) of plants and animals is a big part of our lives, but what does the average person know about GM? Do many people support advances in GM technology? These questions and many more were addressed in recent research by the Cooperative Research Centre for Sugar Industry Innovation through Biotechnology (CRC SIIB).

Background

Genetic modification of plants and animals has been conducted throughout history. Plant and animal breeders and the fermentation industry are just some of the end users of products that were developed after people employed strategies to modify the genetic makeup of useful organisms to enhance specific qualities. This process now generally forms part of what is known as biotechnology.

In recent times biotechnology has become more sophisticated, offering scientists the potential to make quite significant and varied changes to the genetic make-up of crops. However, the response by the general public to these advances has been mixed and some people have been concerned by the perceived risks of GM technology, even when it has the capacity to enhance human health.

The Australian sugarcane industry has invested significant funds into researching new GM techniques as part of its effort to enhance sucrose accumulation in sugarcane plants, improve environmental sustainability, and identify and develop new product options, such as biodegradable plastics. The industry is backed by advanced laboratories and highly qualified, talented researchers.

To gauge how people may perceive the industry's use of biotechnology, the CRC SIIB has sought the knowledge and opinions of a variety of people on GM topics.

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Progress

This study was conducted in Bundaberg and Innisfail and followed a three-step process: an initial focus group discussion to gauge existing opinion; an educational workshop; and a follow-up focus group to assess any changes in perceptions among participants.

Project Manager, UQ agricultural economist, Dr Mal Wegener and colleagues designed the research to determine how much people from the sugar industry and the wider community know about GM technology. After the initial focus group, they invited participants to a follow-up meeting to hear scientists present information about biotechnology and to answer their questions. The original group was brought together again after these workshops to see if the information provided had influenced their perceptions about GM technology. The researchers were interested to see if the participants regarded the technology any more positively after their involvement in the project.

In the first round of meetings or focus groups, there was a fairly mixed response to GM technology. In general, male sugarcane growers were supportive of the technology in terms of applying it to their farms to improve performance and overall returns. However, their female counterparts were fairly sceptical and in general were concerned about possible risks to human safety and the environment. Some other members of the community were particularly concerned about the potential consequences of growing GM cane and consuming the processed sugar. The first focus group discussions also confirmed that most adults acquire the bulk of their knowledge about science through television. It was surprising to learn that virtually nobody knew about the regulatory body (Office of the

Gene Technology Regulator) or understood the processes in place to monitor the development and release of GM organisms.

Two months after the first focus group meetings, all participants were invited along with other members of the local community to a workshop where two geneticists and a social scientist presented information to address their concerns regarding GM. Attendees were handed easy-to-understand information and were given the opportunity to put any questions to the 'experts'.

The impact of these workshops was reviewed soon after they were held during a final focus group discussion with the original group participants. Overall, the change in perceptions was significant. Participants were a great deal more confident about GM technology given the regulatory processes in place and the information they had been presented. Many could see the environmental benefits of GM and as a result of the workshops, believed it to be far less of a risk than they initially assumed. Some respondents were concerned as to whether or not the returns from GM cane would be passed on to growers.

Looking ahead

The outcomes of this study resulted in the CRC SIIB and Biotechnology Australia funding further research into public knowledge, attitudes, and perceptions about genetic modification of sugarcane. This will involve a series of more in-depth, wide-spread surveys and the development of targeted information to best inform the Australian sugarcane industry and the broader community on GM and its applications in the sugarcane industry.