

AUSTRALIAN ATTITUDES TO GM FOOD AND CROPS

Craig Cormick, Manager of Public Awareness Biotechnology Australia, discusses changes in public attitudes to GM technology in Australia

Introduction

Which of the following two statements do you think is true?

- The Australian public see great benefits from GM foods and crops and the forecast for increased acceptance is quite optimistic.
- The Australian public see great risks from GM foods and crops and concerns are continuing to rise.

The answer is that both are true, depending on how you interpret the data available. And, of course, the more complex surveying becomes, the more complex the answers are, and the more liable they can be to being selectively interpreted.

Take, for instance, the apparently conflicting findings that concerns about GM foods have remained quite high in Australia over the past 3 years, but the number of people who claim they would be happy to eat GM foods has risen from 25% in 1999, to 32% in 2000 and then risen again to 49% in 2001 (ACNielsen, 2000; Millward Brown, 2001) (Figure 1).

The levels of concern, or the proportion of those willing to eat GM food, are quoted by the anti-GM food or pro-GM food lobby as best suits their needs – neither looking at the real issue of correlating concern and behaviour to determine if concerns influence behaviour or not.

Biotechnology Australia, the Government agency responsible for co-ordinating biotechnology issues in Australia, has been conducting comprehensive surveys since its inception in 1999, tracking changing attitudes to GM foods and crops as well as health and medical applications in

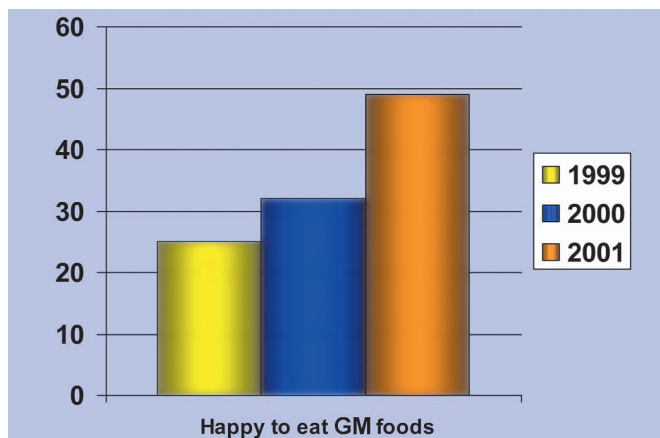


Figure 1. 1999–2001 changes in attitudes towards eating GM foods (ACNielsen, 2000; Millward Brown, 2001).

biotechnology. Working through both qualitative and quantitative research Biotechnology Australia has established a fairly good understanding of both *what* Australians think about GM issues, and *how* they think.

General trends over the past 3 years have been that people have become more set in their attitudes, both for and against the technology. In 2001 a question such as: Will GM food risks increase or decrease? elicited about a 30% *Don't Know* response (with 33% saying *Decline* and 32% saying *Increase*) (MARS, 2001). By 2002 the *Don't Knows* had diminished to 24%, with a net gain flowing mostly to those who felt risks would *Decrease* – which rose to 45% (MARS, 2002).

And while it is true to say that most Australians have a degree of concern about GM foods, it is worth putting this concern into some context. About 39% of those who responded to a 2000 survey stated that they had high concerns about GM food – compared to 45% having high concerns about uses of pesticides in food, 46% having high concerns about human tampering of foods and 58% having high concerns about food poisoning (Quantum Market Research, 2000) (Figure 2). Similar results have been

AUSTRALIAN SURVEY DETAILS

ACNielsen, 2000. CATI survey of 1000 people (<http://www.acnielsen.com/>)

Millward Brown, 2001. (based upon the YCHW 1999 study), CATI survey of 1001 people, supported by 13 focus groups (<http://www.millwardbrown.com/>). This survey was based on the 1999 Yann Campbell Hoare Wheeler CATI survey of 1203 participants, representative of Australia's demographic spread supported by 14 focus groups.

Eurobarometer study, 2001. (16,029 people, roughly 1000 people for each member state of the EU) (http://www.gesis.org/en/data_service/eurobarometer/)

Market Attitude Research Services (MARS), 2001. CATI survey of 1000 respondents on issues of GM foods and crops. Market Attitude Research Services Pty. Ltd., P.O. Box 214, Miranda NSW 2228, Australia.

Market Attitude Research Services (MARS), 2002. CATI survey of 1000 respondents on issues of GM foods and crops, based on the 2000 survey for tracking purposes. Market Attitude Research Services Pty. Ltd., P.O. Box 214, Miranda NSW 2228, Australia.

Quantum Market Research (2000). Quantum Market Research, 96 Bridport Street, Albert Park, Victoria, Australia 3206 (<http://www.qmr.com.au/>)

ATTITUDES TO GM

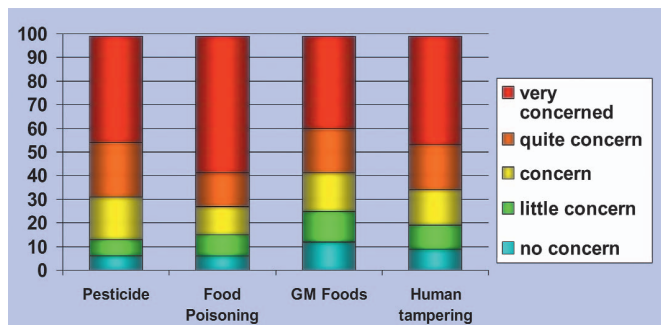


Figure 2. Food concerns in Australia in 2000 (Quantum Market Research, 2000).

obtained from similar studies in the UK (FSA, 2001) and USA (Wirthlin, 2001).

Australia's attitudes to GM foods and the related issues of GM crops and regulation, tend to sit somewhere between those of the more-accepting USA and less-accepting UK, which also tend to be characterised by divergent awareness and trust in their regulators, as found by Moon and Balasubramanian (2002).

In the 2001 Eurobarometer study (16,029 people, roughly 1000 people for each member state of the EU), 70% of Europeans did not want GM foods, with 59.4% believing they had adverse effects on the environment. By comparison, a 2002 study of 1203 people by the US Food Policy Institute found that 74% of people approved of GM foods which were less expensive or tasted better. While the two surveys are not entirely comparable, they do illustrate the general trend that more US consumers are willing to accept GM foods and crops than Europeans.

As a general trend, GM foods and crops have been slowly moving off the agenda as 'hot topics' in Australia, being replaced by stem cells, cloning and other human health issues, but, following the launch of an anti-GM campaign by Greenpeace in 2002 in Australia, there has been increased media attention and renewed interest in GM food and crops.

Risks vs. benefits

A basic measure of public acceptance, or rejection, of gene technology, is the extent to which the public perceive benefits from the technology relative to its risks.

Expressed as a ratio of benefits to risks, Australians have been tending to see increased risks over benefits between 1999 and 2001, but with risk perception diminishing a little in 2002; this change was principally due to a portion of those expressing a 'don't know' view in 1999, seeing increased benefits by 2002. Expressed as a ratio of risk : benefits, public perceptions have gone from 49:20 in 2001 to 51:32 in 2002 (MARS, 2002) (Figure 3), based on the question of whether survey respondents saw risks outweighing benefits or benefits outweighing risks.

Australian Food labelling laws, which came into effect in December 2001, have also some influence on public attitudes. A 2001 survey showed 46% of the sample population would not buy GM foods if they were labelled, but after the labelling regulations came into place that figure dropped to 41% in 2002 (MARS, 2002). However, the

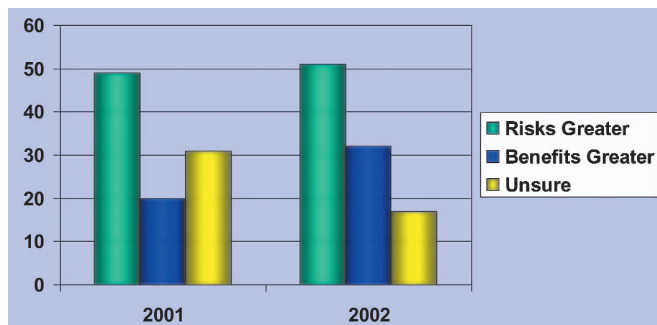


Figure 3. Perception of risks vs. benefits (MARS, 2001 and 2002).

effect on the market has been that most foods that would require a GM label have changed ingredients to non-GM sources, leaving most of the GM food now available exempt from labelling under the regulations. For instance, canola oil from GM canola plants does not require labelling as the refined oil has no novel DNA present. Other exemptions include foods prepared at point of sale, such as in cafes.

An interesting divergence of attitude was highlighted by comparing statistics from 1999 and 2001 surveys that showed that, while concern about the risks of GM foods has risen (66% to 73%), there was a greater acceptance of GM crops that had been modified to be pest-resistant, with a slight increase on the high acceptance level of 74% useful rating in 1999, rising to 78% in 2001 (Millward Brown, 2001). After looking at this issue in focus groups representing a spread of ages, education and geographic location it appears the difference was driven both by a consumer perception that foods and crops were separate issues, and the clear benefit of the crop modification.

Qualitative findings

Focus group studies, used to complement quantitative studies, have been very useful in delving deeper into the way people form their attitudes. There were two major findings from focus group studies conducted for Biotechnology Australia. The first was that people are as concerned about the processes by which new technologies are developed (which goes against the consequentialist ethics argument that something is valued, regardless of process, if the outcomes are beneficial).

The second major finding was that there are five key factors of influence in determining acceptance or rejection of GM foods and crops. They are:

- *Information* – a level of understanding of the technology and what it can and cannot do, which has to be provided from a credible source.
- *Regulation* – a level of confidence that effective regulation exists to protect humanity and the environment.
- *Consultation* – a feeling that the public has had some input to the development of the technology.
- *Consumer choice* – the ability for an individual to accept or reject each application of the technology.
- *Consumer benefit* – a clear individual and societal benefit from each application.

Very few applications of biotechnology currently fulfil all five criteria well and contentious applications, like genetically modified foods and crops, fulfil none of them well – bearing in mind that public perceptions of the factors are more important than reality.

The first two, information and regulation, are where most strategies concentrate, and work by Paul Slovic from the University of Oregon, USA, has shown that risks are perceived to be highest if something is seen as ‘unknown’ and ‘uncontrollable’ (Slovic *et al.*, 1980). No surprise that they are the factors most targeted by anti-gene technology groups. Yet the more a person knows about a particular application of biotechnology, and the more they know there are controls governing it, the less likely they appear to be concerned about it. But information must be in a language accessible to the public, must address their concerns, usually needs to be balanced (which Biotechnology Australia aims for), and must come from a credible source – which can’t be stressed highly enough. Trust can act as a substitute for knowledge in communications.

It is also important to recognise that information alone can rarely change an attitude if that attitude is predisposed to a certain way of thinking. Once formed, attitudes change very slowly and are persistent in the face of contrary evidence – which will be agreed with if it is consistent with one’s initial attitudes and beliefs, but disagreed with as ‘unreliable’ or ‘wrong’ if it goes against them. Test it out on yourself.

Essentially, with regulation, to effectively lessen public concerns, there needs to be a high degree of understanding of the regulatory process and greater trust in the regulator.

Consultation must be perceived to be genuine and must again address root concerns in the language of those concerned, and must be seen to be having some effect. It is also best done before the development of an application, rather than after its development. How different the debate about GM crops would have been if the full supply chain from farmer to consumer had been consulted early in their development.

Consumer choice and consumer benefit are often judged by an individual’s perspective, and can be demonstrated through GM medicines having general high acceptance and GM foods having general lower acceptance.

Fulfilling all five criteria well is a problem for the development of a perfect strategy in Australia since, as in most countries, there is no one agency or body responsible for all five. Government can best address information and regulation, and also consultation and consumer choice to some extent – but consumer benefit can only be achieved by those developing the technologies.

Information

Many anti-GM advocates quote research which shows that the more people know about gene technology, the more they are concerned about it – which is not born out by Australian data. Awareness of both perceived benefits and risks of GM foods has roughly doubled between 2001 and 2002 (20% in 2001 to 32% in 2002) (Figure 3), but concerns have not

significantly risen in relation to knowledge increasing. For example, awareness of less use of chemicals as a benefit from GM foods/crops rose from 34% to 75%, and awareness of increased yields rose from 29% to 69%. But for the same period the level of concern, expressed as a perception of risk, was fairly constant, rating 49% in 2001 and 51% in 2002 (MARS, 2002).

Another regular finding of surveys is that about 75% of people surveyed believe they require more information about gene technology, and that there is currently not enough factual or balanced information available from trusted sources.

Australians still maintain high trust in scientists (up to 85%) (Millward Brown 2001), unlike the situation in Europe, where public trust in science has been falling. And while the public regularly asks for more information about gene technology, the complexity of the information when provided can lead to the public seeking the opinion of trusted figures – with trust being able to replace understanding.

So what does it all mean? Well, put simply, while campaigns like the one by Greenpeace may cause some turnarounds in attitudes in the short-term, trends indicate that about half of the Australian population will accept GM foods and crops, and about half will not – and they will be broken into sub-groups of those who see the foods as safe, those who don’t care, those who distrust all industrialisation processes, those who are against the technology and those who are just cautiously unsure.

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