

# Labelling issues of organic and GM Foods in Australia

by

Hui-Shung (Christie) Chang

School of Economics

University of New England, Armidale NSW 2351

Tel: (02) 67732855; E-mail: [hchang@pobox.une.edu.au](mailto:hchang@pobox.une.edu.au)

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## Abstract

Growth in the demand for organic foods has been phenomenal in the past decade both in Australia and overseas because organic production is seen to be beneficial to both human health and the environment. In general, organic products commend a price premium over conventional products. Since organic attributes cannot be verified easily and there is no control over the use of the word “organic” in the Australian market, the organic label has been subject to abuse. Over ten years, the Australian organic industry has called for a domestic regulation, claiming that any incidence of consumer deception and product misrepresentation can result in the loss of consumer confidence and sales, and more importantly, hinder future industry growth. However, the Government has rejected the calls. On the other hand, despite its recent history, the labelling of GM foods has become mandatory since 2001. This paper examines the arguments for and against the mandatory labelling of organic foods in Australia, compares the political and marketing environments in which organic and GMO foods operate, and assesses the appropriateness of the differing regulatory responses.

Key words: organic foods, GM foods, and food labelling.

## Introduction

Worldwide, the demand for organic foods has expanded quickly in the past decade, stimulated by consumer perceptions that organic products are better for the environment and personal health. Consumers are paying premiums for organic products, ranging from 20 to 200 per cent over the price for conventionally produced foods. In 2001, worldwide organic sales were estimated at US\$26 billion with the main markets being the United States (US\$10 billion), Western Europe (US\$12 billion), and Japan (US\$2.5 billion) (McCoy 2002; Organicsupersite 2003). Together, these countries accounted for more than 95 per cent of total global organic sales (Organicsupersite 2003). These countries are also major importers of organic foods. Australia is also a growing but small market for organic products. In 2001, total retail sales of organic food in Australia were estimated at A\$250 million, accounting for only one per cent of total food sales (McCoy 2002).

The demand for organic products worldwide is currently estimated to grow at a rate of 10-20 per cent per annum, with sales reaching \$US 29-31 billion in 2005 (Kortbech-Olesen 2003). Despite the positive outlook, some problems were identified to have the potential to hinder growth in demand for organic foods. One of those is potential product fraud. This is because the high price premiums noted above have provided an economic incentive for some producers, processors and marketers to falsely claim or label their products as organic. This is easily done since organic products cannot be readily distinguished from conventionally produced products. One way of ensuring the authenticity of the organic claim is through certification and labelling.

In principle, organic production systems are those farming practices that avoid the application of artificial fertilizers and chemicals with a high degree of environmental awareness.<sup>1</sup> Due to the stringent guidelines on production and handling processes, organic products are perceived

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<sup>1</sup> In Australia organic agriculture is defined in the Australian National Standard for Organic and Biodynamic Produce (OPEC 2002) as “management practices that create soils of enhanced biological activity, as determined by the humus level, crumb structure and feeder root development, such that plants are fed through the soil ecosystem and not primarily through soluble fertilisers added to the soil. Plants grown in organic systems take up nutrients that are released slowly from humus colloids, at a rate governed by warmth. In this system, the metabolism of the plant and its ability to assimilate nutrients is not overstressed by excessive uptake of soluble salts in the soil water (such as nitrates). Organic farming systems rely to the maximum extent feasible upon crop rotations, crop residues, animal manures, legumes, green manures, mechanical cultivation, approved mineral-bearing rocks and aspects of biological pest management to maintain soil productivity and tilth, to supply plant nutrients and to control diseases, insects, weeds and other pests”.

to be safer, more ethical and more environmentally friendly than conventionally grown products, particularly amidst highly publicised food scares and widespread environmental problems in recent years (McCoy and Parlevliet 2000). As a result, the demand for organic foods has grown significantly particularly in the past decade. By contrast, the use of genetically modified organisms (GMOs)<sup>2</sup> has been met with opposition from some groups, who are concerned about the potential impacts of GMOs on food safety and the environment. The debate over GM foods<sup>3</sup> has given further impetus to demand growth in organic food (Grothers 2000). Donaghy et al. (2003) also suggested that concerns over food safety, animal welfare and the environment might become important determinants of consumers' purchasing patterns, especially when confronted with the choices between GM, organic and conventional products.

Currently, Australia, the United States, the European Union and Japan all have their own national standards for organic certification. These standards provide the minimum requirements for the production, processing and labelling of organic products and are equivalent to one another in major aspects (May and Monk 2001). What is different in Australia is that the National Standard for Organic and Biodynamic Produce (hereafter referred to as the National Standard), which was developed in 1992, applies only to exports. This means that although it is illegal to export a product labelled as "organic" without proper certification,<sup>4</sup> there is no such regulation or control on organic products that are sold in the domestic market (including imports) (Lovisol 1997a, Lyall 2001). As such, products that claim to be organic or carry an organic label in Australia may not necessarily meet the National Standard or have been "certified". By contrast, the national organic standards in the United States,<sup>5</sup> the European Union and Japan apply equally to exports, domestic sales, and imports.

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<sup>2</sup> Genetically modified organisms are all materials produced through the modern methods of biotechnology, in particular gene technology "recombinant DNA (r-DNA) and all other techniques using molecular or/ and cell-biology for altering the genetic make-up of living organisms in ways or with results which do not occur in nature or through traditional breeding (FSANZ 2001a).

<sup>3</sup> "A food produced using gene technology" means a food which has been derived or developed from an organism which has been modified by gene technology. Gene technology means recombinant DNA techniques that alter the heritable genetic material of living cells or organisms (FSANZ 2001b)

<sup>4</sup> There are seven certifying bodies, each accredited by AQIS as being competent to certify organic producers and processors to meet the National Standard for export.

<sup>5</sup> Except for small producers in the United States.

In the absence of a domestic regulation, many Australian growers have adopted the National Standard as the de facto standard for the domestic market, relying on legislations under the Fair Trading and Trade Practices Act to protect the authenticity of organic claims (WA Department of Agriculture 2002). However, the current system is not entirely satisfactory because the burden of policing is shouldered by consumers and industry participants. Since the court process can be time-consuming and costly, there is little incentive to mount a case against a perpetrator.<sup>6</sup> Even when cases are mounted, they often fail to stand up in court because the term “organic” is not defined in legislation.

For years, the Australian organic industry has tried to introduce in a domestic regulation that would legally define the term “organic” in the domestic market and provide a regulatory framework for preventing deceptive and fraudulent behaviour. However, the Australian government has been reluctant to support such an application. Instead, the industry was advised to self-regulate and to educate consumers (Lovisol 1997b). Meanwhile, GMOs have generated much public debate and the labelling of GM foods has been made into law rather quickly.

The objectives of this paper are to examine the arguments for and against domestic regulation of organic products in Australia and to assess the environments in which organic and GM foods operate and the resultant regulatory responses in Australia. The study contributes to the policy debate on the labelling of organic and GM foods in Australia and provides insights into labelling issues of eco-products as well as functional products.

### **Labelling of organic foods**

Since 1993, the Australian organic industry has been pursuing regulation that would see similar controls on domestic sales that apply to exports. Two applications were presented, through the Australian Quarantine and Inspection Service (AQIS), to Food Standards Australia New Zealand (FSANZ) (formerly the Australian Food Authority (AFA) and later the Australia New Zealand Food Authority (ANZFA)) to alter the Food Standards Code to

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<sup>6</sup> There have been criminal prosecutions of producers for falsely labelling their products as organic both in the United States (cited in McCluskey 2000) and Australia (in relation to Uncle Tobys, Per. Comm.). It is believed there are a lot more incidents that are either not being reported or failed to stand up in court.

define and control the use of the words "organic" and similar words and to require all food labelled as "organic" or similar to be certified by AQIS-accredited certifying organizations (AQIS 1997). The first application (A214) was submitted in December 1993 but subsequently withdrawn in June 1995 for revision. The application (A343) was re-submitted in April 1997, but was withdrawn again in July 2003 after being rejected by FSANZ.

There are three main arguments to support the call for a domestic regulation of organic products (AQIS 1997). Firstly, the general provisions in the trade practices legislation cannot protect consumers from false and misleading representation unless "organic" and other relevant terms are defined in legislation. There is ongoing evidence of organic products being misrepresented in the domestic market and hence a loss of consumer confidence and welfare.<sup>7</sup> This is, allegedly, a contributing factor to a lower growth rate in organic sales in Australia, compared with other growing markets.

Secondly, Australia is a signatory to the World Trade Organisation (WTO) and under the agreements more onerous standards may not be imposed on imports than those that are applied in the domestic market. Therefore, it is necessary for domestic standards to be put in place before they can be imposed on imports. Currently, AQIS regulates all imported foods under the auspices of the Imported Food Control Act 1992, primarily for food safety and public health purposes. Under the Act, AQIS does check, based on a random, risk assessment and inspection approach, for compliance of imported foods with applicable standards, such as dubious labelling, misleading health claims, missing warnings, undeclared ingredients, importer details and country of origin. However, it does not check, and cannot verify, organic claims, because the National Standard is a process standard, not a product standard. Therefore, imported products that are labelled as organic but are not "certified", or are certified by programs that are not well recognised, can make their way into Australia.

Thirdly, around the world, countries that are major or potential trading partners of Australia either have controls on the use of the word "organic", for example, the United States, the European Union, and Japan, or are developing such controls as in the case of Canada (Kinneer 2000). The European Union has had strict government controlled domestic regulations in place since 1992. The United States Department of Agriculture (USDA)

introduced the National Organic Program in October 2002 that sets national standards for foods marketed as organic and makes certification for those products mandatory. Under the legislation, all except the smallest producers (with annual organic sales under \$US 5,000) must be certified by USDA-accredited certifying organisations. Producers are allowed to use the national organic logo “USDA Organic” once they have been certified (Greene and Kremen 2003). Japan also has similar rules and a common national logo (the JAS mark) for organic foods. To export to these markets, organic products must be certified and only by approved certification bodies. Australia needs to closely monitor its activities and ensure that a compatible approach and uniform regulation are applied for domestic and imported organic products.

Without a domestic standard, it is possible for some organic products with dubious origins to be imported and later re-exported as “certified organic”. This problem is most likely to happen when imported ingredients are used in the processing of organic products meant for export markets. It is argued that such incidents could potentially damage existing trading relationships and result in the loss of export sales (WA Department of Agriculture 2002).

AQIS (1997) claimed that establishing a national domestic regulatory framework for organic products would ensure that:

- Australian consumers are better informed and the distinction between certified organic products and conventionally produced products is more easily recognisable;
- Domestic market is protected from imported organic food that does not meet any recognised standard; and
- Australian organic standards are compliant with importing country requirements.

Despite these strong arguments, the application was not supported by the Australian Government for several reasons. The initial response from the then ANZFA was that it did not have the authority to include such a provision in the Food Standards Code and it was concerned about the legality of making a third party certification a pre-condition for selling

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<sup>7</sup> Estimates of the proportion of uncertified sales of domestic organic produce vary ranging from 30 per cent to

food as “organic”. Moreover, the ANZFA could not consider any organic labelling provisions without a clear and agreed definition for the term “organic” as there were no existing references or standards that could be related to organic production or labelling. Finally, in the past decade, the ANZFA has progressively removed from the jurisdiction of the Food Standards Code any labeling and quality provisions that are not related explicitly to public health matters. This strong focus on food safety issues is unlikely to change in the future (WA Department of Agriculture 2002).

In the current climate of deregulation, the Australian Government’s position on mandatory labelling was also quite clear. That is, it would regulate only when it is necessary to protect public health and safety or where there is clear market failure and then, only when the broader community is affected (Troeth 2002; Lovisolo 1997b).<sup>8</sup> The Government's advice to the industry was to establish a voluntary, industry-driven, self-regulatory framework for the operation of the organic standards in the domestic market. The industry was also advised to increase its efforts to address problems of consumer deception and retail fraud by educating consumers about organic foods, rather than seeking strictly regulatory/enforcement-based solutions to those concerns.

Under the proposed industry self-regulation, the organic industry, with or without the involvement of state and territory governments, would develop a national domestic organic Code of Practice (COP) and would have control over its content and implementation (ICC 2002). Certifying bodies currently accredited by AQIS would perform certification to this Code of Practice. However, compliance to this Code would be voluntary. Industry self-regulation is expected to work well since the organic industry, both in Australia and overseas, has developed over the past two decades a system of standards, inspections, audits and legal licencing agreements that are managed by the industry itself with little government intervention (WA Department of Agriculture 2002). Indeed, the organic industry is recognised as an early pioneer in industry self-regulation.

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75 per cent of the total organic sales (Macarthur 1999).

<sup>8</sup> It should be noted that genetically modified (GM) foods have been regulated under the Food Standards Code and that the National Standard precludes the use of GM materials in organic production.

The proposed self-regulation for the Australian organic industry has the following advantages (WA Department of Agriculture 2002):

- it satisfies some industry sectors that prefer a non-legislative framework;
- it has minimal implications for government involvement and resources; and
- the COP provides a reference point for the word “organic” or similar and for any legal action against misconduct.

Self-regulation for the Australian organic industry appears to be appropriate according to the Checklist for the Assessment of Regulatory Forms for Their Suitability (ORR 1998). It seems to meet the following conditions:

- There is no strong public interest concern, in particular, no major public health and safety concern;
- The problem is a low risk event, of low impact/significance; and
- The problem can be fixed by the market itself. That is, there may be an incentive (eg industry survival, market advantage) for individuals and groups to develop and comply with self-regulatory arrangements.

What is less certain is whether the conditions that increase the likelihood of self-regulation apply to the Australian organic industry. They include

- adequate coverage of industry concerned;
- a viable industry association;
- a cohesive industry;
- evidence that voluntary participation can work – effective sanctions and incentives can be applied with low scope for free-riders; and
- a cost advantage from tailor-made solutions and less formal mechanisms such as access to quick complaints and handling and redress mechanisms.

From a policy perspective, voluntary labelling of organic products appears to be an appropriate regulatory response, given that only a small segment of the population is interested in the organic status of food products and is willing to pay more for products carrying this information. It also appears that raising consumer awareness about organic



foods and organic certification may be more effective than regulatory/enforcement-based solutions when addressing problems of consumer deception and retail fraud, especially when any such violations have little impact on public health.

### **Labelling of GM foods**

GMOs in agriculture have only been available for about 10 years. However, their commercial use has expanded rapidly in the last few years. Between 1996 and 1998, transgenic crop areas increased fifteenfold to almost 28 million hectares (Nelson 1999). Increased cultivation and utilisation have been met with increasing opposition from some quarters because of concerns about food safety, the environment and ethics (Jessen 2000). Consumer response to GM foods has varied widely from country to country, according to a survey of existing research by Shoemaker et al. (2001). While European consumers have strongly rejected GM foods, US consumers have voiced little objection to GM foods. By comparison, consumers in Australia are generally in favour of biotechnology, although with some reservations (eg if animal genes are not included) (James and Burton 2003). European consumers are more worried about GM foods because the BSE crisis and other food safety scares in recent years have raised serious concern about food safety and resulted in distrust of government and big business. Many European countries also have very vocal Green parties and environmental groups, as well as consumer advocacy groups, that are generally more concerned about consumer welfare and the environment (Shoemaker et al. 2001). However, there are growing concerns and resistance over GMOs in the United States and Australia (Jessen 2000).

These differences in attitudes towards GMOs have contributed to different regulatory responses. In general, regulation of GMOs in the European Union has been conservative, involving considerable scrutiny and separate regulations for different types of GM crops. The United States, by comparison, has subsumed GM regulation under its established food and environmental regulations (Shoemaker et al. 2001). Overall, fewer varieties of GM crops are allowed in Europe than in the United States. In terms of labelling, the United States requires labelling only if GM versions of foods are substantially different from their traditional counterparts, for example, if allergens are added or nutritional content is changed while the EUROPEAN UNION requires that all foods containing GMOs be labelled.

In Australia, the mandatory Labelling Requirements of Food Produced using Gene Technology (Standard A18/1.5.2) was gazetted on 7 December 2000 and came into effect on 7 December 2001 under the FSANZ Food Standards Code. The Standard requires that (FSANZ 2001c):

- i. all foods produced using gene technology be assessed and approved before sale and use; and
- ii all genetically modified food and ingredients, as defined in the standard, be labelled where they (a) contain novel DNA and/or novel protein in the final food, or (b) have altered characteristics.

The Standard allows for the unintentional presence of a GM food of not more than 1 per cent per ingredient and therefore food that meets such a description is exempted from GM labelling. However, a voluntary claim such as “GM-free” can be made only if it is accurate and verifiable. Manufacturers are warned against making such a negative claim to avoid breaching false and misleading provisions within fair trading and consumer protection laws if the food was found to contain any unintentional GM content.

The diverse consumer acceptance of GM foods stems from the fact that there is little information but great uncertainty surrounding the benefits and risks of GM foods. For supporters, the major benefits of GM foods are (Jessen 2000):

- improving varieties more rapidly at lower costs;
- increasing yields;
- reducing cost of production; and
- reducing pesticide use.

For opponents and sceptics, the major risks are:

- environmental damage;
- food safety hazards; and
- adverse distributional impacts favouring large farmers and multinational companies.

From a regulatory perspective, a thorough cost and benefit analysis of GM foods is not possible at this stage because of the lack of scientific evidence. The recent history (since 1989) of GM technology also makes it difficult to measure some of its alleged impacts, either in the short term or long term. The labelling of GM food has been based on the consumer’s

right to know (Chaitoo and Hart 2000), truth in labelling (WA Department of Agriculture 2002) or the precautionary principle<sup>9</sup> (Donaghy and Rolfe 2001). It is a policy response to an ambiguous situation where no political consensus on regulation exists and a compromised position between complete product bans and no government intervention (Golan et al. 2000).

### **Economics of government regulation and labelling**

Government regulation is usually justified when the market fails to deliver a desirable outcome. Market failures can be caused by (1) an imperfect market where market power results in anti-competitive behaviour and reduced efficiency and social welfare; (2) externalities where the behaviour of one party affects third parties that are not directly involved in the market transaction; (3) public goods that are non-rivalry and non-excludable; or (4) imperfect information where transacting parties do not possess, or have equal access to, pertinent information (Pindyck and Rubinfeld 1995, pp. 588-90). Regulatory responses to addressing market failures include command and control, market-based mechanisms, and information and education (Harris and Cole 2003).

Regulation on labelling is generally enacted to correct market failures as a result of imperfect information<sup>10</sup> especially when the cost of obtaining the information is prohibitively high for individuals. Therefore, the purpose of labelling is to provide information to consumers in a cost-effective way. It is welfare-enhancing because it reduces search costs and enables consumers to make better-informed choices. The impact of labelling would depend on how useful this information is to consumers and the extent to which they change their purchasing behaviour in response to the additional information provided by labelling (Golan et al. 2000).

Is there a case of market failure for organic or GM food? There is. A distinguishing feature of organic and GM products is that neither can be easily distinguished from conventionally produced products.<sup>11</sup> Therefore, consumers and other market participants can potentially be

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<sup>9</sup> The principle means that when there are sufficient risks involved, precautionary measures should be taken even if some cause and effect relationship have not been established.

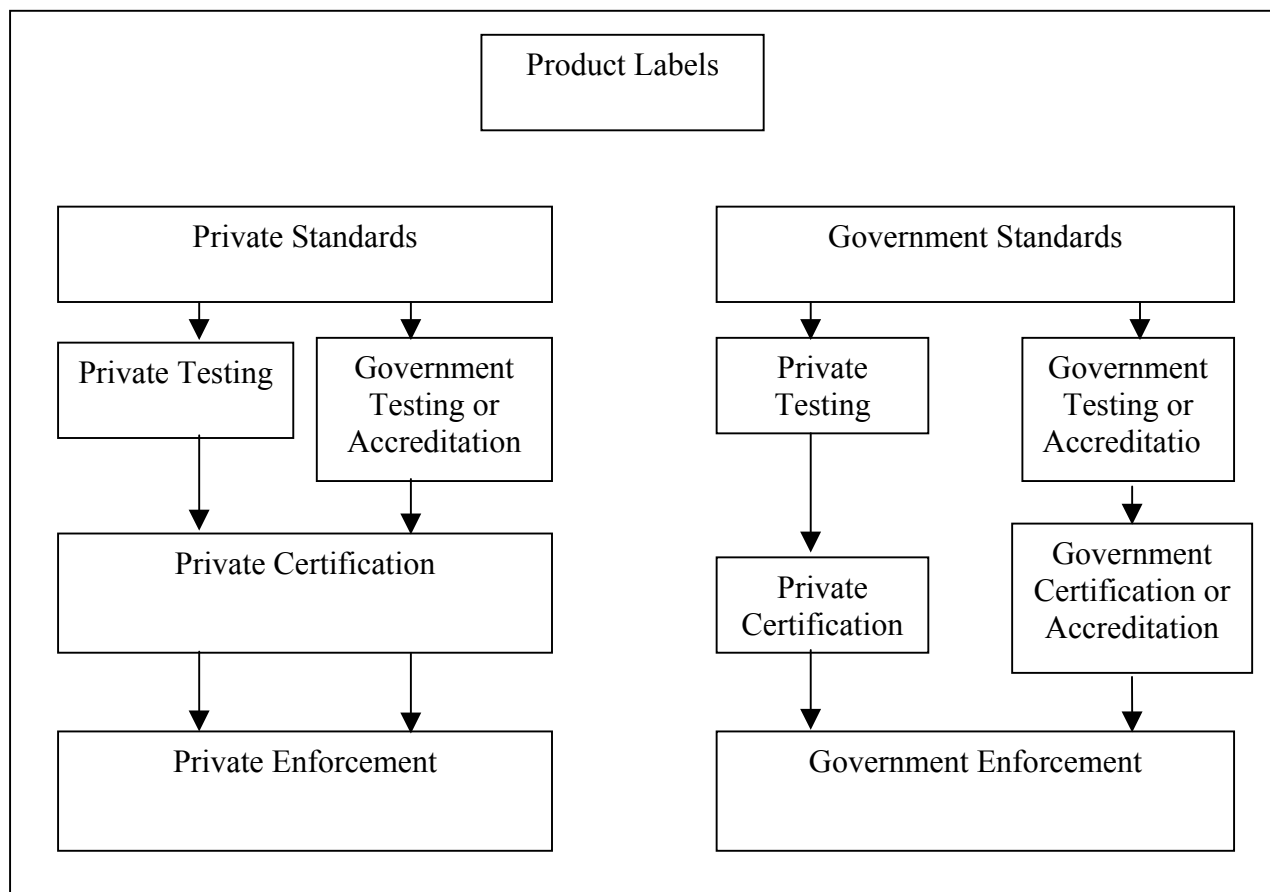
<sup>10</sup> Some have argued that both markets may also fail due to externality and public good because of their likely impacts on public health and the environment. However, the argument is used to call for government assistance in the case of organics and ban on GM crops, rather than for product labelling.

<sup>11</sup> Similar description can be applied to eco-labelled products and functional foods, and may be food products in general (Harris and Cole 2003).

exposed to misleading product information. However, there is a major difference between GM and organics as far as labelling is concerned. In the case of organic food, asymmetric information exists because consumers generally have less information on how the product is produced than producers. For GM food it is more of a case of imperfect or missing information since relevant information does not exist or is contradictory in terms of the potential impact on personal health or the environment of GM crops. It has been argued that while clear, concise labels could be designed to address problems of asymmetric information, it is unlikely that labels would be successful in addressing problems of imperfect information since, by definition, such information is either non-existent or contradictory. As a result, it is difficult to provide such a label without adding to consumer confusion (Golan et al. 2000).

However, not all labelling regulations are mandatory because of government legislation, eg nutrition content on food labels, warning labels on cigarettes and alcoholic drinks, and energy ratings on household appliances. In fact, there are plenty of examples where product information is voluntarily supplied by private firms, with or without third party certification, Different labelling schemes are illustrated in Figure 1.

Figure 1. Labelling Schemes



Source: adapted from Golan et al. 2000.

As can be seen from Figure 1, the very far left represents the case of self-regulation that involves a system of private ordering without any form of government intervention. The very far right is a case of heavy-handed government regulation whereby the whole process is totally in the hands of the government. In between, there are the mixed systems of quasi-regulation and co-regulation. In recent years, governments are in favour of deregulation and are motivated to extend the use of self-regulation to reduce regulatory costs (ORR 1998). It is popular because government can derive political benefits from measures that appear to benefit consumers and others while the costs are not revealed in any public accounts (Trebilcock 1983).<sup>12</sup> However, there are potential costs of self-regulation. These include the creation of restrictions on competition (eg barriers to entry); some fringe businesses not complying with minimum standards; ineffective sanctions for non-compliance; and reduction in consumer choice by imposing minimum standards that do not allow consumers to choose lower cost/quality products or services (ORR 1998).

The effectiveness of different types of regulations varies, depending on (1) the nature and the extent of market failure, (2) the nature of the product (product characteristics, complexity of the product, existence of close substitutes, and the importance to the health and well-being of most consumers and the wider community), (3) industry structure (the number and the size of the firms and the nature and extent of competition within industry), and (4) commonality of interests between consumers, between producers and between producers and consumers (Taskforce on Industry Self Regulation 2000). Furthermore, there are alternative policy instruments to regulation. These are no action or the status quo; information and education campaigns; market-based instruments (eg taxes, subsidies and user charges); tradeable property rights; codes of practices; and standards (ORR 1998).

Currently, both organic and GMO labelling in Europe are mandatory. The European Union requires that all foods containing biotech commodities be appropriately labelled and that all foods labelled as organic be certified. In the United States, all foods labelled as organic must

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<sup>12</sup> ACCC Chairman, Graeme Samuel, announced the introduction of a system of endorsed voluntary codes of conduct (ACCC 2003, Samuel 2003). Mr Samuel suggested that effective codes of conduct would deliver real benefits to businesses and consumers with increased compliance and reduced regulatory costs. Criteria to be considered for endorsement by ACCC include transparency of the processes; independent complaints handling procedures; sanctions for non-compliance; monitoring; and performance indicators. In essence, it is a co-regulation approach that which avoids heavy-handed regulation by government and sometimes less than effective self-regulation.

be certified, except for small producers, and the labelling of GMO is required only when the GMO version of foods is substantially different from its traditionally bred counterparts, eg if allergens are added or nutritional content is changed (Shoemaker et al. 2001). In Australia, the labelling of GMOs is mandatory, and, while the labelling of organic products destined for export markets is also mandatory, the labelling of organic products sold on the domestic market is not. That is, export regulation is administered by AQIS under the auspices of National Standard and the Export Control (Organic Certification) Orders 1997, while domestic regulation is, or will be, voluntarily administered under an industry self-imposed code of practice (AQIS 2003). Table 1 summarises the major differences between organic and GM labelling.

Table 1. Organic vs GM labelling

	Organic	GM
Product Attributes	Credence good; “free” of chemicals	Credence good
Information Problem	Asymmetric	Imperfect or missing
Consumer Attitudes	Positive; perceived to be better than conventional products	Mostly negative; perceived to be of high risks
Incentive to Label	Positive	Negative
Justification for Regulation	To prevent fraud	To protect public health
Regulation	Government regulation on exports and certification is mandatory for exports; industry self-regulation for domestic sales	Government regulation
Labelling	Mandatory for exports, but voluntary for domestic sales	Mandatory

As can be seen from Table 1, there are some major differences between GM and organic products in terms of product attributes and consumer demand. In terms of product attributes, both can be characterised as credence goods and both are distinguished by the production process, not the end product (Chaitoo and Hart 2000). However, consumer attitudes are

mostly positive towards organic products, whereas, they are negative towards GM products. Organic products are perceived to be better for personal health and the environment because of their minimum use of chemicals. On the other hand, GM products are seen to pose a potential threat to human health and the environment despite the fact that most GM products (particularly first generation GM crops) are not significantly different to conventional products (Golan et al. 2000; Chaitoo and Hart 2000). Some consumers are also concerned about the control of agriculture by multinational biotech companies.

Because organic products are perceived to possess good characteristics and therefore demanded by consumers, there is an economic incentive for suppliers of these products to promote and label their products voluntarily, either to gain market access or price premiums. Currently, there is no price premium associated with (first generation) GM products and because of negative consumer perceptions (at least for the moment), there is no incentive to label the product as GM. Instead, there is an incentive to make a negative claim, ie “GM free”. Indeed, third-party certification for GM-free products are emerging to provide assurance to consumers that certified products are truly non-GM (Golan et al. 2000), which is similar to what has happened in the case of organic products.

## **Conclusion**

Both organic and GM products have the characteristics of a credence good whose product attributes remain unknown to consumers upon inspection and even after consumption. In both cases, labelling is seen as a way of providing information to consumers in order to correct market failure arising from imperfect information, a feature that is often associated with credence goods. In the European Union, the United States and Japan, the labelling of both products is mandatory under government regulation. However, while the labelling of both GM foods and organic exports is also mandatory in Australia, the labelling of organic products sold domestically is only voluntary. Many industry analysts believe that credible certification and consistent labelling of organic products is the key to demand growth in the organic industry and that a unified and consistent approach to organic product labelling is a necessary step towards avoiding confusion and building consumer confidence. This paper has examined the economics and politics behind the different regulatory regimes and assessed the arguments for and against labelling regulation of organic and GM products in Australia.

From an economic and policy perspective, voluntary labelling of organic products appears to be an appropriate regulatory response, given that only a small segment of the population is interested in the organic status of food products and is willing to pay more for products carrying this information. It also appears that raising consumer awareness about organic foods and organic certification may be more effective than regulatory/enforcement-based solutions when addressing problems of consumer deception and retail fraud, especially when any such violations have little impact on public health. The labelling of GM products, on the other hand, is based on the precautionary principle of protecting the public from unknown health risks.

The reluctance of the Australian Government to get involved in domestic regulation of organic products may also reflect the lack of political clout of a small but emerging industry, with organic sales being around one per cent of total food sales in Australia and the number of organic farmers constituting around one per cent of the total farm population. With a small domestic market, and the traditional policy focus on export markets, it is not difficult to explain the differing policy responses. However, as the Australian organic industry develops further and becomes mainstream, stricter controls over imports and domestic sales may become necessary. Similarly, regulations may also change as more information about GM foods becomes available.

The regulatory regimes applied to the organic sector may have implications for functional foods and eco-labelled products, where product attributes and benefits are also difficult to verify and therefore subject to misleading claims and advertising. With demand for such products also growing, it will be interesting to see how the labelling of such products will be regulated in future.



## References

ACCC 2003, “ACCC to endorse high standard voluntary industry codes of conduct”, Media Release MR 168/03, 11 August 2003, [http://203.6.251.7/digest/view\\_media.cfm?RecordID=1090](http://203.6.251.7/digest/view_media.cfm?RecordID=1090).

AQIS 1997, “Labelling of food described as ‘organic’-- application to vary the Australian and New Zealand Food Standards Code”, submission to Australia and New Zealand Food Authority.

AQIS 2003, “Australian system of certification of export products labelled as organic”, Department of Agriculture, Fisheries and Forestry, <http://www.aqis.gov.au/organic>.

Chaitoo, R. and Hart, M. 2000, “Labelling of GMO products: strategic trade policy considerations for Canada”, prepared for the Canadian Biotechnology Advisory Committee Project Steering Committee on the Regulation of Genetically Modified Foods, November 2000.

Donaghy, P. and Rolfe, J. 2001, “David vs Goliath: the bifurcation of public policy concerning organic agriculture and biotechnology in Queensland”, paper presented to the 45<sup>th</sup> Annual Conference of the Australian Agricultural and Resource Economics Society, Adelaide, South Australia, 22-25 January 2001.

Donaghy, P. and Rolfe, J. and Bennett, J. 2003, “Consumer demands for organic and genetically modified foods”, paper presented to the 47<sup>th</sup> Annual Conference of the Australian Agricultural and Resource Economics Society, Perth, Western Australia, 12-14 February 2003.

FSANZ (Food Standards Australia and New Zealand) 2001a, “Overview of food labelling: user guide to food labelling and other information requirements”, [http://www.foodstandards.gov.au/\\_srcfiles/general\\_labelling.pdf](http://www.foodstandards.gov.au/_srcfiles/general_labelling.pdf).

FSANZ 2001b, “Labelling genetically modified food: user guide to Standard A18/1.5.2— Food Produced Using Gene Technology”, [http://www.foodstandards.gov.au/\\_srcfiles/user\\_guide\\_GM\\_labelling\\_0817.pdf](http://www.foodstandards.gov.au/_srcfiles/user_guide_GM_labelling_0817.pdf).

FSANZ 2001c, “Standard 1.5.2— Food Produced Using Gene Technology”, <http://www.foodstandards.gov.au/whatisinfood/gmfoods/index.cfm>.

Gehring, T. and Jost, P. 1995, “Quack, lemon and self-regulation: a welfare analysis”, *Journal of Regulatory Economics*, pp. 309-35.

Golan, E., Kuchler, F. and Litchell, L. 2000, *Economics of Food Labelling*, AER-793, ERS, USDA,

Greene, C. and Kremen, A. 2003, *US Organic Farming in 2000-2001: Adoption of Certified Systems*, Agricultural Information Bulletin No. 780, ERS, USDA, Washington DC.

Grothers, L. 2000, “Australia organic products: organic market continues to expand 2000”, GAINS Report # AS0027, FAS, USDA, 8/24/2000.

Harris, J. and Cole, A. 2003, "The role of government in eco-labelling- on the scenes or behind the scenes?", paper presented to the Future of Ecolabelling Conference, Canberra, 9-10 October 2003.

Industry Competitiveness Committee 2002, "Industry consultation: summary record of discussion and resolutions", Regulation of Domestic Organic Food Industry Workshop, Canberra, 16 May 2002.

James, S. and Burton, M. 2003, "Consumer preferences for GM food and other attributes of the food system", *Australian Journal of Agricultural and Resource Economics*, vol. 47, no. 4, pp. 501-518.

Jessen, A. 2000, "Regulation of GMOs: food safety or trade barrier? an EU perspectives", European Union in the US, <http://www.eurunion.org/legislat/gmoweb.htm>.

Kinnear, S. 2000, "Implementation of domestic control on organic and biodynamic (foods) in Australia and New Zealand", <http://www.ofa.org.au/>.

Kortbech-Olesen, R. 2003, "The US and Canadian markets for organic fruit and vegetables", paper presented to the FAO Seminar on the Production and Exports of Organic Fruit and vegetables in Asia, Bangkok, Thailand, 3-5 November 2003.

Lovisol, R. 1997a, "Export requirements for the marketing of organic and bio-dynamic products", in Neeson, R. and Pearson, D (eds), *Conference Proceedings for Marketing Organic and Bio-Dynamic Products*, NSW Agriculture.

Lovisol, R. 1997b, "Federal government initiatives", in Dumaresq, D., Greene, R. and van Kerkhoff, L. (eds), *Organic Agriculture in Australia, Proceedings of the National Symposium on Organic Agriculture: Research and Development, 30 June – 3 July, 1996*, RIRDC Research Paper No. 97/14, RIRDC, Canberra, pp. 5-7.

Lyll, I. 2001, "Australian regulations for organic produce", in *Proceedings of the Inaugural OFA National Organics Conference 2001*, RIRDC Publication no. 01/121, RIRDC, Canberra, pp.79-80.

Macarthur Agribusiness & Quarantine and Inspection Resources Pty. Ltd. 1999, *Organic Certifier—AQIS Charge Review*, RIRDC Research Report MS900.20, RIRDC, Canberra.

May, R. and Monk, A. 2001, *Organic and Bio-dynamic Produce: Comparing Australian and Overseas Standards*, RIRDC Publication No. 01/05, RIRDC, Canberra.

McCluskey, J. 2000, "A game theoretic approach to organic foods: an analysis of asymmetric information and policy", paper presented to the 44<sup>th</sup> Annual Conference of the Australian Agricultural and Resource Economics Society, Sydney, 23-25 January 2000.

McCoy, S. and Parlevliet, G. 2000, *Export Market Potential for Clean & Organic Agricultural Products*, RIRDC Publication No. 00/76, RIRDC, Canberra.

McCoy, S. 2002, "Organic agriculture – introduction", Farmnote No. 21/2002, Department of Agriculture, Western Australia, <http://www.agric.wa.gov.au>.

Nelson, G.C. (ed.) 1999, *The Economics And Politics Of Genetically Modified Organisms In Agriculture: Implications For WTO*, Bulletin 809, University of Illinois Board of Trustees.

OPEC (Organic Produce Export Committee) 2002, *National Standard for Organic and Biodynamic Produce*, AQIS, Canberra, Australia.

ORR (Office of Regulatory Review) 1998, *A Guide to Regulation*, 2<sup>nd</sup> ed., <http://www.pc.gov.au/orr/reguide2/index.html>.

Pindyck, R. and Rubinfeld, D. 1995, *Microeconomics*, Prentice-Hall, Englewood Cliffs, New Jersey.

Samuel, G. 2003, "The big issues and the big ideas", speech to the Australis Industry Group National Industry Forum, Parliament House, Canberra, 11 August 2003, [http://www.accc.gov.au/speeches/2003/australian\\_industry\\_group\\_110803.pdf](http://www.accc.gov.au/speeches/2003/australian_industry_group_110803.pdf).

Shoemaker, R., Hardwood, J., Day-Rubenstein, Dunahay, T., Heisey, P., Hoffman, L., Klotz-Ingram, C., Lin, W., Mitchell, L., McBride, W., and Fernandez-Cornejo, J. 2001, "Consumer acceptance", in *Economic Issues in Agricultural Biotechnology*, pp. 28-35, ERS Agricultural Information Bulletin No. 762, USDA, <http://www.ers.usda.gov/publications/aib762/aib762.pdf>.

Taskforce on Industry Self-regulation 2000, *Industry Self-Regulation In Consumer Market*, Commonwealth of Australia, Canberra, <http://www.treasury.gov.au/self-regtaskforce>.

Trebilcock, M. 1983, "Regulation service quality in professional markets", in Dewees, D. (ed), *The Regulation of Quality: Product, Service, Workplace and the Environment*, Butterworths, Chapter 4.

Troeth, J. 2002. Official Opening. In: Proceedings for Avcare Summit: Building Australia's Food Chain - Link by Link. 14 October 2002, Sydney.

WA (Western Australia) Department of Agriculture 2002, "Domestic regulation of organic production, import, distribution and labelling", unpublished discussion paper.