# Going Organic

## Mobilizing networks for environmentally responsible food production

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# Acronyms

| | |
|---|---|
| AQIS | Australian Quarantine and Inspection Service |
| BFA | Biological Farmers of Australia |
| BSE | Bovine Spongiform Encephalopathy ('Mad Cow Disease') |
| CAP | Common Agricultural Program (European Union) |
| CSA | Community supported agriculture |
| DAFF | Department of Agriculture, Fisheries and Forestry (Australia) |
| DPI | Department of Primary Industries (Queensland) |
| EPOPA | Export Promotion of Organic Products from Africa |
| EU | European Union |
| EurepGAP | Euro-Retailer Produce Working Group Good Agricultural Practices |
| FSANZ | Food Standards Australia New Zealand |
| GE | Genetic engineering |
| GMO | Genetically modified organism |
| ICS | Internal Control System |
| IFOAM | International Federation of Organic Agriculture Movements |
| IPM | Integrated Pest Management |
| ISO | International Standards Organization |
| JAS | Japan Agricultural Standard |
| LISA | Low Input Sustainable Agriculture |
| NASAA | National Association for Sustainable Agriculture Australia |
| NOGAMU | National Organic Agricultural Movement of Uganda |
| NOP | National Organic Program (USDA) |
| NSW | New South Wales |
| OBE | Organic Beef Exporters |
| OFA | Organic Federation of Australia |
| OGTR | Office of the Gene Technology Regulator (Australia) |
| PGS | Participatory Guarantee Systems |
| PMP | Property Management Planning |
| SA | Soil Association (UK) |
| UNF | United Natural Foods |
| UK | United Kingdom |
| US | United States of America |
| USDA | United States Department of Agriculture |
| WWF | Worldwide Fund for Nature |

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# 1

# Introduction

There is a familiar story about organic food and agriculture that anyone interested in the industry will have heard many times. Organic farming techniques were pioneered in the early twentieth century by small groups of farmers concerned about the effects of mechanization, fertilizer use and other forms of intensification on the biological health of the soil. The key to healthy plants, animals and people, they believed, was the diversity of lifeforms found in the soil. The key to successful farming, therefore, was to feed the soil, not the plant. The more widespread dissemination of agricultural chemicals in the years following World War II prompted more farmers to join this group, but organic farming remained marginal and largely invisible next to modern industrial agriculture. Much organic produce was sold on the conventional market simply because there were so few organic retail outlets. The countercultural movements of the 1960s and 70s—along with key publications such as Rachel Carson's *Silent Spring*—provided a boost for the nascent industry. The counterculture drew wider attention to the environmental and personal impacts of agricultural chemicals and fertilizers, expanded the consumer base for organic food, and experimented with new ways of accessing organic food such as wholefood stores and cooperatives. However, it was the confluence, in the 1990s, of opposition to new biotechnologies, food scares such as Mad Cow Disease (*Bovine Spongiform Encephalopathy*, BSE), an ongoing international farm crisis, and the rising affluence of now middle-aged 60s 'flower children', that set the stage for the dramatic, and in many ways unanticipated, growth in consumer demand for certified organic produce. In response to this demand, organic farmers increased production, new organic farmers, processors and retailers entered the industry, certification bodies began to define more systematically what practices were, and were not, acceptable in organic production and processing, some governments began to take organics seriously, and the size of the organic market rose, and continues to rise, exponentially.

All foundation stories are prone to oversimplifying and romanticizing the complex webs of motivations, strategies, coincidences, setbacks, unintended

consequences and sheer strokes of luck that lead to any large-scale social phenomenon. The foundation story described above says nothing, for example, of the involvement of many early British organic movement activists in a variety of far right political groups, or the connections they saw between science, soil health, human potential, rural reconstruction and, more dubiously, racial determinism, eugenics and feudalism (Reed 2001; Reed and Holt 2006). The point here is not to debunk organic food and agriculture by suggesting that beneath its wholesome image lies an underbelly of secret agendas and morally repugnant politics. At any rate, the influence of Ghandiism on key figures during the late 1960s saw this questionable mix of eugenics and nationalism replaced with an altogether different ideology based on the ethical treatment of environments, animals and people (Reed 2001). The point is, rather, that what is going on in the contemporary organic industry—and in agriculture more generally—is a good deal more interesting than the story outlined above of consumer panic in the face of food scares and new technologies might imply. Growing even more rapidly, for example, over the last few years than the market for organic foods has been the market for fairly traded foods and crafts (Raynolds 2003). Fair Trade emphasizes the payment of prices to Southern producers sufficient to ensure both a living wage and the use of desirable environmental practices. This emphasis speaks to notions of quality that extend beyond the physical characteristics of a product to include the social and ecological conditions under which it was produced. The Slow Food movement, similarly, has sought to re-establish authentic local food cultures, tradition, freshness and seasonality as primary dimensions of food quality. Originating in Italy in 1986, Slow Food now counts at least 80,000 members in 40 countries (Miele and Murdoch 2002). Given the successes of Fair Trade and Slow Food, it is not much of a stretch to wonder whether the growing popularity of organic foods might relate to more factors than the potential absence of 'scary' residues and genetically modified organisms (GMOs).

The need to tell a more complex story about organic food and agriculture stems not from pedantry, or purely academic interest, but from the need to use the experiences of the organic sector to transform more radically the ways in which we produce, distribute and consume food on a global scale. Despite the rapid growth experienced by the organic sector in recent years, it remains dwarfed by so-called conventional food and agriculture. Failure to examine critically the basis of organic sector growth leaves us exposed to a number of undesirable futures. First, it leaves the organic industry itself vulnerable to a future in which growth plateaus before the market for organic food expands beyond its existing niche status. Second, we risk, as a consequence of this, a future in which organic food is available only to a privileged minority. Meanwhile, the majority of consumers, farmers, and farm workers, will be forced to accept a future characterized by the presence of GMOs, agri-chemicals and hormones in their food and workplaces whether they like it or not. Third, we risk a future in which the opportunity is lost to disseminate the biological farming techniques practiced

by organic farmers more widely—that is, the opportunity to establish something very like organic agriculture as the norm for food production rather than as the exception. As a flip side to this, sharp lines of demarcation between organic and non-organic agriculture generate an associated risk that the organic farm sector will fail to capitalize on practices and marketing channels generated outside their own networks of innovation. Fourth, and perhaps most importantly, we risk a future in which choice over what foods farmers grow, where they grow them, how, and who gets to eat them, is controlled by a small group of profit-centred corporations. Democracy is not just an attractive political ideal. Access to resources and meaningful participation in decision-making are issues of social justice—ones fundamental to food security and community health and well-being. If the organic industry is to promote these values it must do more than offer an alternative approach to food production and consider how certification requirements, research, knowledge dissemination, market development, and so on, can each contribute to widening the production and livelihood options for everyone in the organic food chain.

Putting the organic sector under the microscope will not be sufficient, by itself, to usher in a new age of democratic and environmentally-friendly food production and distribution. In order to take some tentative steps in this direction, we take as our central problematic in this book the process of *mobilization*. We are concerned, in other words, with who is involved in organic food and agriculture, why, and how further involvement might be encouraged.

## What is organic food and agriculture?

For most people, organics is understood as food or fibre grown without the use of artificial fertilizers, chemicals, growth hormones or GMOs. This provides a *minimalist* definition in which organic food and agriculture are defined only in terms of what they are not. Organic movement organizations and activists tend also, however, to suggest more *holistic* definitions of organic food and fibre as produce grown using practices that enhance soil health, biodiversity, and natural ecological processes of nutrient and energy recycling; that allow animals to act out natural patterns of behaviour; and which reduce the impacts of farming on the wider landscape. In practical terms, this means utilizing management practices and farm-derived renewable resources as much as possible in place of all off-farm inputs—natural and synthetic. Green manure crops, for example, reduce the need for fertilizer applications by capturing atmospheric nitrogen, drawing other nutrients from deep within the soil profile, and concentrating these near the soil surface where they become available to other plants. Similarly, inter-cropping, flowering plants, and wildlife refuges, attract insect predators to keep pest species in check, while grazing practices that mimic the natural movements of migrating herbivores reduce the incidence of weedy plant species. When nutrients are

brought onto the farm, they are brought in the form of natural materials such as composted manures and plant residues, worm castings, and so on.

According to some commentators, the differences between minimalist and holistic definitions of organic food and agriculture are philosophical as well as practical (Guthman 2004a, 2004b). There are a number of producers and other businesses that have been attracted to the organic industry in recent years, critics argue, for whom organics is little more than a lucrative market segment accessed through the avoidance of certain proscribed substances. On the other hand, adherents to a more holistic understanding of organics, it is argued, subscribe not only to the avoidance of proscribed practices but to a wider set of beliefs about the need to farm in harmony with nature, foster a sense of community through food, and otherwise challenge the supposition that food is little more than a commodity to be sold at a profit. While we will return to this theme throughout the book (see Chapters 2 and 5 in particular), we will say at this point that this simple demarcation between minimalist and holistic philosophies of organics should not be taken at face value. There is considerable variation of opinion within the organic movement over how best to implement a holistic understanding of organics and an abiding temptation, therefore, for movement members to dismiss alternative perspectives as superficial and/or misguided. In the absence of consensus over what a holistic approach to organics might entail, corporate participants and other relative newcomers to the organic sector are easy targets for suspicion and criticism. Yet, is there sufficient evidence to support a cynical attitude towards these groups?

Increasingly, the most critical factor in the definition of particular foods and fibres as organic is the official *certification* by an independent third party of the farm from which they have originated and of the processing and distribution nodes through which they have passed. A number of commentators have argued that the emphasis of certification processes on compliance with minimum standards necessarily promotes the minimalist notion of organics at the expense of a more holistic one (Guthman 2004b). However, there can be little doubt that third party certification has been critical to rapid expansion of the organic sector and that sale of non-certified produce as organic—especially on the international market—is increasingly difficult. Generating trust among consumers, it would seem, does require communicating the providence of food and the ecological values of production and processing sectors of the agri-food industry. For these reasons, we will devote the vast bulk of our analysis in this book to the analysis of certified organic foods. However, not wanting to take anything here for granted, the politics and implications of certification will be discussed in more detail in Chapter 4.

Box 1.1. Official definitions of organic agriculture

**International definitions and standards**

While there is no international regulation of the organic industry, the International Federation of Organic Agriculture Movements (IFOAM) maintains a set of 'basic standards' with which member organizations are expected to comply. IFOAM also has established a Code of Conduct for Organic Trade that stresses issues related to social justice and relationships with the Fair Trade movement. According to IFOAM (www.ifoam.org):

> Organic agriculture is an agricultural production system that promotes environmentally, socially and economically sound production of food and fibres, and excludes the use of synthetically compounded fertilizers, pesticides, growth regulators, livestock feed additives and genetically modified organisms.
>
> Utilizing both traditional and scientific knowledge, organic agricultural systems rely on practices that promote and enhance biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain or enhance ecological harmony.
>
> The purpose of organic agriculture is to optimize the health and productivity of interdependent communities of soil life, plants, animals and people. Organic agriculture adheres to globally accepted principles which are implemented in specific social, economic, geo-climatic and cultural contexts.
>
> The principle aims of organic production and processing are outlined in the IFOAM Basic Standards. These set out an international framework for organic production and processing.

**United States of America**

After some controversy over the proposed inclusion of GMOs, untreated sewage sludge and irradiation techniques, the United States Department of Agriculture (USDA) introduced a uniform national standard in 2001 that precluded these inputs and practices. Regulations cover production and handling, labelling, certification processes, accreditation of certification bodies and imported produce. According to the USDA (www.ams.usda.gov/nop):

> Organic food is produced by farmers who emphasize the use of renewable resources and the conservation of soil and water to enhance environmental quality for future generations. Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones. Organic food is produced without using most conventional pesticides; fertilizers made with synthetic ingredients or sewage sludge; bioengineering; or ionizing

radiation. Before a product can be labelled 'organic', a Government-approved certifier inspects the farm where the food is grown to make sure the farmer is following all the rules necessary to meet USDA organic standards. Companies that handle or process organic food before it gets to your local supermarket or restaurant must be certified, too.

**Europe**

The European Union also legally defines use of the term 'organic' and establishes minimum standards for organic production that individual countries must translate into their own law. In the United Kingdom, the Department of Food and Rural Affairs licences certification bodies such as the Soil Association to develop these standards further and thence to audit and certify growers, distributors etc. The Soil Association stresses, however, that there is more to organics than certification and is active in lobbying and consumer awareness:

> organic systems recognize that our health is directly connected to the health of the food we eat and, ultimately, the health of the soil ... Going organic isn't just about organic food—it's a way of life.

**Australia**

Unlike Europe and the US, Australia has no uniform national definition of organic food or standards for its production, processing and distribution with the exception of a standard for exports administered by the Australian Quarantine Inspection Service (AQIS). Independent certification bodies such as Biological Farmers of Australia (BFA) and the National Association for Sustainable Agriculture Australia (NASAA) maintain standards that are, in most cases, consistent with AQIS and IFOAM minimums. Thus, BFA states that (see www.bfa.com.au):

> Certified Organic products are grown and processed without the use of synthetic chemicals, fertilizers, or GMOs. It is an innovative method of farming and production— and is increasingly being recognized as being on the leading edge of food and fibre technology into the future.
>
> Organics is not just chemical free by testing. It is about the way your food is grown and handled. The whole system is linked— Soil. Plants. Animals. Food. People. Environment.
>
> Standards to achieve this are internationally recognized, and are assured through annual audits of all certified operators by an independent third party auditor.

Box 1.2. Variations on a theme: alternative approaches to 'organic' agriculture

It is not unusual for those unfamiliar with the organic sector—or with sustainable agriculture in general—to become confused at the plethora of terms that sometimes seem to be saying pretty much the same thing. To limit confusion, we define here some of the main variations on the organic theme.

*Biodynamic Agriculture* originates in a series of lectures given by the Austrian philosopher Rudolf Steiner in 1924. Biodynamics promotes an understanding of the farm as a living system and aims to renew the soil in order to produce nourishing and energizing foods. While, in doing so, biodynamic farmers use practices consistent with organic definitions and standards, a number of these practices, and the philosophies behind them, are unique. Biodynamics stresses the integration of science, spirituality and farming through observation of the multiple influences on soil, plant and animal life—influences that include the rhythms of the sun, moon, planets and stars. In practical terms, this means that in addition to those practices widely used by organic farmers, biodynamic farmers: first, consider the timing of major activities such as cultivation and planting in relation to the Luna calendar; and second, utilize a variety of preparations derived from natural sources (including animal manures, plants and minerals), and at very low concentrations, to stimulate soil and plant life. Farmers may be certified as biodynamic growers through specialist organizations such as Demeter or the Biodynamic Farmers and Gardeners Association, and/or as organic growers through organic certification organizations (Wildfeuer 1995).

*Permaculture*, a contraction of the phrase 'permanent agriculture', was a term coined in Australia in the mid 1970s by ecologist David Holmgren. Permacultural practices and its underlying philosophy were to be later promoted in Australia and worldwide by Holmgren's associate, Bill Mollison. Permaculture is an approach to the design of human environments that aims to promote environmental, social and economic sustainability. While this is consistent with organic and biodynamic agriculture, the focus is shifted from farming practices to the application of design ethics and principles that are relevant to any sphere of human activity such as transport, urban planning, forestry etc. Permaculture ethics are based on cooperation, caring for the earth, caring for people and distributing surplus. Design principles include: energy efficiency, biological diversity, treating pests and waste as resources, utilizing each system component to perform multiple functions, using biological processes to create favourable ecosystems, and so on. Permaculture has demonstrated wide appeal among those pursuing self-sufficiency lifestyles and has been applied most to small-scale systems. However, the design methods, ethics and principles are applicable at any scale and entirely compatible with many other planning systems developed for largeholder agriculture.

*Agro-ecology* refers variously to the full and complex variety of social-ecological processes implicated in agricultural production; an academic field concerned with research into those relationships; and an approach to agricultural sustainability based on conserving the natural resource base, reducing reliance on external inputs, and managing pests and diseases through natural ecological processes.

*Low Input Sustainable Agriculture* (LISA) was initiated by the United States Department of Agriculture in 1985 as a research program to support farmers who wished to use synthetic fertilizers and chemicals at rates below those generally recommended by advisory services. While not focused on the elimination of synthetic inputs, the program encouraged the development of lower input options for otherwise conventional farmers. In 1990, LISA was re-named the Sustainable Agriculture Research and Education Program.

## How big? How fast?

It is not uncommon for growth rates in the market for certified organic food to be estimated at 20 to 40 per cent (Sahota 2004). However, calculating rates of growth, or decline, in the organic sector accurately at an international level is hampered by limited data availability and uniformity. Some statistics on sales and land area include produce and farms that are certified as 'in conversion' rather than as fully organic—others do not. More recent statistics on acreage tend to include farms that simply were missed in earlier rounds of data collection. Consequently, data on changes in the retail value of certified organic foods appear to be more reliable.

It is estimated that in 2003 more than 24 million hectares worldwide were managed for organic production and a further 10.7 million were used for wild harvesting of plants that were subsequently certified as organic (Yussefi 2004). Organic land area was dominated by Australia, which accounted for over 10 million hectares of certified organic land (see Table 1.1). Latin America accounted for 5.8 million hectares under certified organic management; Europe 5.5 million hectares; North America 1.5 million hectares; Asia 880,000 hectares; and Africa 320,000 hectares. Australia's leading position as the nation with the greatest area of organic production and large average farm sizes is explained by organic grazing activities. The semi-arid landscapes that dominate inland Australia offer few opportunities for cropping and horticulture but are well suited to organic livestock production with few fly and tick problems. This is also the case for Argentina and Uruguay. Indeed, less than half the land certified for organic production internationally was deemed suitable for cropping. In comparison, an estimated 68 million hectares were sown to genetically modified (GM) crops—primarily in North America where the land area under organic management was comparatively low. This represented a 40-fold increase over the area planted to GM crops internationally in 1996 and some 25 per cent of the total

cropped area (Pew Initiative on Food and Biotechnology 2004). While organic farming is practiced on a significant minority of the world's agricultural lands, it needs to be recognized that forms of agriculture fundamentally inconsistent with organic production standards are staking their own claim to the transformation of food and agriculture.

In 2002, it was estimated that the global retail market for organic food and drink was worth approximately US$23 billion (Sahota 2004). Of this, North America accounted for US$11.75 billion, Europe US$10.5 billion, Japan US$350 million and Oceania US$200 million. The Latin American share of the global organic retail market was a mere US$100 million. The rest of Asia and the whole of Africa accounted for less than US$200 million. Despite the presence of substantial organic production sectors (5.8 million hectares in Latin America, 320,000 hectares in Africa and 875,000 hectares in Asia excluding Japan), the vast bulk of produce from these regions is exported to wealthier consumers in the West (see Yussefi 2004).

## Is organics the only path to sustainability?

Based on a 22 year comparison of organic cropping systems with conventional minimum tillage cropping systems (see Box 1.3) at the Roedale Institute in Pennsylvania, Pimentel *et al.* (2005) conclude that organic systems deliver consistent environmental benefits including reduced chemical and energy use, reduced soil erosion, water conservation and improved soil organic matter and biodiversity. The yield and profitability of organic systems relative to conventional systems are more variable—depending on the particular crops, regions and technologies that are employed. However, Pimental *et al.* found many instances in which organic systems either matched, or exceeded, the productive and economic performance of conventional systems. The length and rigour of this trial make a compelling case for continuing research and application of organic farming practices.

Nevertheless, the answer to the above question remains 'no'. Other approaches to farming that are not certified organic have legitimate claims to the delivery of environmental and social benefits. Furthermore, not all organic operations are necessarily sustainable. It is possible, for example, for organic producers to avoid the use of synthetic chemicals but do little to ensure that soil nutrients are replaced over the growing cycle. In other words, if nutrient cycles are not closely monitored organics can 'mine' the soil as might conventional farming practices. The Roedale trials analysed by Pimentel *et al.* were based on application of the best available management practice for each plot—organic and conventional—something that cannot always be assumed among the wider farming community.

Table 1.1. Estimated land area under organic certification—selected countries (adapted from Yussefi 2004)

| Country | Organic land area (ha) | Percentage of total agricultural area (%) | Number of farms | Average farm size (ha) |
|---|---|---|---|---|
| Australia | 10,000,000 | 2.2 | 1,380 | 7,246 |
| Argentina | 2,960,000 | 1.7 | 1,779 | 1,664 |
| Italy | 1,168,212 | 8.0 | 49,489 | 24 |
| United States | 950,000 | 0.2 | 6,949 | 137 |
| Brazil | 841,769 | 0.2 | 19,003 | 44 |
| Uruguay | 760,000 | 4.0 | 500 | 1,520 |
| United Kingdom | 724,523 | 4.2 | 4,057 | 179 |
| Germany | 696,978 | 4.1 | 15,628 | 45 |
| Spain | 665,055 | 2.3 | 17,751 | 37 |
| France | 509,000 | 1.7 | 11,177 | 46 |
| Canada | 478,700 | 1.3 | 3,510 | 136 |
| Bolivia | 364,100 | 1.0 | 6,500 | 56 |
| China | 301,295 | 0.1 | 2,910 | 104 |
| Austria | 297,000 | 11.6 | 18,576 | 16 |
| Czech Republic | 235,136 | 5.1 | 654 | 360 |
| Mexico | 215,843 | 0.2 | 53,577 | 4 |
| Sweden | 187,000 | 6.1 | 3,530 | 53 |
| Denmark | 178,360 | 6.7 | 3,714 | 48 |
| Finland | 156,692 | 7.0 | 5,071 | 31 |
| Peru | 130,246 | 0.4 | 23,057 | 6 |
| Uganda | 122,000 | 1.4 | 33,900 | 4 |
| Switzerland | 107,000 | 10.0 | 6,466 | 17 |
| Hungary | 103,672 | 1.7 | 1,116 | 93 |
| Paraguay | 91,414 | 0.4 | 2,827 | 32 |
| Portugal | 85,912 | 2.2 | 1,059 | 81 |
| Ecuador | 60,000 | 0.7 | 2,500 | 24 |
| Turkey | 57,001 | 0.1 | 18,385 | 3 |
| Tanzania | 55,867 | 0.1 | 26,986 | 2 |
| Poland | 53,515 | 0.4 | 1,977 | 27 |
| Slovakia | 49,999 | 2.2 | 84 | 595 |
| Aotearoa/New Zealand | 46,000 | 0.3 | 800 | 58 |
| South Africa | 45,000 | 0.1 | 250 | 180 |
| Netherlands | 42,610 | 2.2 | 1,560 | 27 |
| Indonesia | 40,000 | 0.1 | 45,000 | <1 |
| Romania | 40,000 | 0.3 | 1,200 | 33 |
| India | 37,050 | <0.1 | 5,147 | 7 |
| Kazakhstan | 36,882 | na | 1 | 36,882 |
| Colombia | 33,000 | 0.2 | 4,500 | 7 |

| | | | | |
|---|---|---|---|---|
| Norway | 32,546 | 3.1 | 2,303 | 14 |
| Estonia | 30,552 | 3.0 | 583 | 52 |
| Costa Rica | 13,967 | 3.1 | 3,987 | 4 |
| Japan | 5,083 | 0.1 | na | na |
| Liechtenstein | 984 | 26.4 | 41 | 24 |

Things get even more complicated when we start looking beyond the field or farm scale to consider the ecological and social processes in which farms are enmeshed at regional, national and global scales. And they get more complicated still when we consider the multiple ways in which a concept like sustainability might be interpreted. While the definition of sustainability as meeting the needs of the present without compromizing the ability of future generations to meet their own needs is widely accepted (WCED 1987), much ink has been spilt trying to work out what, in practice, this might mean. Pretty (1998) suggests that the shorter term goal of sustainability is not to design a steady-state environmental utopia. Rather, it is to identify and enhance those components of agro-ecologies that help these systems to regenerate themselves in the face of disturbance. Such components range from natural resources such as soil biota through to social resources such as knowledge, vibrant local economies, and so forth. We do not wish to get bogged down here either in trying to define the concept of sustainability too tightly or reviewing alternative approaches to it too comprehensively. However, we do think it important to highlight the major approaches to agricultural sustainability and some of the issues these raise for the organic sector. It is possible to discern, we would argue, four broad models, or approaches to sustainability, into which the majority of sustainable agriculture programs and practices may be grouped. These may be described as the input-output model, the natural systems model, the bioregional model (or bioregionalism), and the eco-social model.

- *Input-output model:* this model conceives sustainability in terms of efficiency (Waltner-Toews and Lang 2000; see also Pretty 1998). Agricultural chemicals, fertilizers and biotechnologies ensure optimum conditions for plant and animal growth by controlling pests and ensuring nutrient needs are met. Environmental damage is minimized by controlling the loss of nutrients, chemicals and soil from the farm. Relatively unexamined, if at all, are the environmental and social costs of producing, transporting and using petrochemically derived fertilizers and chemicals. This is the most pervasive approach to sustainability within contemporary food networks.
- *Natural systems model:* this model construes sustainability in terms of the ability of farming systems to provide for their own needs and to recover from environmental perturbations such as pest infestations. Farming systems are designed in ways that mimic the productive processes and inherent checks and balances of nature. Farming in this manner is management intensive rather than input intensive.

- *Bioregionalism* seeks to integrate individual enterprises at a regional level in a manner that preserves the integrity of existing ecosystems and landscapes. Watersheds, or catchments, often serve as the unit for bioregional planning, management, and institutional reform, due to the role of water in linking physical and ecological processes throughout landscapes.
- *Eco-social model:* this focuses on the organization of social relationships to meet diverse human and ecological needs. Social and economic considerations extend beyond farm viability to include issues such as the vibrancy of rural economies, the needs of food consumers, and so on. Emphasis is placed, again, on the ability of systems to provide for their own needs and adapt to changes in the wider environment, but at a wider scale than the natural systems model and with an overt concern to integrate the social and the natural.

In practice, these models are not always mutually exclusive. Many individual farms that utilize the input-output model at the field level may use tools at a whole farm level that are more redolent of natural systems thinking. Input intensive practices, for example, such as conventional cropping regimes may be implemented with consideration of factors such as where they might be located so as to avoid environmentally sensitive or important landscape components (e.g., streambanks) and to capitalize on the ecosystem services generated by others (e.g., windbreaks). Planning at a bioregional level, similarly, may accommodate both input-output and natural systems approaches by encouraging active management of the off-site impacts of farming activities.

Box 1.3 summarizes a range of programs and practices that provide examples of these four models. Reviewing these supports several broad conclusions: (1) certifying farms as organic is not sufficient to ensure they adopt holistic understandings of organics or sustainability as reflected in the natural systems model; (2) neither is certifying individual farms as organic sufficient to guarantee sound environmental management at the community and landscape scales highlighted by the eco-social and bioregional models; (3) there are many attempts to develop more sustainable food systems outside the certified organic sector that have a great deal of merit; and (4) there is sufficient variability within both organic and conventional sectors to make treating questions of sustainability as a straightforward choice between organic and non-organic agriculture a nonsense.

## Is organic food better for you?

Again, the answer is more complex than a simple 'yes' or 'no'. Debate about the non-environmental attributes of organic food usually focus on health; particularly on whether organic foods contain: first, less chemical residues; and second more vitamins and minerals, than do conventional foods. Unfortunately, these questions cannot be answered simply by walking into a store, selecting outwardly similar

organic and conventional products, sending them to the laboratory and waiting for the results. The problem here is one of sampling. Food quality is affected by numerous pre- and post-harvest factors—ranging from seasonal conditions to storage times and processing methods—that can lead to considerable variation among both organic and conventional foods. To put it crudely, a certified organic vegetable that has turned limp sitting too long on the supermarket shelf is unlikely to be more nutritious than a freshly picked alternative whether the latter is organic or not. Small studies based on limited samples are unlikely, therefore, to produce reliable results.

In a review published by the Soil Association of 400 scientific papers and reports, Heaton (2001) concludes that despite a great deal of contradictory evidence, on balance it appears that organic foods contain less harmful additives and more primary and secondary nutrients than conventional foods, and carry no additional risk of food poisoning. In fact, several studies of mycotoxin contamination in organic and conventional foods suggest that, contrary to popular wisdom, conventional foods are more likely to be contaminated with potentially dangerous fungi than are organic foods (Benbrook 2005). Focusing on particularly vulnerable groups, the US National Academy of Sciences concluded in 1993 that pregnant women, infants and children face potentially significant developmental and endocrine-system risks from even low-level pesticide exposures—such as those resulting from chemical residues in food—during important stages of development (Benbrook 2004). Occupational exposure to pesticides, meanwhile, has been associated with a significantly increased chance of developing prostrate cancer (Alavanja *et al.* 2003), suffering Parkinson's disease (Semchuk *et al.* 1992) and parenting children with birth defects (Garry *et al.* 1996). This is a brief and selective overview of available studies. Nevertheless, there is limited, if any, scientific evidence that eating certified organic foods is likely to cause harm, and rather more to suggest it may be beneficial.

Importantly, nutrition is not always a function of the vitamins, minerals and additives that may, or may not, be found in particular foods. It is a function also of access to foods and the resources either to grow or purchase them. Although it is often assumed that the retail price premiums Western consumers pay for certified organic foods limit their consumption to the comparatively well off (see Chapter 7 for a critical appraisal of this assumption), adopting organic production practices has helped many poorer communities escape the treadmill of indebtedness and food insecurity often associated with conventional cash crop production (Halweil 2004; Parrott and Marsden 2002). Again, the improvement of farm incomes and the revitalization of local economies is not an inevitable outcome of the adoption of organic production practices but, when allied with one or more of the eco-social initiatives outlined in Box 1.3, the potential for significant community-level benefits is enhanced.

## Approach to the book

As stated above, we take as our central problematic in this book the process of mobilization. Who is involved in organic food and agriculture networks? Why? And what opportunities exist to encourage greater participation? As basic as these questions might seem, the answers to them do not always accord with widely held views either within or outside the industry. Their answers also are of wider relevance, we would argue, to the promotion of more sustainable food networks irrespective of whether these are certified organic or not. Indeed, rather than treating the expansion of certified organic food networks as an end in itself we regard the processes and symbolism of certification as just one of the many factors that must be considered in explaining the mobilization of people, plants, animals, technologies and so on around the idea of 'organics'.

The focus on mobilization has led us to organize this book loosely around the concept of a commodity chain. Not only does the notion of a commodity chain highlight the multitude of actors involved in the production, distribution and retailing of food, it highlights also the relationships between those actors and the role of food as a medium of power among them. However, the book is not organized entirely around this concept, for there remain a number of critical domains of social interaction at one or more steps removed from the production and exchange of organic foods that are drawn into their networks nevertheless. These include governance and the mass media. In seeking to treat the organic sector relatively comprehensively in this manner we highlight what is potentially the major limitation of this book; namely, that it is not more comprehensive. Not all links in the organic commodity chain, or network, are dealt with in the same detail. And while the book addresses issues of global importance, the data are predominantly Australian. We deal with these limits by including comparative international data wherever possible and by drawing out the lessons that have been learnt from our research about mobilization, how the mobilization of particular actors has shaped the organic sector, and how further mobilization might be encouraged. At face value, these lessons will appear much more relevant to those parts of the world that share a highly industrialized and capital intensive agricultural sector. However, exports of the major share of certified organic foods grown in poorer southern countries to wealthier markets in the north are suggestive of a wider relevance.

Taking up this theme, Chapter 2 considers the current position of organic food within international networks of food production, trade and consumption characterized by widescale concentration, industrialization and globalization. Through critical review of these processes the chapter both sets out the basic concepts that will guide analysis throughout the book and the research questions they suggest. Among these are the concepts of 'conventionalization' and 'bifurcation', which have been defined as processes through which the organic sector becomes increasingly polarized between large-scale industrial producers

who differ little from their conventional counterparts and a small residual of artisanal producers who, while remaining truer to the ideals of organics, become less and less significant as suppliers of organic food.

Chapter 3 deals with media politics and the ways in which organic food and agriculture have captured media agendas in relation to food safety and environmental care. The chapter deals also with strategies used by critics to debunk organic foods and shape media discourses in a manner that is more favourable to conventional agriculture and the new biotechnologies. But, despite this, the chapter finds that organic foods are overwhelmingly constructed through the mass media as *the* 'natural' alternative to 'risky' industrialized foods.

The manner in which organic food and agriculture is governed and regulated is dealt with in Chapter 4. This chapter examines the reliance of the organic sector on both private and public regulation and the criticism this has generated that regulation has promoted the industry's conventionalization, as well as undermined other ways of establishing trust, and so on. It also examines the role the organic industry has played as a pioneer in the development of independent quality certification processes that increasingly are represented in a host of alternative quality assurance programs. It also examines the increasing influence of large food retailers in the regulatory process and the increasing promotion, through organic agriculture, of a range of other social and environmental policy goals.

The movement of organic food along some sort of commodity chain becomes more evident in Chapter 5, which deals with the production of organic foods. It considers who is growing organic foods, why, and whether this is leading either to the conventionalization of the organic industry or a bifurcation between smaller and larger growers. The chapter addresses these questions through consideration of changes in both the economic scale and ideological basis for organic farming. With large numbers of farmers still entering the organic industry, the chapter looks also at the process of conversion and its risks and benefits.

Chapter 6 focuses on the spheres of distribution, trade and retailing. Challenging the popular belief that 'consumer demand' is driving growth in the organic sector, there can be little doubt that the positioning of major food processors and retail chains as responsible corporate citizens through the promotion of organic products has also played a significant role. This chapter will investigate where organic food is sold and what price premiums it attracts. It examines the ways in which retailers and others have attempted to use organic and other quality-certified products to represent themselves as champions of consumer demands and interests while limiting exposure to liability for food-borne risk. But the interest of major retail chains and processors is not the only dynamic in the organic market. The chapter thus looks also at direct marketing methods which also are growing in popularity.

Box 1.3. Multiple approaches to agricultural sustainability

**Input-output models**

*Conservation Farming* (also known as reduced tillage, minimum tillage and no-till farming) replaces mechanical cultivation with chemical-based weed control. This helps to minimize soil erosion while enhancing soil organic matter content, soil structure, and soil water and nutrient holding capacity.

*Precision Farming* (also known as prescription farming, site-specific management) uses GPS (global positioning systems), remote sensing, and other technologies to apply chemicals and fertilizers at variable rates across fields according to need. This reduces overall rates of input use and wastage by applying only what is needed where it is needed (Pretty 1998).

*Controlled Traffic Farming* restricts the use of machinery to specified tracks within a field, thus limiting soil compaction and promoting water infiltration and soil conservation.

*Genetic Engineering* uses recombinant-DNA technology to transfer specified pieces of DNA from one organism to another. Proponents argue this offers untold opportunity to develop crops and animals with enhanced productive, nutritional and environmental performance. To date, most applications have concentrated on herbicide tolerance (Norton 2001).

**Natural systems models**

*Organic Farming* is farming in a manner that eschews the use of synthetic inputs and which relies instead on practices that enhance natural ecological processes of nutrient and energy recycling and which promote animal welfare.

*Integrated Pest Management* (also known as Integrated Production) replaces sole reliance on chemical pest control with use of multiple methods directed through understanding of pest life cycles and population monitoring. Methods include encouragement of predator species, mechanical control, and chemical application. Compliance with IPM principles has become mandatory for farmers wishing to access farm support in a number of EU countries.

*Whole Farm Planning*, also termed Property Management Planning (PMP), is the integrated management of ecological, human and capital resources at a whole farm scale. Typically PMP involves a process of mapping out the physical resources, attributes and layout of the farm as a basis for re-assessing existing practices and managing them according to land use capability and production and financial goals.

**Bioregional models**

*Integrated Catchment Management* (also known as Integrated Watershed Management) integrates natural resource planning and management activities at a catchment/watershed scale. Components may include water resources, soil conservation, forestry, flood mitigation, urban planning, and so on.

*Landcare* (or the Australian Landcare Program) is a network of state-sponsored community groups comprised mostly of farmers and other landholders working to address land and water degradation through cooperative local planning, learning and action (Lockie 2001). Elements of Landcare have been emulated in a number of other countries including the Philippines and South Africa.

**Eco-social models**

*Community Supported Agriculture* is a means for farmers to market direct to consumers who subscribe to receive a share of farm produce over a pre-specified period (usually one growing season). This supports environmentally-sound production by increasing the share of consumer expenditure flowing directly to farmers, sharing the risks of production between producers and consumers, and educating consumers about the realities of food production. Other means of increasing direct interaction between farmers and consumers include Farmers' Markets and farm-gate sales (Lezberg and Kloppenburg 1996).

*Multi-functional Agriculture* is a concept increasingly embedded in European rural, agricultural and trade policy which stresses the variety of policy goals—other than maximizing production—to be pursued in relation to agriculture. Other goals include the preservation of viable rural communities, rural cultures, and environments (Hollander 2004).

*Slow Food* is an international movement originating in Italy that seeks to promote authentic local food cultures based on tradition, fresh seasonal foods, and resistance to the homogenizing pressures of globalization and industrialization (Miele and Murdoch 2002).

*Fair Trade* is focused primarily on promoting market linkages (through branding and supply chain development) that pay, at minimum, a living wage to largely Southern producers and workers. Many Fair Trade products stress also a range of environmental attributes—such as organic production methods and biodiversity conservation—that payment of fairer prices enables producers to sustain (Raynolds 2003).

Who eats organic food and why? Chapter 7 addresses this question both demographically and ideologically by looking at how personal characteristics, beliefs and motivations interact to influence food consumption. While this will provide evidence that organic food consumption is increasingly mainstream, it also will provide evidence that consumers are confused or ambivalent about many of the claims and counter-claims about organic food and that very specific factors make a substantial difference to the likelihood that people will invest in consuming a major proportion of their diet as organic.

Chapter 8 considers the future for organic food and agriculture in light of the many processes and strategies identified throughout the book. Organics has helped to force change in the way a whole range of non-organic commodities are produced and certified for their quality, safety and environmental attributes. But can the organic industry, as we know it, survive either the plethora of 'green' products and certification systems flooding the market or the large corporate farms, processors and retailers adding organics to their portfolios? The recent history of growth in organic production and consumption provides no guarantee of equally fertile conditions for the organic sector in the future.

The book will conclude by summarizing strategies to mobilize people in support of more sustainable food networks and ongoing challenges for the organic movement.

# 2

# Positioning Organics: The Global Context for Organic Foods

Unprecedented growth in the organic sector over recent years may be interpreted in a number of ways. For some, dramatic expansion in output and sales is unambiguously positive. The belief is that more organic foods in the global marketplace means greater accessibility to foods untainted by agrichemicals, genetically-modified organisms, and other 'unnatural' technologies—thus creating better health options. Similarly, more land under organic production means a greater likelihood that farming will be conducted in a sustainable manner. And the rejection of industrial production, processing and distribution methods opens opportunities to enhance traditional food cultures, cuisines and skills while re-asserting values of community, identity and place. Not surprisingly, there are those also who utterly reject these views, accusing the organic industry of everything from fraudulent environmental and food safety claims to endangering world food security and biodiversity. We will return to these claims in the next chapter. For our purposes here, it is more relevant to highlight the moderate misgivings of those who interpret the growing availability of organic foods in the global marketplace as something of a mixed blessing, and who question whether the sector has made too many compromises in its efforts to accommodate growth. The most obvious issue here is that of transport and the energy expenditure involved in shipping ever-growing volumes of organic food around the globe. No less important are potential changes in organic growing practices and manufacturing or processing standards as the scale of production is ratcheted upwards, and confusion over how meaningful the concept of organic foods remains as an alternative to the perceived homogeneity, artificiality and riskiness of many industrially-produced foods.

These issues are subject to spirited debate within the organic industry. They are also encapsulated in what has become known among social scientists as the

'conventionalization thesis'. Broadly speaking, conventionalization refers to a process through which organic agriculture comes increasingly to resemble the mainstream food sector in terms of structure and ideology. As straightforward a process as this sounds, it raises a host of theoretical and empirical questions that we will begin to address in this chapter and return to throughout the book—questions about the nature and meaning of 'globalization' and 'industrialization'; the specific characteristics of 'conventional' food networks that organic food networks might acquire; and their consequences for the organic sector, food consumers, rural environments, and so on. Addressing these questions will require us to think more broadly than the conventionalization thesis, as it is currently conceptualized, and to consider a range of other perspectives on the nature of contemporary food networks. This chapter thus begins with an overview of the conventionalization thesis and a summary of empirical evidence for the processes that comprise it. It then critiques the notion of conventionalization before expanding its discussion to a wider range of theoretical and methodological perspectives that help us to reconceptualize conventionalization in more satisfactory terms, and to identify the practical research questions that will be addressed throughout the book.

## The 'conventionalization thesis'

The concept of conventionalization has its roots in research undertaken in the early 1990s by Julie Guthman and colleagues on the organic vegetable sector of Northern California (see Buck *et al.* 1997). This groundbreaking study found evidence that large agri-business firms were taking over the most profitable aspects of organic production, processing and distribution, while abandoning many of the ecologically-oriented practices pioneered by smaller organic growers. Organics was seen to be 'subsumed into conventional agro food commodity chains' (Jordan *et al.* 2006: 144). Slowing the rate at which agri-business subsumed the organic sector were a number of features of organic production that included: (1) limitations on the ability of large monocultural farming operations to manage pests, diseases and soil fertility without recourse to pesticides and fertilizers; (2) the competitive advantage available to small organic growers servicing extremely specialized niche markets; (3) resistance among existing organic movement participants to involvement with agri-business; and (4) consumer demands for foods perceived to be safe by virtue of their production using natural farming methods. Other authors pointed also to the strategies adopted by governments—particularly in Europe—to promote organic foods as a means to maintain smallholder agriculture (Michelsen 2001a). However, noting that similar barriers to the capitalist appropriation of food production had progressively been dismantled in the conventional agriculture sector (see Goodman *et al.* 1987), Buck *et al.* (1997) argued that the patterns they observed in California were likely to be replicated elsewhere.

Since then, the notion of conventionalization has been taken up in a number of studies. It would be misleading to suggest that these have coalesced into a comprehensive and widely accepted theory of conventionalization. However, it is possible to discern from these studies a variety of potential dimensions of change in the organic sector that replicate or engage, in some way, with historic and contemporary changes within mainstream food and agriculture. Such changes include concentration, de-localization, institutionalization, erosion of standards, input substitution and, finally, bifurcation between conventionalized organic agriculture and a residual 'artisanal' organic sector resistant to such changes. These are explained in more detail below.

### *Concentration: ownership and control*

Concentration refers to a process through which fewer, larger, and more capital intensive producers and market intermediaries come to dominate a sector of the economy. In relation to the organics industry this is probably the most obvious manifestation of conventionalization. Even though the market for organic produce and the number of farms and other participants is expanding, the number of firms capturing the greater proportion of that market is, it is argued, contracting. Price premiums for organic produce have attracted the interest of larger and more specialized businesses that operate at greater economies of scale. The interest of larger farming operations in organic production has the potential: first, to erode price premiums by dramatically shifting the balance between supply and demand for organic produce (Smith and Marsden 2003); and second, to displace smaller farms as preferred suppliers to retailers and other intermediaries due to the capacity of larger farms to provide greater continuity of supply and lowered transaction costs (Buck *et al.* 1997; Lyons *et al.* 2004). Much of this dynamic has been driven by the increasing commitment of large processors, distributors and retailers to the development of organic product lines, with many companies apparently finding it cheaper to support a small number of large conventional farms through the organic conversion process than to deal with multiple existing small producers (Guthman 2004a; Lockie *et al.* 2000; Lyons 2001; Smith and Marsden 2003). Many of these larger farms in Guthman's (2004c) Californian case study did not even convert their whole farms to organic management. Instead, they certified either the minimum acreage necessary to grow whatever volume of organic produce they had been contracted to supply or, alternatively, whatever acreage could be converted and managed organically at least cost.

The organic production and processing sectors are characterized both by the growth of initially small organic businesses into large businesses, and the development by already large farms and food companies of organic product lines (Sligh and Christman 2003). Examples of the former include Natural Selection Foods which has grown from a small Californian raspberry farm established in 1984 to a US$200 million organic produce firm most well known as a pioneer in the market for pre-washed and bagged salad greens (Sligh and Christman 2003).

At the same time, the success of Natural Selection Foods has attracted the interest of conventional firms with Tanimura and Antle—the world's biggest non-corporate lettuce producer—buying one third of Natural Selection in 1999. An important feature of Natural Selection's operation is that of not growing all the produce themselves, but, rather, contracting much of their production to independent farm operators. This illustrates an argument made by social scientists in relation to the conventional agriculture sector that concentration is not exclusively about ownership but more generally about control over production, processing, and distribution (see Burch *et al.* 1992). Comparatively small family farms, they argue, survive as a large proportion of the total number of farms because they are willing to internalize many of the risks inherent to agricultural production—risks such as drought, pest damage and market instability. Many upstream and downstream agri-businesses find it financially beneficial to leave such risks with farmers while focusing themselves on more profitable and stable links in the food chain. However, to ensure access to produce that meets their own specifications for product attributes and quantity, downstream firms frequently contract independent farmers to grow particular foods, in particular ways, and at particular times. While the farmer procures a guaranteed market (provided they deliver precisely what they have been contracted to deliver), the downstream firm subsumes control over the production process.

We have no wish to imply here that Natural Selection Foods, or any other organic produce, processing or retail firm, engages in exploitative contracting arrangements with their suppliers. Contracting may take many forms and often is used quite strategically by independent farmers as their own risk management tool (Lockie 1997). The point is, rather, that concentration needs to be considered in terms of the spread of influence within food networks, not solely in terms of ownership by individual business units. Further, the extent to which larger firms achieve concentration through contracting, rather than through owning and operating production facilities themselves, is highly variable. In the late 1990s, for example, three firms produced and processed 95 per cent of all organic milk sold in the US—three quarters of which came from just two mega-dairy herds in Idaho and Maryland (Du Puis 2000). Production concentration of this nature tends to occur in cases where there is a confluence of at least two factors. The first are social, institutional, and legal conditions conducive to concentration (Du Puis 2000). These include various tax breaks, subsidies and policy settings that encourage businesses to merge to take advantage of economies of scale. The second are technological solutions to the problems of pest control and climatic variability that otherwise limit large-scale monocultural production—solutions such as pesticides, veterinary medicines, animal confinement, irrigation and so on (Guthman 2000). These are discussed again below under the heading of input substitution.

Box 2.1. Makeover or takeover? Corporate involvement in organic food processing (sources: Food Engineering 2002; Sligh and Christman 2003; individual company annual reports and corporate websites)

We have already seen how concentration has affected the organic production and retailing sectors, but what of those in between—the big food processing companies that control the majority of food brands around the world? And, to what extent does corporate involvement in organics signal a genuine shift towards healthier and more environmentally-friendly foods across the product range?

If we look at the world's 25 largest food processing companies (excluding breweries, distilleries and fish processors) we find several with no obvious organic product lines. These include the world's largest food company, Nestle (which turned over some US$46 billion in 2001), along with PepsiCo (US$26 billion), Sara Lee (US$9 billion), Snow Brand Milk Products (US$8.5 billion), Dairy Farmers of America (US$8 billion), Nippon Meat Packers (US$7.5 billion), Parmalat (US$7 billion) and Smithfield Foods (US$6 billion). Given the size and diversity of many of these companies it is, of course, likely that some of them have at least part ownership of one or more organic brands that they do not publicize via their annual reports or corporate websites.

Indeed, most of the Big 25 do have at least token organic interests—interests they have developed, in most cases, through acquisition of existing organic businesses. The world's second largest food company, Kraft (US$38 billion), for example, sells organic coffee in the US, UK, Sweden, Germany and Austria, along with Back to Nature processed foods and Boca Burger in the US. ConAgra (US$27.6 billion) is responsible for Hunt's organic tomatoes and the Lightlife range of soy-based products such as Fakin' Bacon and Foney Baloney; Unilever (US$26.7 billion) for Go Organic; Archer Daniels Midland (US$23.5 billion) for NutriSoy; Cargill (US$21.5 billion) for AdvantaSoy and Complete soy isoflavones used to fortify the nutritional content of organic products made by other firms; Coca-Cola (US$20 billion) for Odwalla Organics; Mars (US$15.3 billion) for Seeds of Change; Groupe Danone (US$12 billion) for Stoneyfield Farms and Brown Cow; Tyson Foods (US$10.8 billion) for Nature's Farm Organic; Kelloggs (US$8.9 billion) for Kashi and Morningstar Farms; Cadbury Schweppes (US$8 billion) for Hanson Natural and Nantucket All Serve; General Mills (US$7.9 billion) for Cascadian Farms, Muir Glen, Gold Medal Organic Flour and Sunrise Organic; Campbell Soups (US$6.7 billion) for their own brand organic soups; Associated British Foods (US$5.6 billion) for Twinings Tea organic lines and Silver Spoon organic sugar; and the Fonterra Cooperative Group ($5.5 billion) for Naturalea Organic Whole Milk.

However, of the Big 25 there are two firms that stand out for their explicit positioning of organic product lines as core areas of business—Dean Foods (US$9.7 billion) and HJ Heinz (US$9.4 billion). Through acquisitions of Horizon Organics, Rachel's Organic, White Wave and Alta Dena, Dean Foods controls these and associated brands such as Silk organic soy products. Heinz,

meanwhile, both has developed a range of own-brand organic products (ketchup, soup, baby food and baked beans) and acquired (largely through its stake in Hain Pure Foods) interests in a host of other brands including Christina's, Mountain Sun, Shari Ann's, Walnut Acres, Frit de Bosco, Millina's Finest, Soy Dream/Rice Dream/Imagine, Celestial Seasonings, Earth's Best, Health Valley, Arrowhead Mills, Terra Chips, Westbrae/Westsoy and Casbah. Following acquisition of the New Zealand-based Watties Frozen Foods, Heinz provided technical support and guaranteed pricing to a number of conventional vegetable growers in order to support their conversion to organic production and began exporting organic frozen vegetables to Japan.

From the perspective of the Big 25, organic foods are small fry. That the majority of them have at least some stake in the sector certainly suggests that its rapid growth has made it an attractive sector in which to invest, establish a presence and develop expertise. Yet, there is little to suggest that the majority of these firms envisage a future for organics that extends beyond the 'natural foods' niche or that might influence more fundamentally the rest of their business. With few obvious attempts to associate organic food and agriculture with their core brands, these firms certainly cannot be accused of using organics to 'greenwash' the rest of their operations. This stands them in quite different stead to retailers—particularly in the UK—who have made promotion of organic foods a central plank of corporate positioning (see Chapter 6).

From the perspective of the organic industry, however, the influence of these businesses is immense. While many of the brands listed above will not be familiar to consumers outside the markets in which they are sold, they include a number of market leaders. Stoneyfield Farms, for example, owned by Groupe Danone, is the largest organic yoghurt producer in the US. Similarly, the Hain Food Group—in which Heinz holds a 20 per cent stake—is the leading US producer of 'natural foods'. Reflecting the complex patterns of shareholding in public companies, other major investors in Hain are reputed to include tobacco giant Philip Morris and agri-chemical and biotechnology firm Monsanto. Philip Morris also has significant interests in Kraft and General Mills. While it is possible to argue that corporate involvement introduces economies of scale and distribution networks that potentially make organic food available to more people, it is no great surprise that many smaller actors in the organic sector worry nevertheless about the consequences of this involvement.

At the retail end, mainstream supermarket chains control up to 85 per cent of organic sales in Denmark, 80 per cent in Argentina and the UK, 70 per cent in Austria, 65 per cent in Belgium, 49 per cent in the US, and over 40 per cent in Italy, France and Germany (Sligh and Christman 2003; Schermer 2006). In very few countries do natural foods or other speciality stores account for significant market share—the major exception being the US where 48 per cent of organic foods are sold through health and natural products stores. Of this, however, some

65 per cent (or a total market share of 31 per cent) is sold through natural food retail chains that successfully have established across multiple locations using store layouts and scales similar to those of conventional supermarkets. The Whole Foods Market chain, for example, sells approximately US$2.7 billion per annum worth of natural and organic products through 140 stores averaging 50,000 square feet (or around 5,500 square metres) in size (Sligh and Christman 2003). The next two largest chains—Trader Joe's and Wild Oats Markets—account for a further US$2.8 billion in sales of organic and other natural products. Concentration, such as this, within the retail sector appears to have contributed substantially to expansion of the organic market. Hamm *et al.* (2002) report that in European countries where organic food sales are dominated by supermarkets, reduced distribution costs contribute to lower retail price premiums and higher growth rates in the total market share of organic foods than in countries where sales are dominated by specialized organic food stores. At the same time, however, Smith and Marsden (2003) argue that the involvement of supermarkets and growth of organic sales has contributed to a decline in the farm-gate price of some organic foods in the UK—a decline that experience in the conventional sector would suggest will force producers to intensify their production over the longer-term.

### *De-localization*

Concentration within food networks is not simply about firms getting bigger, it also is about how the spaces in which food is grown, processed and retailed are re-organized on a qualitatively different scale. This re-organization is conceptualized within the conventionalization thesis as the progressive shift from a sector dominated by small farms growing a variety of produce for predominantly local markets to a sector in which output is dominated by larger and more specialized farms that supply ever more distant processing and distribution nodes which, in turn, supply ever more distant retailers (Buck *et al.* 1997). Put more simply, the distance between producers and consumers widens while the range of produce available to consumers—despite the appearance of diversity—is determined primarily by their durability. Even though the transport of produce any further than absolutely necessary is considered anathema by many industry participants (Tovey 1997), burgeoning demand, combined with consumption norms of year-round availability and supermarket shopping convenience, have supported both the growth and lengthening of organic food chains. Concentration within the production, processing and retailing sectors as described in the above section would all seem to fuel, therefore, some measure of de-localization.

It is important to stress that while de-localization has been noted as a general tendency within the conventionalization literature, it is not universal. This is not so much because of the continued existence of highly localized production and consumption networks (although we will examine these in more detail below) but because many organic crops and production settings have never been oriented to

local markets on a significant scale—they have always been oriented towards export. Whether or not organic foods are exported internationally is, of course, of far less salience here than how many miles they have travelled (Holt 2006). Nevertheless, international organic trade provides important insights into this issue. In Africa, almost all certified organic food is grown for export, primarily to Europe (Parrott and Kalibwani 2004). A similar situation exists in Latin America and Asia where exports are dominated by low value-added raw commodities such as coffee, fruit, sugar, meat and vegetables (Lernoud 2004; Sahota 2004). As Sahota (2004) points out, investment in the development of organic export operations to Europe and US has spilled over into the development of small local markets for certified organic produce where none previously existed. However, the growth of local markets is constrained by difficulty matching the price premiums available on export markets, the limited ability of smaller producers to satisfy organic quality and certification requirements, and the limited demand for food commercially due to continuing practices of subsistence food production. New Zealand and Australia are also highly export-oriented with roughly 50 per cent, by value, of New Zealand production (Ritchie and Campbell 2002) and 15–20 per cent of Australian production (DAFF 2005; Halpin and Sahota 2004) destined for export. This orientation reflects not only the price premiums that are available on export markets but the belief that those markets offer more growth potential in the short to medium term than do domestic markets (Halpin and Sahota 2004). Within Australia (as in the US and Canada), much produce destined for domestic markets is transported distances that would stretch across at least several countries on almost any other continent. Two main points emerge from these examples in relation to de-localization. The first, and most obvious, is that the organic industries of these countries were born de-localized—in some cases far more de-localized than their conventional agriculture industries which maintain important links with subsistence production. The second is that many of the crops exported either cannot be grown in the countries or regions to which they are transported (e.g., coffee in Europe) or require post-harvest processing most economically conducted at centralized points (e.g., wool and cereals).

Box 2.2 What is agri-industrialization?

In the popular imaginary, 'industrial agriculture' is associated with a veritable grab-bag of images from factory farming to corporate ownership, mechanization, intensification, animal confinement, massive farms and homogenous products. The problem is, these images are neither terribly specific nor always unique to 'industrial agriculture'. Take land-use intensity, for example. Conceiving sustainability in terms of the replication of natural systems (see Chapter 1) often means using polycultural farming methods to increase biological diversity *and* productivity. Permaculturalists, in particular, promote intensive farming using agro-ecological design principles to boost the number of useful species in a farming system and thence the variety and volume of produce. So intensification *per se* is not solely characteristic of industrialization. However, intensification based on the use of externally-sourced inputs to simplify agro-ecosystems and boost productivity of a limited range of species is a different matter.

What really sets industrialization apart is not matters of resource-use intensity or scale but the ways in which the various factors of production (land, labour, technology, etc.) are organized so as to enhance predictability, reduce risk, even out supply and speed up the turnover of capital (Goodman *et al.* 1987). The metaphor of the production line is apposite here, not so much because of its reliance on technology but due to the way in which it is used to organize in time and space a large number of highly specialized tasks in order to produce standardized goods at regular and predictable intervals. Intensive animal production (eggs, chickenmeat, pork, etc.) stands out as particularly amenable to factory-style production. The majority of other agricultural commodities, however, tend to encounter technology barriers that force them to continue dealing with the less controllable vagaries of nature.

There are at least two ways, however, in which other agricultural sectors are subject to industrialization, both of which relate to the dependencies that up and downstream agri-businesses impose on farm businesses. The first of these is the *appropriation* of those parts of the overall production process that lend themselves to mechanization, input substitution, and other industrial techniques (Goodman *et al.* 1987). Given the chronic oversupply that tends to characterize agricultural commodity markets, farmers have little choice but to adopt such technological innovations if they are to remain competitive and profitable. The net effect of mass adoption is, of course, to deepen oversupply and to create yet more pressure for technological innovation and industrially-produced inputs. The second way in which farms are subject to partial industrialization is through the potential for *substitution* of one agricultural input for another in food manufacturing (Goodman *et al.* 1987). By increasing the flexibility available to food processors to source the cheapest available inputs (take the variety of fruit and corn-derived sugar substitutes now available for example), farmers become even more vulnerable to oversupply, falling prices, and pressures to intensify production using technological inputs (Gray and Lawrence 2001; Lawrence *et al.* 2004). They also,

in increasing numbers, grow under contract to supply foods directly to processors and retailers rather than to open markets.

The processes of appropriation and substitution can play out in myriad ways that are not discussed here. And they can be resisted. The key point is that farms do not have to exhibit all the features of a production line to be deeply affected by industrialization. Neither do they need to be particularly large or particularly specialized. Given, instead, that the key factor is their level of integration into larger networks of technological innovation, food manufacturing and retailing we need to be very careful about assuming that small farms are any more or less likely than large farms to manage particular crops in particular ways or to deliver particular social or environmental benefits for rural areas (Guthman 2004c).

### *Institutionalization: rationalization, codification and de-radicalization*

Institutionalization refers to a process through which organics is transformed from a politically and ecologically innovative social movement that is highly critical of conventional agriculture to yet another sub-sector within conventional regulatory paradigms and agencies (Guthman 1998; Kaltoft and Risgaard 2006; Lyons and Lawrence 2001; Michelsen 2001b; Pugliese 2001; Tovey 1997). In one of the first studies to focus on institutionalization, Hilary Tovey (1997) argued that the implementation of EU support for organic agriculture in Ireland through mainstream agricultural policy agencies saw, in turn, the integration of organic farming into conventional agriculture as an environmental conservation strategy. Losing its focus on agricultural sustainability, Tovey argued, organics became part of an institutional support system that, far from challenging conventional agriculture, enabled it to continue. The veracity of this argument depends on a number of factors. First, it depends on the extent to which organic food networks may adequately have been described as radical social movements prior to attempts at institutionalization. As Michelsen (2001a) notes, organic farms in Ireland accounted at the time for only 0.5 per cent of farms and farm area, suggesting some need for caution in this regard. Second, the strength of Tovey's (1997) argument depends on the extent to which it transpires that those goals attributed to the 'organic movement' are incompatible with aspects of institutionalization and, if so, which ones. Addressing this issue requires us to consider somewhat more broadly what institutionalization might entail.

In Tovey's (1997) early work, institutionalization related to the broad re-conceptualization of 'organics' as an issue for state policy institutions. A more widespread form of institutionalization, however, has been the codification of organic movement goals and beliefs into systematic production, auditing and certification standards. Clear standards, supported by auditing and regulation, have been fundamental to the expansion of the organic industry through provision of a basis for trust among food consumers with limited or no opportunities to assess the claims of organic producers for themselves. Simply put, rationalized

systems of codification and regulation assure consumers that they get what they pay for. More specifically, in most cases, standards act to assure consumers that foods have been produced in a manner consistent with organic principles but make no claims as to the actual attributes of the product. Process standards, of this kind, guarantee that foods have been produced, for example, without the deliberate application of synthetic pesticides, but not that they do not contain chemical residues for which they have not necessarily been tested. At the same time, organic standards assist farmers and others to expand production by providing a means through which to differentiate their products from those of their conventional competitors. Organic standards help to provide, in other words, a predictable and stable platform for investment. Moreover, standards and auditing make a tight institutional 'fit' with the administrative logics of European national and supranational bureaucracies. While industry standards pre-dated state support, it could be argued that these standards made state financial support for the organic sector much easier to implement.

Such processes are far from unique to the organic sector. Food scares and market premiums for high quality foods have contributed to the widespread adoption of similarly rationalized systems of quality assurance throughout the food industries of industrialized countries and their trading partners (Lockie 1998). Importantly, institutionalization of this nature has often preceded, or extended beyond, the involvement and requirements of state agencies. Within the conventional food sector, much of the impetus for independent auditing and quality assurance has been driven by large retailers (Marsden *et al.* 2000). In the case of organics, the development of production standards and auditing procedures pre-dates state interest or involvement in most parts of the world by at least a decade (Herrmann 2004). Comprehensive standards for production, auditing and certification were developed on a wide scale by predominantly farmer organizations in the 1980s with meaningful government involvement first becoming evident in Australia in 1992, Europe in 1993, the US in 2002 and internationally, via the *Codex Alimentarius* Commission,[1] in 1999 (AQIS 2004; Kilcher *et al.* 2004). There is no denying, however, that governments have become increasingly involved and influential, in recent years, in the practical definition of organic values through codification and rationalization. The politics of state involvement in auditing and certification are discussed in more depth in Chapter 4.

By providing a basis for investment in the organic industry, standards—along with other elements of institutionalization—have made a clear and direct contribution to concentration as discussed in the above section. However, standards do not simply support market growth by guaranteeing that transactions

[1] The *Codex Alimentarius* Commission is a joint initiative of the Food and Agriculture Organization of the United Nations and World Health Organization Food Standards Program. The *Codex Alimentarius* was initiated in 1991 and released its first international standards for organic production and certification in 1999.

are fair and honest. Organic standards provide a mechanism through which producers, retailers, and others in the sector may associate socially-desirable attributes with particular products; create scarcity by limiting opportunities for their competitors to make similar claims about 'conventional' products; and, as a consequence of both, charge premium prices irrespective of whether or not organic foods are more expensive to produce (Guthman 2004a)[2]. According to Guthman (2004a), this has led, in the Californian case, to a number of undesirable and contradictory effects. These include: (1) the construction of organic consumption as an elite practice; (2) the realization of price premiums for organic produce in the value of land suitable for organic production with concomitant increases in rent and mortgage payments; (3) the attraction and establishment of larger organic enterprises operating at greater economies of scale and able to compete at lower premiums; and (4) pressure, as a result, on all growers to intensify production. According to Mutersbaugh (2002, 2004), organic standards have had further unintended consequences on farmers in the Global South whose participation in organic and Fair Trade schemes often has seen them cede control over production processes to certification bodies based in the Global North. Additionally, it has been argued that the re-definition of organic production and consumption as individualized acts aimed at personal financial, sensory or health benefits makes the organic market vulnerable to challenge by foods guaranteed through competing quality assurance programs to be safe and nutritious (Campbell and Coombes 1999; Lockie *et al.* 2000). As we will see in further chapters, there is some basis for these fears given that consumers do tend to purchase organic foods for reasons other than for their perceived environmental attributes. The promotion of organic foods—at least from Australian evidence—suggests that certifiers and food branding experts appreciate this as they have been shown to make a variety of claims that do not relate to the environmental performance of organic farming systems (Halpin and Brueckner 2004a).

### *Erosion of standards*

Somewhat paradoxically, at the same time that codified standards for production and processing of certified organic foods have helped lay the foundations for concentration within the sector, concentration has, in turn, generated concern that where organic standards place limitations on the ability of large farmers, processors, and retailers to boost production and increase economies of scale, they will progressively be undermined (Clunies-Ross 1990; MacRae *et al.* 1993). In other words, with ever-larger business units dominating organic production, processing and trade, existing industry participants and commentators have

[2] Evidence from Australia will be discussed in Chapter 6 showing that the retail price of organic products can vary by up to several orders of magnitude between outlets even within the same city. This suggests that retail prices may be based more on consumers' perceived willingness to pay than on the costs of production and distribution (Halpin and Brueckner 2004b).

expressed concern that standards will increasingly be re-written to suit the interests and operations of these businesses. The clearest manifestation of this, to date, was a proposal put forward by the United States Department of Agriculture (USDA) in late 1997 to introduce a national standard for organic production that allowed the use of technologies and inputs considered anathema by most members of the organic industry—genetic engineering, irradiation and municipal sewage sludge (Guthman 2004b; Scholten 2006; Vos 2000). This proposal ignored recommendations made by the National Organic Standards Board in 1994 and evoked widespread protest over both the inclusion of controversial technologies and an associated attempt to redefine organics in the narrow technocratic terms of allowable inputs (Goodman 1999; Guthman 2004b). When a national rule finally was adopted in 2002, it resembled far more closely the wishes of the existing organic industry.

The specific role played by agri-business in the development of the USDA's draft organic standard—and several other national standards—is less than clear (Guthman 2004b). However, it would be a mistake to assume that large firms necessarily are in favour of radically reforming organic standards in order to facilitate more industrial production methods. Irrespective of whether or not agri-business operators share personally the values attributed to the 'organic movement', many believe they have little to gain by watering down standards and threatening consumer confidence in the organic label (Guthman 2004b). Thus, while the erosion of standards through conventionalization and concentration is possible, it also is likely to be resisted on both ideological and commercial grounds by smaller and larger operators alike.

Nevertheless, even in the absence of legalistic challenges to the content of organic production standards, it is possible to bypass the values and principles that underlie these standards wherever they prove difficult to codify, audit and regulate. The following section will deal with the erosion of agro-ecological principles—such as biodiversity and nutrient recycling—that are frequently built into definitions of organic food and agriculture but which are difficult to prescribe through specific production standards applicable across multiple localities and production systems. It also is relevant to note the paucity of social considerations in organic production standards. In part, this stems from similar barriers to the codification of social values in ways that are relevant to multiple communities and their highly variable cultural and economic contexts. It also, however, relates to the lack of a clear social agenda for organic food and agriculture and the historic compromises that have been made to accommodate multiple political projects (Reed 2001, 2006). Certainly, attempts have been made, in recent years, to address this situation by IFOAM and other movement organizations. IFOAM has inserted conditions in their minimum standards that organic producers uphold basic human rights and labour conditions (Raynolds 2000, 2003). Linkages also have been made with the Fair Trade movement. However, these are small and tentative steps, and the organic industry continues to attract criticism for inadequate attention to social justice issues such as the poor pay, working

conditions, housing and, often, citizenship status of farm workers in areas dependent on migrant and other cheap labour (Allen *et al.* 2003; Goodman and Du Puis 2002).[3]

### *Input substitution*

Input substitution is a key element of the erosion of agro-ecological and other principles not adequately codified through organic standards and auditing procedures. As stated above, the impossibility of stipulating how principles of energy and nutrient recycling, soil health, biodiversity, ecological harmony, and so on should be operationalized across all farming situations has led to a focus within organic production standards on the identification and banning of those inputs and practices that are not acceptable under any circumstances. This allows, it is argued, the development of certified organic farming operations that comply with the letter, but not the spirit, of organic production standards simply by replacing use of disallowed synthetic pesticides and fertilizers with permissible alternatives such as bacteriological pesticides, sulphur-based fungicides and naturally-derived fertilizers. Organic farms may thus resemble ever more closely their conventional counterparts in terms of: specialization in a limited range of produce; substitution of energy-intensive sources of external inputs for natural processes and management practices; and dependence on off-farm suppliers of inputs, expertise and capital (Guthman 2004b; MacRae *et al.* 1993).

None of this is to say that the use of any and all inputs is counter to the principles of organic agriculture. Recalling the definitions of organic agriculture provided in Chapter 1, the ideal of organic agriculture is to minimize external input use where possible through utilization of management practices and farm-derived renewable resources. These definitions accept, in other words, that organic farms are not closed systems and that their sustainability depends often on the judicious exchange of energy, germplasm, nutrients, wastes and so on with the wider environments, communities and economies in which they are nested.[4] Further, there are good reasons to suggest that input substitution can never be a complete process, not simply because permissible organic inputs are less efficacious means of pest control and plant nutrition, but because all input-dependent agricultural production systems encounter what Guthman (2000) refers to as the 'technology barrier'. More specifically, they encounter limits to the control affected by available technologies over production problems associated

[3] Much of the literature on the exploitation of labour in the organic industry has been focused, to date, on the highly industrialized and migrant dependent agriculture of California and elsewhere in the US. However, it is highly likely that exploitative employment conditions elsewhere simply have not received the research attention they deserve.

[4] It is possible to argue that no farm—organic or conventional—can be operated sustainably without some measure of external input use. All farms are simplified ecosystems designed to increase the productivity of a limited number of desirable species. While the diversity of organic farms relative to conventional farms helps buffer against environmental, social and economic disruptions it does not eliminate them or the need for human intervention.

with the agro-ecology of particular crops and production settings (Guthman 2000). Resistance among insects and weeds to pesticides is a case in point. The application of pesticides stimulates natural selection within pest populations for individuals inherently resistant to the particular type of chemical used. Techniques available to slow the development of resistance and prolong the 'life' of pesticides include the rotation of chemical types, the use of non-chemical control measures (such as cultivation and fire) and more management intensive systems of Integrated Pest Management (see Chapter 1). Plants genetically engineered to resist pests also promote the development of resistance among target species that must be managed through a similar variety of means. While the possibility of input substitution allows organic farms to shift away from the agro-ecological principles embedded in definitions of organic agriculture, ecological realities such as insect biology force all farming operations, at some point, to address the limitations of input-dependent farming systems.

This still leaves us with the question of why some organic farmers would pursue a level of input substitution more consistent with the input-output rationality of conventional farming systems than the natural systems rationality underlying most definitions of organics. It certainly is the case that organic standards do not, in themselves, provide incentives to use 'ideal' practices when allowable ones will suffice (Guthman 2000). But this still does not explain why organic farmers would not seek to develop regenerative rather than input-dependent farming systems. The problem for organic farmers identified in some case studies is the same problem faced by conventional farmers—declining terms of trade (the 'cost-price squeeze') and the consequent pressures for increasing returns to scale (Guthman 2004a; Moore 2006; Smith and Marsden 2003). In simplistic terms, while farmers are not forced to intensify their farming operations, those who choose not to do so risk losing competitive advantage and market share to others who do. Preservation or pursuit of new niche markets for organic foods produced on a small scale—as exemplified by farmers' markets, community-supported agriculture and so on—may provide a measure of relief from these competitive pressures. Direct sales of this nature account, however, for only a small share of the organic retail market (Sligh and Christman 2003) and may prove themselves vulnerable to concentration (Moore 2006). At the same time, therefore, although standards do not overtly proscribe input substitution, the competitive pressures of the organic marketplace may actively encourage it.

Box 2.3 Certified organic inputs (sources: AQIS 2002; BFA 2003)

Organic production and processing standards around the world generally contain detailed guidance as to the sorts of practices growers should implement in order to comply with the agro-ecological principles of organic agriculture. The Australian *National Standard for Organic and Bio-Dynamic Produce*, for example, which is administered by the Australian Quarantine Inspection Service (AQIS) as an export standard only, advises farmers that the fertility and biological health of the soil *must* be maintained using *any* combination of: cropping rotations involving legumes, green manures and deep-rooted perennial plants; sheet composted animal manure; the application of composts derived from approved source materials; biodynamic preparations and methods; tillage techniques that improve soil structure; and/or the incorporation of livestock within the farming system. Similar guidelines are provided for pest control, livestock management, and so on.

While approved external inputs are permitted by the *National Standard*, their need must be demonstrated and evidence provided that they are not being used merely to support a poorly designed or managed system. Additional restrictions specific to each allowable substance also must be adhered to. In relation, again, to soil fertility the range of permissible inputs includes:

- animal manures and waste products from livestock processing provided they are composted or followed by at least two green manure crops;
- compost produced in accordance with Australian Standard 4454-1999 or a recognized equivalent system;
- minerals and trace elements from natural sources that have not been chemically treated to improve water solubility;
- microbiological, biological and botanical preparations provided these have not been genetically modified;
- naturally occurring biological organisms such as worms and their by-products;
- plant by-products, sawdust, bark, wood waste, wood ash and straw from chemically untreated sources;
- seaweed and algae preparations;
- trace elements and natural chelates;
- Epson salt and zeolites;
- perlite, vermiculite and peat for plant propagation/seedling mixes only.

AQIS and Australian certifiers have gone to some lengths to ensure the list of permitted inputs within these standards is as harmonious as possible with standards elsewhere throughout the world. Harmonization is not necessarily a straightforward process (see Chapter 4), in part because the use of some inputs such as copper-based fungicides is controversial (Guthman 2004c). AQIS stresses that while some national standards outside Australia may be considered less stringent, no produce may be exported from Australia as organic unless it meets Australia's own national standard. Australia's National Standard disallows,

for example, a small number of inputs that are permitted in the USDA Organic Standard and takes a less lenient attitude towards partial conversion.

There are currently no data available in Australia or elsewhere either on the extent to which farmers have pursued an input-substitution strategy or on the extent to which agri-business firms have identified and targeted the market in certified organic farm inputs. Of some 42 companies listed in the Biological Farmers' of Australia product directory in 2005 as suppliers of certified organic fertilizers, all but one could be described as a small to medium enterprise specializing in certified organic inputs. The exception was a division of a nationally-based chemical, fertilizer and mining company. The directory listed 37 suppliers of certified organic compost with, again, one nationally-based company providing the exception from a list of otherwise small to medium enterprises. Similarly, eight firms supplied certified organic fungicides and insecticides; seven of which were small to medium enterprises and one of which was a multinational oil company. While many farmers undoubtedly source generic inputs from conventional supply firms, it seems clear enough that, in Australia at least, the deliberate appropriation of organic production by upstream agri-businesses can be regarded as something of a cottage industry.

### *Bifurcation*

The idea of bifurcation suggests that at the same time concentration and input substitutionism characterize the bulk of organic production and trade, a significant number of small producers continue to practice a more regenerative form of organic agriculture (Buck *et al.* 1997; Coombes and Campbell 1998; Campbell and Coombes 1999; Campbell and Liepens 2001; Jordan *et al.* 2006; Lockie *et al.* 2002; Lyons and Lawrence 2001). This process was first examined in detail in New Zealand where, Coombes and Campbell (1998) claimed, newer, larger, growers closely aligned with downstream processors had not subsumed the existing domestic market for organic produce but had developed new export markets for frozen vegetables and durable fruit crops such as apples and kiwifruit. They claimed that smaller, more lifestyle-oriented, growers not only continued to supply the domestic market but benefited from the increased profile given to organic foods by the involvement of larger farmers and exporters and the investment they stimulated in research and development. These growers also maintained comparative advantage in the production of difficult and more perishable crops for which they faced less significant technology barriers and were better placed to absorb the risks of small and potentially inconsistent production. At the same time, export-oriented growers benefited from the existing knowledge and market credibility of longer-term organic farmers.

There are a number of reasons to expect smallholder organics to survive despite the pressures of concentration. These include: the technology barriers facing larger and more monocultural operations; the ability of household-based

enterprises to cope with unfavourable returns through self-exploitation and reduced consumption; their ability to target market niches; and political values and strategies within the organic movement sympathetic to small enterprises (Buck *et al.* 1997; Coombes and Campbell 1998). What is particularly important about Coombes and Campbell's (1998) contribution is that while they do not suggest that the relationship between small and large growers will always be mutually beneficial, they show that neither is it necessarily antagonistic. Other studies, by comparison, have tended to interpret the survival and/or prospering of smaller growers, processors and retailers as signs of resistance by 'artisanal' enterprises to the loss of values marginalized through concentration, de-localization and institutionalization (Tovey 2002; Lyons and Lawrence 2001; Moore 2006). Such studies often are suspicious that any level of corporate or state involvement in localizing initiatives, such as farmers markets, represents a form of capture (Moore 2006). And while based on a dubious account of the organic sector's past, notions of 're-localization' have become increasingly prominent in the policy positions of a wide range of organic sector organizations, other environmental organizations and governments, particularly in Europe (Halweil 2004). Clearly, both synergistic and antagonistic relationships between small-scale enterprises, their larger counterparts and governments are possible. The question is how these relationships play out in different empirical contexts and how they influence the practice of organic agriculture and food distribution.

## Limits to the conventionalization thesis

There is a degree of plausibility to the conventionalization thesis that cannot be overlooked. The rapid growth of the organic market has attracted the interest of very large businesses and there has been considerable soul searching and conflict within the industry over what this means for the values and principles of organics. However, it also is possible to stretch the notion of conventionalization too far and to attribute to the concept more cohesiveness and explanatory power than it deserves. In this context, several commentators have expressed concern that the findings of a limited number of case studies might be misinterpreted as an inevitable process of change into which the entire organic sector must eventually be drawn (Hall and Mogyorody 2001; Michelsen 2001a). While we do not wish to explore this debate in detail, we do think it important to reiterate that a number of countervailing processes to conventionalization are identified in the sections above (see also Guthman 2004b). Further, general acceptance among social researchers that processes of conventionalization are unlikely ever to affect the entire organic sector is reflected in the related concept of bifurcation.

There are, we believe, two far more significant problems with the concept of conventionalization that deserve mention here (see also Lockie and Halpin 2005). The first relates to a tendency among industry observers and participants to adopt a simple binary division between 'traditional' and 'conventionalized' organic

enterprises and then to impose on these two categories a host of vaguely defined characteristics, untested empirical assumptions, and less-than-subtle moral evaluations. To put it crudely, in popular and academic discourse alike we find constant reference to a small-scale artisanal organic sector with long-term commitment to the preservation of tradition, community, environment, and other non-market values, counterpoised against a large-scale industrial organic sector comprised of uncommitted opportunists drawn into organics by niche markets and price premiums. Members of the first group are represented as members of a social movement seeking to transform the fundamental character of food and agriculture while members of the second group are represented as members of an industry for which food is just another commodity and profit opportunity. The binary opposition of artisanal and industrial production thus conflates differences in economic scale with differences in production practices, market relationships and grower motivations that have not been clearly defined or verified on a wide scale. This suggests a need not only for more data on what is happening in the organic industry but also for greater conceptual clarity about what seemingly innocent terms like 'industrial' and 'conventional' really mean; particularly where these terms have been applied pejoratively—that is, as terms of abuse. The second problem with the concept of conventionalization is one that confronts any theory of change; namely, its focus on a limited number of potential processes to the exclusion of others. Conventionalization studies have focused a great deal on the relationships between economic scale, production practices, labour relations, market linkages and industry regulation. They have focused somewhat less attention on industry and social movement politics. And they have dealt hardly at all with the consumption politics that underlie so-called 'consumer demand' or the gendered nature of food production and consumption. With these two limitations on the concept of conventionalization in mind we will close this chapter with a brief discussion of the theoretical issues and research questions to arise from a more holistic consideration of change in organic food networks.

## Linking production and consumption

Relatively few food studies deal with both production and consumption in a sophisticated manner (see discussion in Lockie and Collie 1999). In contrast, the mobilization in recent years of social movements and other political actors concerned with food scares, agricultural biotechnologies, organic standards, and so on, throw the inter-dependencies between production and consumption into sharp relief (Goodman 1999; Lyons 2001). We do not wish to discuss the theoretical issues involved here in detail (see Lockie 2002; Lockie and Kitto 2000). However, we do wish to make a number of observations particularly pertinent to this book.

First, the industrialization of food provisioning implicit in the notion of conventionalization has only been possible through a series of inter-related

changes in the worlds of technology, work and consumption. According to Goodman and Redclift (1991), the mass movement of women into the paid workforce facilitated the introduction of new domestic technologies—including processed convenience foods—into the home. Farmers thus were transformed from the producers of food into the suppliers of inputs for industrial food manufacturing processes. Goodman *et al.* (1987) argue that, in the process, farms became dependent on other firms to supply them with technological innovations and other inputs while becoming vulnerable to the loss of markets through substitution in food manufacturing of one raw agricultural input for another. While this argument may be challenged for the lack of influence it accords to women in the household and to farmers (both male and female) in their own active transformation (Lockie and Collie 1999), it offers useful insight into the specific dimensions of agri-industrialization and the highly gendered nature of household food provisioning and consumption.

Second, dealing simultaneously with production, consumption and related activities is not necessarily straightforward. As Chapter 1 states, this book is loosely organized around the concept of the commodity chain or system; that is, the network of production and exchange processes that result in the consumption of a final commodity (Hopkins and Wallerstein 1986). While commodity system studies do not, in themselves, provide a coherent theory either of what transformations currently are underway in food and agriculture, or how to go about studying them, they do highlight the diversity of production and exchange processes likely to be relevant to our understanding of organic foods. Drawing on Friedland (1984, 2001) and Dixon (1999, 2002), relevant spheres of activity might include:

**Production**
- Production practices
- Grower organization
- Labour and industrial relations
- Science production and application
- Marketing and distribution
- Product design

**Consumption**
- Tertiary production processes
- Means of access
- Manner of delivery
- The eating environment or context
- The eating experience

**Distribution**
- Retailing practices and organization
- Food services sector organization and practices
- Retailer-led product development
- Marketing and distribution
- Labour as a factor of distribution
- Food knowledge and discourse production

**Regulation**
- Auditing of on-farm practices
- Certification of organic products
- The sale and movement of products
- National and global trade
- State versus private systems

Third, the global extent of contemporary food networks—along with the innumerable actors, exchanges and projects involved in them—raise considerable issues for researchers and participants alike. We do not, therefore, deal with all of those aspects of food commodity chains identified by Friedland and Dixon above. Rather, we move away from the traditional concern of commodity system studies with how networks are organized around the provision of individual agricultural outputs (lettuce, chickenmeat, etc.) to a concern with how networks are organized around concepts such as 'health', 'greening' and 'quality'. As Friedland (2001) states, much of the rationale for commodity studies was provided by the extreme levels of agricultural specialization that emerged—particularly in California—in the post-war period. While specialization continues to define much agricultural production and trade, it also is the case that supply chains organized around the creation of products embodying multiple ingredients and/or, in the case of organics and Fair Trade, unique social and environmental attributes also are increasingly important (Connors 1998; Marsden and Arce 1995). In this book we have focused, therefore, on those aspects of organic food networks that have some continuity across product categories and avoided those that are specific to individual farm outputs. Our object of analysis, in other words, is not agents, institutions or processes, but the organizing principles according to which relationships between them are organized (see Lockie and Kitto 2000).

## Conclusion

Terms such as 'conventionalization' easily conjure poorly defined stereotypes that provide little insight into either organic or non-organic food networks. We have been very careful in this chapter, therefore, neither to demonize conventional farmers, processors and retailers nor to present the process of conventionalization as an inevitable or universal process. Case studies from around the world provide evidence that concentration, de-localization, institutionalization, input substitution and bifurcation certainly are occurring to a significant extent. They provide less evidence that organic standards are being eroded under the influence of agri-business. They also suggest the ongoing relevance of countervailing factors to conventionalization including biological limits to the application of monocultural practices and input substitutionism; the competitive advantage of small enterprises in particular markets; consumer demands for what are perceived to be artisanal products; and other forms of resistance to concentration.

Recalling the focus of this book on the mobilization of actors throughout organic food networks, the value of the conventionalization thesis can be seen to lie not so much in its implicit theories of agricultural change but in the questions it suggests for each of the major stages in organic production and consumption chains. We may begin to ask, therefore, not just how far concentration has progressed in the production, processing and retailing sectors but:

- How concentration, institutionalization and de-localization are experienced by consumers and what roles consumption norms play in the conventionalization process?
- How organic foods are represented by various participants in, and observers of, organic food chains and which images of organic foods subsequently are important in the mobilization of people to produce, sell or consume them?
- What has motivated state agencies to participate in organic food networks and how state regulatory processes inter-relate with private certification and other elements of institutionalization? How, in other words, is the organic industry being governed?
- Why major retailers and other market intermediaries participate in organic food networks that contain an implicit critique of the conventional food networks in which they also are involved and how are the contradictions between these networks managed?

# 3

# Media Discourses: Capturing the Environment and Health Agenda

In early 2001, one of Australia's most popular television current affairs shows featured a story alleging that faecal coliforms had been found contaminating food purchased at a Melbourne organic retail outlet. The implications seemed clear: the environmental and health benefits of organic food were illusory. Consumers were being fed lies, and a good deal worse than that! Organic food was seen as a con. The owner of the outlet—a prominent representative of the organic industry and critic of genetically modified foods—was not to be trusted. But, as in much media reporting, the story was not quite true. The contaminated food item had been purchased in the named retail outlet, but had not been organic. In fact, the item had been clearly labelled as a conventionally-grown lettuce and the contamination found only on the outer leaves—leaves that would normally be discarded prior to washing and consumption of the rest of the plant. Once this information was made public, the show was forced into an embarrassing backdown.

There is no doubt that much that was written of this incident would come under the heading of poor journalism. But it is also a story about the hotly contested terrain that is green food—contestation that is evident in debates and campaigns over genetic modification, food labelling, agricultural research priorities, tree clearing, food safety standards, property rights, pesticide regulation, appropriate levels of public investment in agri-environment schemes, and so on. Sifting through these debates we can see that while not many people would dispute the need for safe and sustainable food networks, there are some extremely divergent views on what, in practical terms, such networks might actually look like.

In this chapter, we review some of the principal discourses that have emerged around the greening of food networks.[1] While the remaining chapters of this book are organized around the enrolment of actors in particular kinds of activities within green food networks (activities such as production, research, marketing and so on), this chapter is concerned more with the discourses that help to define and organize those networks. In doing so, we aim to show that despite the many ways in which concepts like greening and sustainability might be understood, in the industrialized world it is those discourses based on the concept of organic food and agriculture that stand out in terms of their ability to structure networks all the way from production to ingestion. This chapter thus provides both a rationale for focusing most attention in the rest of the book on organic food and agriculture networks, and an introduction to a number of discourses that will re-appear throughout succeeding chapters.

## Greening discourse

The data presented in this section were drawn principally from a content analysis of the *Chicago Tribune*, the *New York Times*, *The Times* (London), and all major Australian national and state newspapers as defined by the Nexus indexing service. The sampling period for this analysis was January 1996 to December 2002. Searches were performed on a variety of terms including *organic food*, *organic agriculture*, *agriculture and environment*, *food and environment*, *genetic engineering*, *genetically modified foods* and *food scares*. All articles identified using these search terms were downloaded and screened to ensure they matched the intended meaning of the search criteria.[2] Analysis was then conducted of:

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[1] As used by sociologists, the concept of discourse is used to show how words and symbols are linked to power and knowledge. According to Feindt and Oels (2005: 163), the features of such an approach are:

- An awareness of the role of language in the ways arguments are shaped.
- A sceptical approach to claims that there is an objective 'truth'.
- An inclination to regard knowledge as contingent and contested.
- An understanding that language and knowledge are bound up in power relations.
- An interest in practices (both 'professional' and 'everyday') that lead to an understanding of power relations.
- A strong interest in democratizing knowledge production and policy making.

Discourses play an important role in the organization of networks by helping participants make sense of the webs of relationships in which they find themselves immersed. Discourses are most influential when they make these relationships appear natural and common-sensical, but often this is not the case. Discourses are contestable and always potentially unstable. The ability to influence them, therefore, is a major resource of power. This ability is itself dependent on access to resources including means of communication—such as the mass media—and the authority with which to make claims—such as that derived from expertise in science, economics, policy formulation, accounting and so on.

[2] While it was important not to impose a narrow definition of search criteria and risk eliminating competing points of view from consideration, it was also important to discard articles in which the

first, the prevalence of each search term and how this had changed over the sampling period; and second, the key themes to emerge in relation to the greening of food networks and the manner in which these were framed.

Framing refers to the repetitive use of particular ways of presenting information that help the reader, viewer or listener interpret the meaning and significance of that information (Hannigan 1995). By reducing complex issues to a series of largely unrelated events—but presenting those events in the context of familiar storylines, or frames—the need to provide in-depth analysis is significantly reduced. Framing devices include metaphors, examples, catch-phrases, depictions and visual images, and may be accompanied by reasoning devices including the causes of events, their consequences, and appeals to principles (Hannigan 1995). Frames are important because they reflect, and contribute to, discourses that extend beyond the immediate text of the newspaper or broadcast.

### *What is news for the press?*

The prevalence of articles concerned with the greening of food networks has changed dramatically over the last ten years. Despite the development of sizable sustainable agriculture movements, programs and research initiatives over several decades, we found that, prior to 1996, very few articles of any aspect of greening found their way into any of the mainstream media publications included in this analysis.

Even over the period 1996 to 2002 there are some aspects of greening that seemed still not to rate significant media attention. Searches on *agriculture and environment* and *food and environment* uncovered few articles concerned with the biological and physical environment rather than the market, business or regulatory environment for food production. Those articles that were found were framed in terms of impending environmental crisis as a result of salinity, water shortages and land clearing (see also Vanclay 1992). Very few made mention of alternative or innovative agricultural practices that may help to avert or manage these crises. Farmers and governments were represented either as victims or villains, but there was no mention of how consumers, agri-businesses and other participants in agri-food networks contribute to environmental threats.

Figures 3.1 to 3.5 show results of the other searches. Caution should be exercised in drawing conclusions based on differences in the number of articles attributed to each source for any one search term since the categories used are a combination of single publications and groups of publications. Trends in the numbers of articles published over time for each source—and differences in the

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search terms combined in a way that clearly had nothing to do with greening and food networks. Hypothetical examples might include the '*organic* chemistry of *food* packaging' or the 'regulatory *environment* for *agriculture*'.

number of articles published on each topic—are more reliable indicators of the relative prominence of the various greening issues over time.

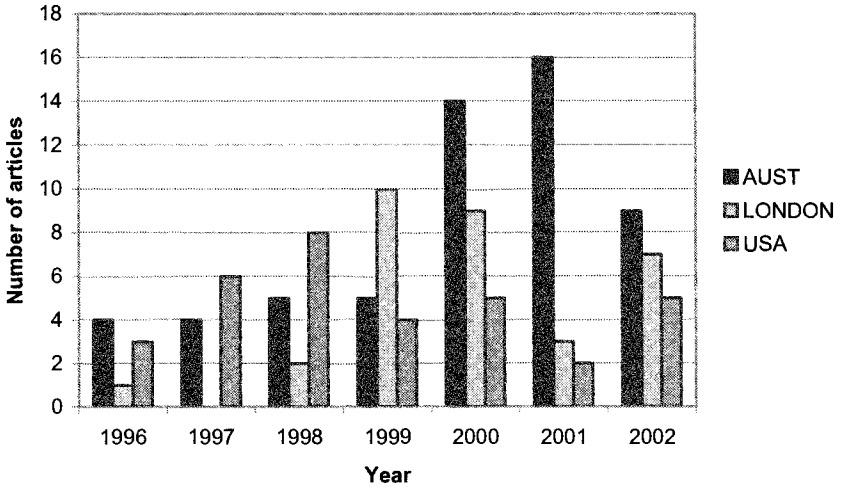


Figure 3.1. 'Organic agriculture' articles

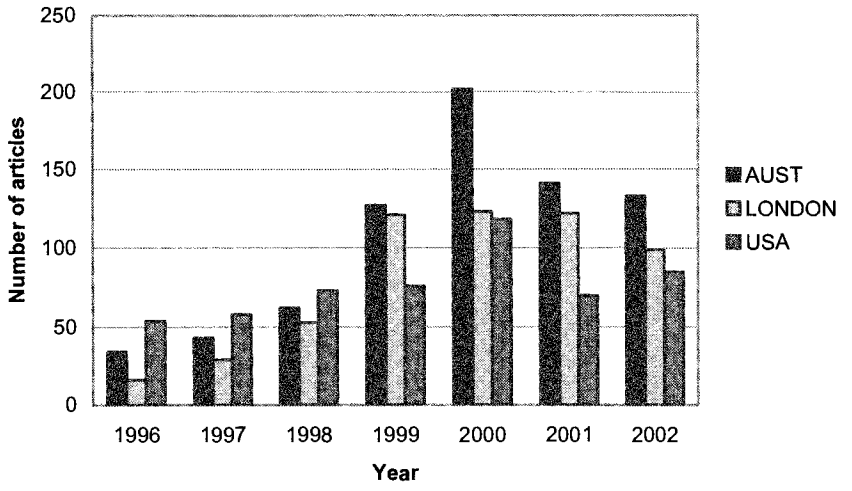


Figure 3.2. 'Organic food' articles

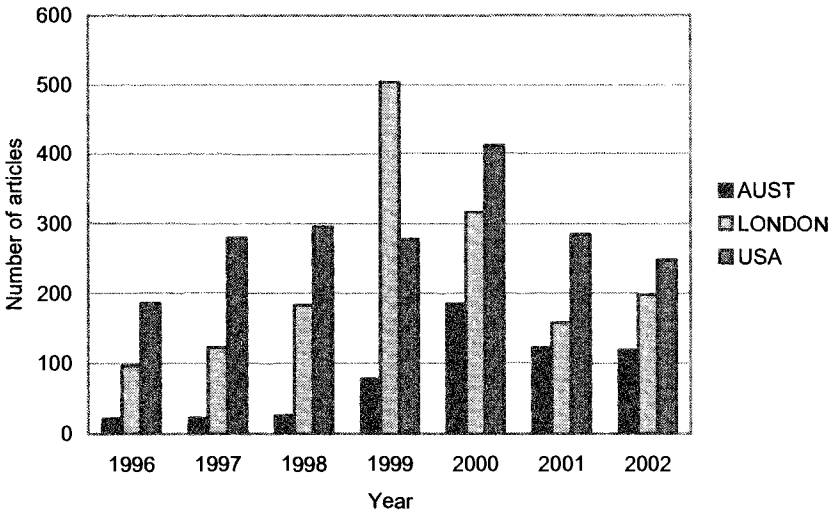


Figure 3.3. 'Genetic engineering' articles

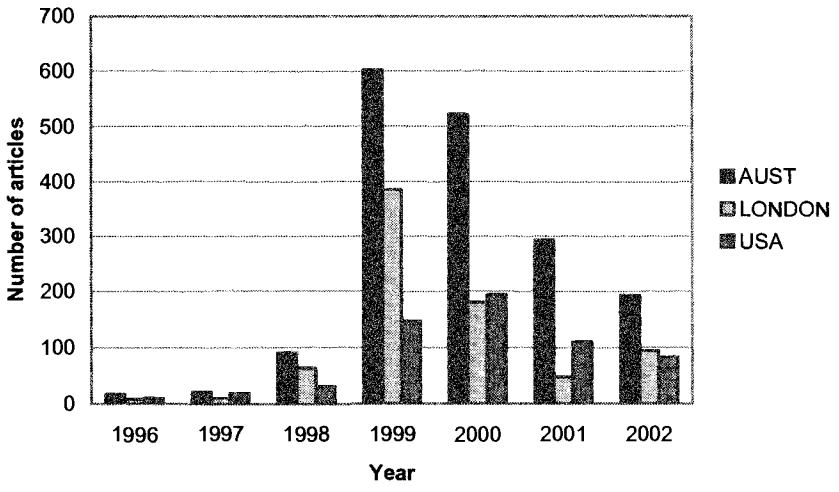


Figure 3.4. 'Genetically modified food' articles

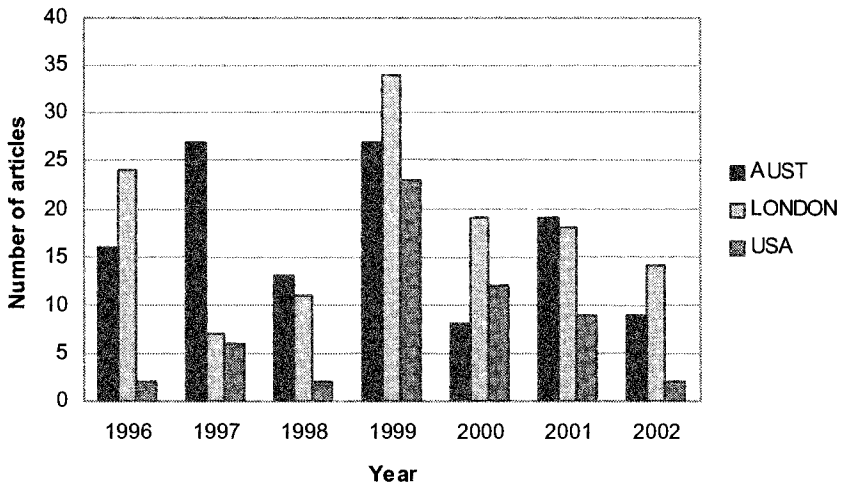


Figure 3.5. 'Food scares' articles

In contrast with the extremely low level of reporting on issues associated with environmental degradation in agriculture, organic food and agriculture and genetic engineering both featured prominently. However, consistent with the low level of reporting on environmental issues, the prevalence of articles on *organic food* (Figure 3.2) was several orders of magnitude higher than the prevalence of articles on *organic agriculture* (Figure 3.1). In terms of prevalence alone, the focus was very much on what potential readers may be eating rather than on how it was produced. There was also a clear trend over time with coverage of organics rising from its low base to a peak in 2000 and 2001 and then dropping slightly.

As Figures 3.3 and 3.4 show, the concept of *genetically engineered foods* was far more common in Australian newspapers than was *genetic engineering*, while the reverse was true of the London and US newspapers sampled. Reporting on *genetic engineering* and *genetically modified foods*, however, followed a consistent pattern, peaking approximately a year earlier than organics in 1999 and 2000, and then dropping off somewhat more dramatically than did reporting on organics. While it is impossible to draw a direct causal link between heightened media scrutiny of the new biotechnologies, peoples' concerns regarding these technologies and their interest in organic foods, this pattern is at least consistent with such a proposition and deserves further analysis.

The level of reporting on *food scares* was low by comparison with organics and genetic engineering. Although this may have reflected low use of this specific term in articles that otherwise dealt with specific food scares such as the BSE crisis, what is important to note from Figure 3.5 is that there is no readily

apparent correlation between the level of reporting on food scares and media interest in either organics or genetic engineering in Australia and the US. The London Times, by contrast, did appear to increase its reporting of food scares around about the same time that its interest in genetic engineering peaked, although it also appeared to sustain a more consistent interest in organic foods over the following few years. While it is possible to speculate that some of the attention devoted internationally to the organic industry has arisen out of concern regarding the moral, ecological and health implications of the new biotechnologies, there is no compelling evidence to suggest that media reporting of food-borne hazards has been primarily responsible subsequently for either the level of concern over genetic engineering or the growth of interest in organic foods.

It is, of course, inappropriate to infer too much from the prevalence alone of articles on each topic. By itself, prevalence tells us nothing of the relative importance placed on different issues through practices such as positioning and presentation, nor the ways in which issues are interpreted and represented to the reader. We turn, therefore, to the framing of these issues and, in particular, the ways in which they were framed in relation to each other.

## *Food scares*

The apparent lack of any direct causal relationship between the incidence of food scares and the level of media interest in either organic or genetically engineered foods is shown to be somewhat more complicated by an examination of the ways in which food scares were framed in British, US and Australian newspapers. A number of themes dominated the framing of food scares:

- the perception that the principal food-borne threat in Australia and the US was food poisoning or contamination caused by food producers, processors and/or retailers;
- the perceived freedom of Australia and the US from the level of food-borne risk associated with farming practices experienced in Europe and Britain;
- the status within Britain of genetic engineering as a food scare in its own right; and,
- the dramatic contrast between public fears and anxieties as embodied in food scares and the claims of state food regulators that these fears were out of proportion with the level of risk determined by objective scientific assessment.

Often, these themes were drawn together as shown by the following quote from the *Chicago Tribune* (Goering 1999: 1):

> European countries, spooked by recent food scares from mad cow disease to products laced with cancer-causing dioxins, have in the last four months

> led an international charge away from transgenics, which environmental groups there have termed 'Frankenstein foods'.

This food-scare induced retreat from transgenics was, in turn, credited with responsibility for the rapidly growing enthusiasm of the British public for organic food. *The Times* (London) reports that:

> The controversy over genetically modified foods and multitudinous food scares have meant that ... Organic food sales have risen by 40 per cent for the second year running, and will be worth £546 million by the end of 1999 (and an estimated £1 billion by 2001) ... Studies show that one in three people have bought organic food in the last three months (Teeman 1999).

As we will elaborate in the sections below, biotechnology proponents have regularly used print media in all three countries to promote the view that food scares related to genetic engineering and other industrial agriculture technologies are irrational and have cynically been manipulated by the organic food industry for its own commercial ends. In response, an alternative framing has also been presented in these newspapers that represents consumer demand for organic produce not as an irrational confusion of unrelated events but as a reasonable response to competing knowledge claims and to state and industry agencies that have not proven themselves trustworthy. In an article that otherwise parodied anti-GE protestors as earnest, but ill-informed and confused, The *London Times* argued that the British government was not only losing the battle to convince the general public that genetic engineering offered significant benefits but would continue to do so because of its past record on these issues:

> The problem for the government is that after a tortuous period of shillyshallying and double-talk, many previous food scares have proved to be well founded (Driscoll and Carr-Brown 1999).

The erosion of trust in public agencies was extended to private firms seen to be pushing products with no discernable consumer benefits. Attempts by Monsanto, for example, to market transgenic crops in Europe were reported in the *Chicago Tribune* to coincide:

> with a string of food scares that undermined confidence in big agriculture, as well as in government regulators who at the time downplayed the genuine human health risks of mad cow disease (Burns 2002: 1).

From this perspective, consumers were rational to shun genetically modified foods promoted by the same governments and companies that had dismissed their fears in the past. Industrialized foods—whether the products of genetic

engineering or input-intensive agriculture more generally—were believed to be as risky for their dependence on untrustworthy institutions as they were for the dependence on seemingly unnatural production processes.

Despite contradictory views on the rationality of food scares, the fact that food scares were frequently framed as responsible for anti-GE and pro-organic sentiment among consumers does not, in itself, prove that such a relationship exists. Certainly, such a relationship is plausible and it seems unlikely that food scares have not played a role in focusing public attention on greening issues. Our point, here, is not that the threat of food-borne hazards is irrelevant but that a simple linear relationship (food scare plus novel technology equals rush to organic alternatives) is unlikely. Perhaps more importantly, what the framing of food scares and pro-organic sentiment in these terms does tell us a great deal about is the attempts of particular actors to influence food production-consumption networks in particular ways. These attempts will be elaborated in the following sections.

### *Genetic engineering and genetically modified foods*

It is little wonder that genetic engineering has become newsworthy. The novelty of genetic engineering—together with its raft of highly controversial positive and negative implications—both amplifies its public significance and provides innumerable symbolic resources on which pro and anti-GE spokespeople may draw. *Genetic engineering* and *genetically modified foods* were framed variously as:

- scientific achievements newsworthy in their own right as examples of human progress and modernization;
- a focus of moral and environmental conflict to be reported on in an impartial manner little different to reporting of conflicts over, for example, animal experimentation, abortion or wildlife conservation;
- a source of personal and environmental risk with uncertain ecological and health implications including the possibilities of gene transfer and genetic contamination;
- a new agricultural and pharmaceutical revolution promising, on an international scale, to ease hunger and cure currently intractable diseases;
- a new agricultural revolution promising to increase production efficiencies and in which farmers must participate in order to maintain competitive advantage;
- an international trade dispute between, primarily, the United States and the European Union;
- a threat to democracy and the rights of farmers and consumers to decide for themselves whether or not to grow or ingest genetically modified organisms; and,

- the antithesis of anti-scientific irrationalism.

The application of GE to a variety of fields (agriculture, health, forestry etc) and the intensity of debate that has accompanied these applications means that detailed analysis of each of these themes could easily absorb the rest of this book! Our primary concern here, however, is not the entire discursive field of genetic engineering, but those aspects of it that speak specifically to attempts to influence green food production-consumption networks.

Of the framings listed above, by far the most prevalent among the newspapers sampled was genetic engineering as a focus of moral and environmental conflict, with protagonists themselves drawing, to varying degrees, on other framings such as personal and environmental risks, the promise of a revolution in food supply, and so on. Articles thus tended to draw on several framings at once within an overall framing of the article as a factual report on public debate. This melding of framings is illustrated in reports of a speech given by British Prime Minister Tony Blair to the Royal Society in London. According to the Prime Minister:

> to oppose scientific research [is] to retreat into a culture of unreason ... There is only a small band of people, I believe, who genuinely want to stifle informed debate ... But a small group can, as has happened in our country, destroy experimental crops before we can determine their environmental impact. I don't know what that research would have concluded. Neither do the protesters. But I want to reach my judgments after I have the facts and not before ... In GM crops I can find no serious evidence of health risks, but there are genuine and real concerns over biodiversity and gene transfer (Kite and Henderson 2002).

Importantly, one of the outcomes of those debates (informed or otherwise) to which Mr Blair refers has been the restrictions placed in many parts of the world on the experimental and commercial release of genetically modified organisms.[3]

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[3] At present, the Office of the Gene Technology Regulator (OGTR) in Australia has issued a licence to release only three genetically-modified crops including canola and cotton. Other—imported—products including cotton, soya bean, corn, potato and sugarbeet have also been approved (see Carman 2004). In relation to the planting of canola, while Food Standards Australia New Zealand (FSANZ) and the OGTR have approved Roundup Ready canola, many States in Australia have implemented a moratorium on its commercial production—along with that of other crops—until 2006 (Grice and Lawrence 2005). Indeed, Monsanto Australia has abandoned its plans to introduce GM canola into Australia, citing 'commercial uncertainty' as the reason for the company's change of heart. In other words, there exists a good deal of concern about commercial release of GMOs in Australian agriculture. The situation elsewhere is complex. In the EU, for example, the so-called 'precautionary principle' has been applied to regulate GM foods. While, in countries such as the UK, the British Medical Association has called for an indefinite ban on GM foods, in the US, the lead regulatory agency (the pro-agri-business US Department of Agriculture) has deemed GM foods safe, as has the US National Research Council. NGOs are coordinating actions across national boundaries, seeking to politicize the regulatory processes in many countries. There is evidence that the US is moving closer to EU policy [especially in relation to compulsory labelling and the segregation of GM and non-GM

Such debate has had, therefore, impacts on the construction of production-consumption networks incorporating GE foods that extend well beyond the immediate disruption to GE crop trials caused by the protests to which Tony Blair refers.[4]

Comments from the British Prime Minister, as quoted above are, of course, far more temperate than some of the rhetoric that has been published on *genetic engineering* and *genetically modified foods*. From 'miracle seeds' to 'mad scientists' and 'Frankenfoods', it is not difficult to find extravagant claims about both the benefits and dangers of the new biotechnologies and the hidden agendas and/or fundamental stupidity of both pro and opposition groups. Nor is it difficult to find such claims dressed up as scientifically reputable positions (see also Kleinman and Kloppenburg 1991; Kloppenburg 1991; Levidow 1995). Dr Bruce Chassy, for example, assistant Dean for Biotechnology Outreach at the University of Champaign-Urbana suggests that reluctance to eat genetically modified foods stems from a pair of 'clinical conditions' he describes as 'food neurosis' and 'food psychosis' (O'Neill 2001). According to Arthur Caplan, Professor of Bioethics at the University of Pennsylvania, those avoiding genetically modified food 'have become susceptible to bogeyman nightmares about cuckoo scientists run amok' (Stolberg 2002: 16). While negative stereotyping of political opponents is nothing new, it is striking in this case that the opponents targeted by promoters of genetically modified foods were often the potential consumers of those foods.[5] It is notable, however, in taking a holistic view of reporting of conflict over *genetic engineering* and *genetically modified foods* that the vast majority of claims used relatively moderate language. This was especially the case outside of Britain, where direct protest actions such as ripping up GE trials were seen, like food scares, to be a particularly British phenomenon.

The reporting of conflict over genetic engineering in the US gave relatively little voice to opponents of the technology with conflict represented as a reflection of differences in the regulatory and institutional environment between the US and European Union. Even though a series of polls conducted by the Pew Initiative on Food and Biotechnology suggested that Americans were more-or-less evenly divided over the merits of biotechnologies and the reliability of food

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products (see Prakash and Kollman 2003)]. Thus, although the US is threatening the EU with trade retaliation via the World Trade Organization, many in the US see the inevitability of stricter regulations being imposed worldwide. Along with Eurep-GAP, there appears to be more of a 'convergence at the top' rather than a 'race to the bottom' (Prakash and Kollman 2003) in relation to regulations for the release of, and exporting of, genetically modified crops and foods.

[4] It is highly likely that many such protests were designed as much to attract the attention of media more interested in reporting events than issues (Hannigan 1995) as they were to cause direct disruption to GE trials.

[5] The ideologies of consumer sovereignty and choice seem to break down fairly quickly in the face of corporate interests where genetically modified foods are concerned as evidenced both by the active campaigning of the biotech industry against labelling of GE-foods and the disparagement of consumer concerns.

regulators,[6] major US newspapers seemed to accept the assertions of pro-biotech lobby groups that opposition to GE was a peculiarly European 'hysteria'. According to the *New York Times*:

> Genetic modification of food has been a relatively unquestioned phenomenon in the United States and Canada, with altered ingredients in a range of processed food from soft drinks to beer to breakfast cereals ...But its arrival [in Britain] set off alarms and united demonstrators from lapsed causes into a powerful protest movement against what they call 'Frankenstein food' and the large multinational companies promoting it. There is no government agency in Europe of the regulatory rigor of the United States Food and Drug Administration to build consumer confidence, and government approval can arouse as much suspicion as it can provide reassurance (Hoge 1999).

In contrast, Australian reporting of conflict over genetic engineering was as notable for its focus on the threat posed by gene transfer to the rapidly growing organic food industry as for its focus on the threat posed to ecosystems and human health. Indeed, it is possible to speculate that the strong market performance of the organic industry and its ability to draw on discourses of economic growth and free enterprise helped to legitimize anti-GE campaigns (organized primarily by the Gene-Ethics Network, Network of Concerned Farmers, Australian Conservation Foundation, Greenpeace and the Organic Federation of Australia) and thus open up space to raise other criticisms.

As mentioned above, our interest here lies not in the entire discursive field of genetic engineering but in those aspects that relate to the organization of green food production-consumption networks. In this respect, it is important to reiterate that while one framing of genetic engineering was as a revolution in agriculture that would solve environmental problems and feed more people, this particular framing was secondary to the framing of GE as a focus for conflict over human safety and the morality of 'tampering with nature'. The environmental and humanitarian framing was also criticized (by opponents and proponents alike) for overstating and misrepresenting the benefits of genetic engineering as it was actually being applied. With the majority of commercial applications devoted to herbicide and insect resistance, it was entirely reasonable, many argued, for potential consumers to conclude that few tangible benefits would flow either to themselves or to the environment that might justify the perceived risks of the technology. Nevertheless, the future potential of genetic engineering to develop products that incorporated more environmental and health attributes was

[6] A series of polls conducted between 2001 and 2002 (accessed online at http://pewagbiotech.org/polls/) found that consumers were evenly divided over whether the benefits of genetic engineering outweighed the disadvantages. Further, 53 per cent of Americans were opposed to genetic engineering of mosquitos to make them incapable of carrying the malaria virus and levels of awareness of genetically modified foods in supermarkets etc was increasing.

frequently used to frame GE as an approach from which the benefits did ultimately outweigh the risks. In contrast, framing GE as a revolution in agricultural efficiency and profitability did not outweigh such risks. In light, however, of the future orientation of many of these benefits—and scepticism over the environmental benefits of herbicide and insect resistant crops—the major impact of genetic engineering and genetically engineered foods on the mobilization of overtly green production-consumption has generally been represented as a stimulus to growth in demand for organic and other certified GE-free foods. As the data presented earlier in this chapter on the prevalence of reporting on these issues show, this appears to be a plausible conclusion.

### *Organic food and agriculture*

As has been discussed in the above sections, organic foods have been constructed in the mass media often in terms of what they were not—genetically engineered or otherwise the products of industrialized agriculture. However, while the link between food scares, genetic engineering and organic food was strong, it was certainly not the only, or even dominant, framing of organic food. Organic food and agriculture were framed as:

- newsworthy in their own right as reputedly the fastest growing sector of the food and agriculture industries with significant potential for further market and export growth;
- a fashionable, high quality and tasty ingredient found increasingly both in the offerings of restaurants and retail outlets and in the diets of celebrities[7];
- the safe and natural alternative to conventionally grown foods tainted by scares over, among other things, chemical residues and genetically modified organisms;
- the solution to a raft of environmental problems caused by conventional farming and threatened by genetic engineering;
- a means of protecting the integrity and viability of traditional regional cuisines and farming communities, and of connecting urban consumers with those cuisines and communities;
- an industry that has cynically manipulated public fears despite offering products that themselves carry considerable risks for consumers;
- the focus of considerable scientific controversy over the real risks and benefits of organic food and farming practices.

Framing organic food and agriculture as an alternative to genetic engineering and other industrialized agricultural practices was common in the print media of

[7] We learn, for example, that organic food was preferred by KD Lang, Kurma Dasa, Prince Charles, the Two Fat Ladies (Clarissa Dickson Wright and the late Jennifer Patterson), Ronnie Wood, the late Ruth Cracknell, Jerry Hall, and many more.

all three countries. However, while the framing of organics as an alternative may conjure up a host of other identities and practices associated with so-called alternative lifestyles (vegetarianism, intentional communities, alternative economics and so on), there was also much to suggest that organics was constructed as increasingly mainstream. The framing of organic food and agriculture as a legitimate market segment and as a high quality ingredient, in particular, established organics as a regular item for reporting and discussion quite independently of its status as an alternative to conventional agriculture. Lifestyle sections, in particular, devoted increasing space to organic foods over the sampling period in a manner that largely avoided the framing of organics as an alternative. The more overtly editorial nature of material presented in lifestyle sections also made for some important differences in the way organics was represented. With the expression of personal opinion and experience far more acceptable in this format than in news sections of the newspapers, a great many authors simply presented organic food as a product that was self-evidently superior to conventionally-grown foods in a number of ways. For a number of authors this was simply a matter of taste, but for others it was also a matter of safety, naturalness and environmental protection.

The evidence of mainstreaming evident in this acceptance of organic food as a desirable high quality product was augmented by regular news articles on growth in the market for organic foods and on the increasingly diverse consumer base. The *Chicago Tribune*, for example, reported that sales of organic foods grew more than 20 per cent per annum over the ten years leading up to 2001 when they were estimated at US$9.3 billion, and were projected to increase to nearly US$20 billion by 2005 (Kaiser 2002). According to Paddy Spence, CEO of a market research group specializing in natural foods: 'as organic and natural foods get more distribution points in supermarkets and other retail outlets, they will become even more mainstream' (Condor 2002).

Whether the organic food and agriculture industry would have grown as quickly or to the extent that it has without food scares including the threat of genetic engineering is a moot point. Nevertheless, as the most visible alternative to industrially produced foodstuffs the industry has attracted considerable attention and criticism. Framing organic foods as themselves risky, and the organic food and agriculture industry as cynical and exploitative, critics have attempted to debunk positive beliefs towards organics and suggest it is in consumers' own interest to avoid organic products. Claiming the mantle of scientific objectivity, critics charged the organic industry with:

- promoting farming practices that:
  - will fail to produce enough food to feed growing populations without massive clearing of the world's remaining forests;
  - deny livestock veterinary medicines essential to their health and welfare;
  - increase the risk to consumers of ingesting microbiological pathogens;
  - have no proven environmental benefits;

- overstating nutritional differences in the nutritional content and levels of contamination between conventionally and organically grown foods;
- manipulating public fears in order to promote their own economic interests.

As with genetic engineering, there was no shortage of extravagant and colourful language. According to a representative of the Institute of Public Affairs (a politically conservative thinktank based in Melbourne) writing in the Brisbane *Courier Mail*:

> You have to hand it to the greens. They really know how to generate unnecessary public alarm. Their latest triumph has been with genetically modified crops, or 'Frankenfoods' as they call them. No doubt most 'poo-food' farmers are responsible people, but in their desire to make a profit, it is a fair bet that some are cutting corners and putting public health at risk. After all, greens always claim that this is what large corporations are doing (Brunton 2000: 30).

As also noted in the case of genetic engineering, there were enough dimensions to these claims, and their counterclaims, to fill an entire book. It is not our intention to offer an evaluation of the veracity of each specific claim here but, rather, to assess the degree to which such framings of organic food and farming have influenced the mobilization of green food production-consumption networks. It is worth noting, in this regard, that accompanying the increase in debunking articles over the sampling period were a number of articles questioning the integrity and motivations of the organic industry's critics. Suggesting criticism to be part of an orchestrated campaign to discredit the organic industry, the *Chicago Tribune* stated that:

> A recent front-page headline in The Daily Mail in London warned, 'Organic Mushrooms Were Contaminated With Deadly Bacteria.' Not until the fifth paragraph did the reader learn that the headline was false, that the *E. coli* found in the mushrooms was not *E. coli* 0157:H7, which is deadly, but the generic variety, which is not ... These weren't the first false charges. Last year, according to *The Guardian*, the 'agri-industrial food establishment' mounted 'an ill-informed and unjustified smear campaign' that tried to link organic food to the hazardous form of *E. coli*. The thriving organic movement in Britain must have agri-business and biotech industry worried (Burros 2000: 3B).

As we will see in Chapters 4 and 8 of this book, while farmers and consumers may also be sceptical of the motives of the organic industry's critics, conflict over the real risks and benefits of organic food created significant confusion and doubt over several issues including: whether organic practices were sustainable; whether organic foods had the benefits people claimed; whether organic labels

were trustworthy; and whether, as an individual, one could grow or consume enough organic food to make a difference anyway. However, despite this confusion, organic food was the only signifier consistently linked with environment, healthiness and quality within the print media surveyed. As simplistic a position as it may seem, the overwhelming impression to be gained from this analysis is that organic foods have been constructed in the print media as natural while their competitors have not.

There is, of course, more to knowledge and power than those aspects of discourse reflected in the mass media. In the case of food, in particular, it is impossible to ignore a range of influences including science, farming culture, government policy and so on. It is no great surprise, therefore, that the simplistic 'organics versus biotechnology' framing that dominates mass media representation of greening does not accurately reflect the full range of approaches to sustainability to be found within agriculture or agricultural science more generally. Even those appeals to the authority of science found in media discourses seldom do justice to the complexity of scientific debate on sustainability. Nevertheless, the pervasiveness of the mass media raises the obvious question as to the extent that media representations are actually reflected in public beliefs and understandings. While the motivations and attitudes underlying organic food consumption are examined in more detail in Chapter 7, the following section provides a brief overview of how Australian food consumers conceptualize organic foods.

## Consuming ambivalence: conflicting understandings of organic food

Communications research has shown that there are no straightforward and linear relationships between the dissemination of messages through the mass media and people's awareness and interpretation of those messages (Hannigan 1995). Once publicly available, information has a life of its own. Yet, the prevalence of information, the credibility of information sources, the consistency of information with existing beliefs, and the perceived relevance of information to individuals and communities all influence the significance people are likely to accord 'truth claims'. Similarly, direct relationships between people's attitudes towards any number of issues and their behaviour seldom occur. This is not because people profess values that they fail to act on. Rather, it is because decisions are rarely decisions between an obvious good and an equally obvious bad. When making, for example, choices about what food to eat people must manage an array of competing imperatives, needs and desires while confronting, as we have seen, a range of competing and contradictory discourses about organics, health, environment and so on. Put more simply, we shouldn't expect people necessarily to believe what they read in the mass media, nor necessarily to act on their beliefs.

As we will see in Chapter 7, on the whole, most people have positive attitudes towards organic foods. Importantly, however, the number of people who unambiguously endorse organic foods is comparatively small. There also are a significant minority either who do not believe organic foods deserve their status as environmentally-friendly health foods or who do not believe them to represent adequate quality or value for money. And, there are a significant minority who profess the same sorts of arguments put forth through the mass media about the threat organic production poses to environmental quality and food security. One consumer interviewed during the course of this research expressed their belief that *'one of the other disadvantages of the organic thing is that you get less quantity of a product per acre ... So we've got an increasing population and food shortages, and we are talking about growing less per acre of land use'*. Another expressed concern that organic production would promote more soil erosion than chemical-based minimum tillage techniques: *'I can see problems with mechanical cultivation in some areas contributing to erosion more than say, if you used a site and left the crop on the surface'*. Yet another consumer argued that organic agriculture would lead to nutrient depletion: *'once you've harvested you are still taking something out of the earth, out of the soil, ripping it off and sending it away, and so you are constantly sucking and draining the soil no matter what you do, or where you are or how you're growing it. It's just the inputs that have changed'*.

More common, however, than either wholesale rejection or endorsement of organic foods among Australian consumers is confusion and ambivalence. While confusion relates to uncertainty over who and what to believe, ambivalence relates to mixed feelings about making potentially costly changes in personal habits with uncertain, long-term or intangible benefits. One consumer expressed this in the following way: *'I guess the thing that really hits home for me at the moment, is okay, we've got a choice, to choose organic foods possibly from some products that we buy, but certainly not all. So no matter what you buy, you are only going part of the way in achieving a healthy lifestyle for yourself, achieving good land use and other planetary global issues'*. Some consumers argued that changing food consumption preferences and habits was simply a very difficult thing to do. That people were inherently reluctant to change. One asked: *'What will you pay? Are you prepared to change? You talk about it ... but it's what you're used to and its habit isn't it'*.

With very little overt promotion of organic foods (see Chapter 6), the majority of consumers are likely to source their information on organics from the mass media, personal networks and product labels. It is telling, in this respect, that few people understand existing certification schemes for organic growers and processors and many are sceptical, consequently, about the honesty and reliability of organic labels: '*You slap organic on it, but there is no way you can prove what they've been doing to it'*. Suspicions that organic labels may not be reliable are fuelled not just by media stories making these claims, but by both the lack of a unified and state-regulated national standard in a number of countries, such as

Australia, for products sold as organic (see Chapter 4) and the increasing availability of highly processed organic products that do not fit the images of wholesomeness and non-industrialized production methods associated by most participants with organic foods. The question of how this widespread ambivalence about the attributes of organic food translates into actual food consumption behaviour will be addressed in Chapter 7.

## Conclusion

There is a clear disjuncture in greening discourses between those that dominate agriculture and agricultural science and those that dominate the mass media and public debates. While agriculture in the broadest sense is characterized by a range of competing approaches to sustainability that we have summarized through identification of four underlying models (see Chapter 1), media discourses often present sustainability simply as a choice between organic agriculture and the industrialized, genetically-modified and chemical-intensive alternative of conventional agriculture. This simplification of greening discourse, and the focus on aspects of greening that relate to food safety and nutrition, within the mass media can hardly be considered surprising. It is a basic journalistic principle, after all, to help audiences sift through and understand the vast amount of information to which they are exposed by getting right to the point of why it is relevant to them as individuals. Our point here is not to criticize the mass media, but to show how, despite the multitudinous ways in which we might approach agricultural sustainability, organic food and agriculture has been the only approach consistently seen within public discourses to signify the maintenance of healthy environments and people. Other approaches, ranging from Integrated Pest Management to Conservation Farming, simply do not have the public recognition nor the ability to structure food networks from production to consumption.[8] Further, the techniques that are used in a number of competing approaches to sustainability to improve environmental performance and have widespread support among farmers (such as the use of chemicals to reduce soil erosion) are interpreted in public discourses as almost unequivocally bad.

Despite the apparent simplification of greening discourse, the four models of sustainability discussed in Chapter 1 demonstrate that conflict between the approaches to sustainability of conventional and organic food networks is not simply a conflict over the facts of environmental and health impacts. Nor is it simply a matter of consumer ignorance or trust. Rather, it is a conflict between rationalities, or worldviews, that are used to ask questions and interpret

[8] It is, of course, possible to argue that techniques such as Conservation Farming are applied over a vastly greater area than organic practices and are, therefore, more successful at organizing production-consumption networks. Our point here is not that such techniques are not widely used and extremely influential, but that they are not the key principles around which these networks are constructed. In fact, these practices are largely invisible to potential consumers.

information. Organic food may be understood not just as a product that consumers perceive to be safe from chemical and biological hazards, but as a product that embodies non-reductionist rationalities and links consumers and farmers with their food in a more holistic, and intuitively more appealing, manner. Equally, the appeals of localism, tradition and community may be interpreted by those schooled in the principles of the input-output model as inefficient and irrational. Enrolling actors within green food production-consumption networks is as much, if not more, about encouraging their acceptance of an alternative model of sustainability as it is about debating the 'facts' of specific agricultural products and practices.

# 4

# Governing Organic Agriculture

In most parts of the world, organic agriculture is notable for how little government interest it historically has attracted. This stands in marked contrast to agriculture more generally in Western nations, particularly in the post Second World War period. While social and political scientists often argue that regulation is not the sole prerogative of government agencies, the importance of private regulation to the organic sector is, in fact, abundantly clear. As shown in Chapter 2, the focus of private regulation largely has been on the codification of organic principles and beliefs into systematic production, auditing and certification standards that set the boundaries for acceptable and unacceptable practices associated with organic agriculture. These standards have been fundamental to the expansion of the organic industry. With declining opportunities for direct contact with organic producers, codified standards provide consumers with some measure of guarantee that foods have been produced without the deliberate application of synthetic pesticides or other proscribed substances. At the same time, adherence to organic standards enables growers, processors and others to distinguish their produce from their conventional competitors. Organic standards, and the logos that accompany them, thus have become vital tools in accessing markets for organic produce.

More recently, however, governments have taken more active and important roles in regulation of the organic sector. This has occurred both directly and indirectly. Examples of the former include state appropriation of standards-setting processes while examples of the latter include the incorporation of organics within rural and community development policy. As we saw in the case of moves by the US Department of Agriculture (USDA) to set a uniform national organic standard (see Chapter 2), the involvement of state agencies in regulation of the organic sector has not always been uncontroversial. Indeed, some in the organic sector see state 'intervention' as key to success, while others view it as impeding growth through the market. Private regulation of organic standards has also been subject to criticism, particularly in relation to its failure to address a range of social issues associated with the exploitation of small farmers and farm workers.

Clearly, there is much more at stake in the regulation of what is meant by 'organics' than a battle for control between 'the state' and 'the industry'.

This chapter examines the historical basis for the emergence of organic regulation, and describes the significance of certification for the contemporary organic sector. It will evaluate the role of the government and non-government sectors in organic governance, point to challenges arising alongside the politics of organic regulation, and discuss how different approaches to organic governance relate to different motivations for involvement in the organic sector.

## Building traceability in organic food networks

The organic agriculture movement of the early 1900s reflected an, albeit contested, array of values about farming, agro-ecology, and human/nature relations. However, it is arguably the expansion that has occurred over the last 30 years that has been responsible for the transformation of organic farming principles and beliefs into codified sets of rules and guidelines (see Courville 2006). In the early stages of rules development, assurances of the integrity of organic produce were embedded in voluntary standards and inspection systems (Rundgren 2002). These processes were informal, and at times subjective. In New Zealand, for example, farmers' personal values and attitudes—most notably their ideological commitment to organics—were known to influence their success or failure in obtaining organic certification (see Campbell and Liepins 2001). In contrast, contemporary certification relies on impartial third parties to oversee the implementation of clearly documented standards (Burch *et al.* 2002). It is worth clarifying the significance of rising consumer demand for organic food in the formation of these standards (for detailed discussion of organic consumers, however, see Chapter 7).

Consumer demand for organic food began to grow rapidly during the 1960s and 70s (see Reed and Holt 2006). This was accompanied by an expansion in the number and type of organic food outlets, including organic buying groups, non-profit food cooperatives and wholefood shops. Growth of these organic distribution networks signified a common opposition among participating growers and consumers to the methods of production and distribution that characterized conventional systems of food provision (Belasco 1993). Of particular relevance to this chapter were the relatively direct connections that these networks fostered between food producers, food consumers, and food production environments. Organic farmers and food consumers established immediate and personal relationships through the consumption of locally grown organic food (Clunies-Ross 1990). The important point here is that the direct relationships characteristic of producer-consumer organic networks were able to provide some confidence as to the integrity of organic produce. As the organic sector has expanded, however, so too has the complexity and length of the path between farm-gate and dinner plate. New systems of trust building have emerged

to provide accountability for goods produced under organic management. This is all the more apparent in countries—like Australia and New Zealand—where export orientation is a key attribute of organic industry growth.

While the organic consumer movement has provided a significant impetus for the formation of certification standards, the entry of a range of additional stakeholders including processors, distributors and retailers also is associated with the increasing demand for regulation. Importantly, this demand focuses not only on the development of standards in and of themselves but on the standardization of certification procedures and the professionalization of certification bodies more generally. The initiation by Heinz-Wattie, for example, of organic vegetable processing and exporting from New Zealand to Japan in the mid-1990s saw the explicit structuring of standards and certification procedures by Bio Gro—New Zealand's leading certification body—in line with Heinz-Wattie's requirements for consistency with international standards and procedures. While Heinz-Wattie deals only with a fraction of the 900 growers certified through Bio Gro, their influence over standards has had far reaching consequences in terms of enabling access to international markets for New Zealand organic produce (Lyons 2001). The progressive internationalization of organic trade has created considerable pressure for the standardization of regulation across borders. The recent formulation of organic standards in countries such as Uganda and South Africa thus have been undertaken with explicit consideration of their compliance with standards that regulate leading organic markets (including the EU, the US and Japan). The outcome will, it is anticipated, simplify access to the international market. So what are the arrangements for the regulation of organic production, and how does this affect farmers' ability to access their desired markets?

## What is organic certification and where is it recognized?

As stated in Chapter 1, the most important factor in the definition of particular foods and fibres as organic is the official *certification* by an independent third party of the farm from which they have originated and of the processing and distribution nodes through which they have passed. Certification is based on compliance with established sets of standards. These standards include lists of allowable inputs (e.g., animal manures and some natural herbicides) as well as prohibited substances (including GMOs and antibiotics). In addition, organic standards stipulate a range of broader environmental management criteria, including reference to biodiversity, soil fertility and water conservation. Standards also stipulate requirements related to the management of adjacent organic and non-organic crops, buffer zones between these crops, and record keeping of farm activities.

The details of certification standards regulate use of the word 'organic' (and in some countries 'biodynamic' and 'ecological') on food, cosmetics, wine and other labels. 'Certified' organic refers to production practices and processes,

rather than the final product itself. It is illegal, in many countries, to make 'certified organic' claims without first obtaining organic certification through adherence to these standards.[1] Growers, processors and retailers are all eligible for organic certification when they meet the requirements outlined in the standards. For growers, organic certification generally takes between 12 months and three years, depending on the rules of the organization and the history of farm use prior to beginning the conversion process (BFA 2003). Applicants are inspected by a representative from the certification body during the conversion process, and are regularly re-inspected after certification is granted. This process ensures adherence to standards, and indirectly, provides invaluable 'extension', or advisory, services to growers that are otherwise difficult to obtain.

To date, the majority of organic certification has been undertaken by non-government agencies. However, shifts over the last decade suggest that this may not continue to be the case. The UK Soil Association was one of the earliest private certification organizations, established in 1945 with an initial membership base of 60 people. Since then, private industry organizations providing organic certification have proliferated. The international peak body IFOAM (the International Federation of Organic Agriculture Movements) was established in the early 1970s and now has over 100 member organizations. The IFOAM standard (see Chapter 1) has been widely utilized as a template by other certifiers, and embodies a model for industry ownership of both standards and standards setting procedures. Many countries are home to an abundance of private certification organizations (see Table 4.1 below). Australia has comparatively few, while countries including the United States, Canada and Japan have around 50 such bodies. In contrast, countries with emerging organic sectors, including Thailand, the Philippines, Senegal and Zambia, have few if any private agencies. In cases where there is no local certifier, growers must utilize foreign agencies. Many organic coffee producing countries including East Timor and New Guinea, utilize Australian-based agencies. In addition to these private systems, throughout the early 1990s a number of government-based certification systems began statutory regulation of the organic sector. The US, China and Japan are included among countries with government involvement in the certification of organics.

While the majority of standards regimes, both public and private, are established at a national level, they play a vital role in securing access to the international organic market. And it is here that the influence of government involvement in organic certification becomes particularly clear, for where there is no government regulation of organic standards there are no barriers to entry of imported goods based on their need to comply with domestic standards. Where,

[1] As discussed elsewhere in this chapter, while use of the term 'organic' is strictly regulated in a variety of countries there are many countries where its use is not regulated—including Australia. In such countries, the legality, or otherwise, of staking a claim to be 'certified organic' depends on other legislation. In Australia, for example, one farmer was prosecuted under the *Trade Practices Act* for fraudulently claiming that they had used organic practices to produce wheat that was subsequently sold as 'certified organic' to a cereals processing company (Lyons 1999).

conversely, government regulation of organic standards does exist, it is possible to find a number of additional arrangements for the regulation of organic trade. In some circumstances, unilateral and bilateral agreements have been established by governments to facilitate direct trading between countries. This has occurred where organic standards have been accepted by one or both governments as equivalent. This arrangement exists on a unilateral basis between Japan and Australia. In this situation, Japan recognizes Australia's standard to be similar enough to its own to be considered equivalent. This enables direct entry of Australian organic produce to the Japanese market, labelled under the Japan Agricultural Standard (JAS) organic logo. While these arrangements work in some circumstances, they are costly in both finances and human resources. In addition, they exclude those countries that lack state support.

Table 4.1. Certification bodies and their approvals by region (source: Rundgren 2004)

| Region | Total | IFOAM accredited | Japan compliant | ISO 65 compliant | EU compliant | USA compliant |
|---|---|---|---|---|---|---|
| Africa | 7 | | | 1 | | |
| Asia | 83 | 4 | 65 | 1 | 1 | 2 |
| Europe | 130 | 10 | 9 | 45 | 100 | 28 |
| Latin America/ Caribbean | 33 | 4 | | 10 | 5 | 8 |
| North America | 101 | 4 | 1 | 14 | | 64 |
| Oceania | 10 | 4 | 6 | 3 | 6 | 4 |
| TOTAL | 364 | 26 | 81 | 74 | 112 | 106 |

Similarly, the EU has established multilateral arrangements with all its members. This structure makes it relatively easy for traders to sell across EU member countries. Countries outside the EU are able to apply for recognition as equivalent with the EU organic standard (EEC 2092/91). Australia has been successful in this process, and currently holds 'third party import' status, which enables direct entry of Australian organic produce to the EU market. Again, negotiating this regulatory terrain to access the lucrative EU market is costly, and requires a degree of political astuteness. Many growers within non-'third party import' status countries must obtain certification from EU-based certifiers (such as EcoCert and Krav) if they are to bypass this difficulty.

By contrast, the United States Department of Agriculture's (USDA) National Organic Program (NOP) introduced a uniform national standard in 2001 that requires all produce entering the US market be certified by a USDA approved organization (Kung Wai 2002). The announcement of this ruling in 2001 drew initial panic from certifying bodies and incited a clamour of applications for

USDA accreditation to avoid exclusion from the US market. It is fair to say that very few certification organizations from developing countries have either applied for, or been successful in obtaining, USDA accreditation. As a result, producers from these countries have been left increasingly marginalized from the US organic market.

## The cost of certification

The development of organic certification has brought a range of additional costs to producers. These relate most obviously to the direct financial costs associated with membership of certification bodies, payment of inspection fees, and so on; and to the opportunity costs of time and energy that must be devoted to administrative activities such as record keeping and reporting instead of to other more productive activities. Perhaps more importantly though, organic certification can impose very significant, if indirect, financial costs by reducing market access for those growers to whom appropriate certification is not readily available.

In direct terms, organic certification is estimated to cost around 1.5 per cent of the value of organic goods sold, and, as such, the organic certification industry was estimated to be worth US$300 million in 2002 (Rundgren 2002). Further, the organic conversion period often is associated with a decline in crop yields as growers learn new production and management techniques. Coupled with lower premiums for 'in conversion' produce, the conversion period can become a financially precarious time for growers. This financial burden has been lessened in the EU, where many national governments provide subsidies to growers to cover the costs of conversion. While this may advantage some growers, the reality for most is that conversion to organic agriculture can be costly. For growers in developing countries the situation is accentuated. In Central and South America, Southeast Asia and Africa, a relative dearth of national certification bodies means that growers often are forced to obtain their certification from overseas organizations. The cost for certification—in US dollars, British pounds or Euros—is impossibly high for small-scale farmers on meagre local incomes. This is further exacerbated in cases where growers must obtain certification from more than one agency. These initial costs may be off-set in the medium or long term by declining expenses on farm inputs (such as agri-chemicals) and the price premiums received for organic produce.

Table 4.1 above illustrates the problem for small-scale farmers. When it is considered that 65 of the 83 certification bodies in Asia are Japanese, it becomes glaringly apparent that developing regions of Africa, Asia and Latin America are under-serviced by domestic certification bodies and, in the absence of off-shore certification, have few viable pathways into lucrative export markets. Indeed, there is mounting evidence from around the world that the increasing cost of organic certification excludes many from participating in the certified organic

market, particularly those on small-scale farms, low income growers, and those geographically distanced from the sites of standards administration. The long distance between growers operating in the developing world and certification offices housed largely in the first world increases transport costs related to inspection and administration (see Barrett *et al.* 2001). This has profound impacts on market access as certification is an essential prerequisite for trade. The USDA's National Organic Program outlined above illustrates well the discriminatory tendencies of emerging organic regulation. The NOP requires all growers wishing to sell on the US market to certify with an organization recognized by the USDA. With the US market accounting for over a third of global organic sales, the magnitude of this ruling is amplified for export-dependent growers. Smaller certification organizations that cannot afford accreditation fall through the cracks of this regulatory structure, and this has a ripple effect for growers certified with these organizations. The impacts of regulatory restructuring were articulated by the NOP Program Manager not long after it was introduced in 2001:

> We will no doubt see a rationalization of the certification industry, as smaller certifiers find it increasingly difficult to compete in the new regulatory environment (Keith Jones, pers. comm. April, 2002).

Not surprisingly, a number of strategies have been developed to address these costs and to maintain, or improve, accessibility to organic certification. One such strategy is known as group certification, or Internal Control Systems (ICS), which are utilized in developing countries to shift the level of certification from individual farmers to producer groups or cooperatives (see Box 4.1) and thus to reduce both the financial and reporting burden on individual farmers.

## Certification loopholes

Despite the proliferation of organic standards, there do exist a number of loopholes that enable what is arguably a certain amount of misuse of the word 'organic'. By loopholes we refer not to behaviour that is fraudulent—such as the making of false declarations—but to behaviour that does not directly contravene organic regulatory regimes but which is, nevertheless, inconsistent with the principles and values underlying those regimes. This is perhaps most evident in situations that are not covered by state-enforced regulations. Where there is no government regulation of the word 'organic', for example, anyone may sell produce labelled as organic irrespective of whether or not its production and post-harvest handling has been certified by a reputable third party. This is the case on the domestic market in Australia (see Box 4.2) and in many other countries.

Box 4.1. Group certification for small-scale farmers

The cost of organic certification in developing countries is exacerbated by the frequent need to transport inspectors from foreign certification organizations and importing countries. For the majority of small-scale farmers, the prohibitively expensive nature of certification has meant they have been unable to provide verification of the organic integrity of their produce, and have therefore been excluded from participating in international trade in organic produce. Group certification has emerged as a response to this challenge, by attempting to reduce the costs of organic certification for growers. This system of organic regulation also has the capacity to improve the relevance of international organic standards to the specific local conditions of farmers, while ensuring they remain compliant with internationally accepted definitions of organic agriculture. In Uganda, for example, nearly all 28,000 organic farms are certified through a group certification scheme.

As its name suggests, group certification involves the organization of farmers into groups. An organic certificate is awarded to the group, rather than to farmers as individuals, and only one certification fee is required to cover all farms that are members of this group. In many cases, the costs of group certification are financed by development agencies and export companies. In Uganda, Export Promotion of Organic Products from Africa (EPOPA) has funded over 12 export companies to establish organic group certification across a range of commodities including coffee, fresh and dried fruit, vanilla, fish, shea oil, honey and spices, and continues to expand its support to other companies. Demonstrating the capacity of group certification, over 12,000 cotton farmers are certified with the Lango Organic Cotton Project in Northern Uganda, while 6,000 coffee farmers are affiliated with the White Nile Organic Coffee Project in north-west Uganda.

Management to ensure all farmers comply with organic standards occurs via an Internal Control System (ICS). The ICS involves the implementation of a management plan that stipulates requirements related to growing methods, post-harvest handling, record keeping and other activities. The details of the ICS are communicated to growers by field officers who also may undertake documentation of farm activities where farmers are unable to do so. The ICS provides a tool to ensure the integrity of members of group certification, and works via the following:

> *The certifying body will take a sample of documents from the ICS, cross-check those with the actual farmers, make sure the farmers actually exist, make sure the records we have on the farmers are actually similar to what the farm actually looks like ... and then the certifier basically says, 'yes, I think this group can manage its own control', or 'no I don't think the group can manage' ... The traditional European system was that the inspector works directly with a farm and inspects a whole farm. Now obviously you've got 6000 small farmers, you can't have a* muzungu *(white person) wandering around for the whole*

*year, it would get very time consuming and extremely expensive* (Agricultural Consultant, Uganda).[2]

Group certification relies on all farmers following organic standards. If just one farmer breaches these standards by, for example, using a non-allowable chemical input, all farmers will suffer with cancellation of organic certification. Ensuring that all farms comply with organic standards relies on effective communication among farmers, and between farmers, inspectors and field officers. Farmers are encouraged to support each other to ensure they neither need, nor are tempted, to breach organic rules. Organic inspectors do undertake random inspections of some farms. However, they rely more heavily on field officers to ensure that farmers are following organic practices.

Additional benefits associated with group certification include its capacity to increase information sharing and community networking. Recent research demonstrates that this system of cooperation can assist in building social capital, by facilitating the sharing of knowledge related to organic practices, as well as building capacity in organization, management, marketing and financial planning (Barrett *et al.* 2001).

But even where use of the word 'organic' is tightly regulated, loopholes may be found. Allen and Kovach (2000) argue that, to a certain extent, this must be seen as an inevitable consequence of the codification of organics into standards-based certification procedures. Simply put, no set of production standards can possibly be expected to cover all possible circumstances. And the focus of most organic standards on permissible and disallowable inputs encourages farmers to engage in input substitution rather than on developing more holistic and biodiverse production practices (see Chapter 2). Allen and Kovach (2000) provide the example of some growers in the US reportedly fumigating their soil with methyl bromide prior to establishment of long-term perennial crops such as apples and grapes. Methyl bromide is an ozone depleting chemical that is highly toxic to humans and animals—its potency making it a highly effective agricultural pesticide. However, by the time these crops bear fruit the three year conversion phase will have passed and the fruit can be sold as certified organic. While the intentional use of proscribed chemicals in the production of fruit in this manner is clearly a cynical manipulation of organic rules it is not, it seems, illegal. And in what is no small irony, since 2001, the Japanese government has insisted that all imported organic fruit products from New Zealand be fumigated with methyl bromide to ensure compliance with sanitary and phytosanitary regulations (Campbell *et al.* 2006b). In light of such loopholes and inconsistencies, many organic farmers keep a watchful eye on their peers,

[2] The data reported in Boxes 4.1 and 4.3 were collected by Dr Kristen Lyons during her sabbatical visit to Uganda in early 2005.

believing mutual accountability an essential strategy to ensure the maintenance of integrity within the organic sector.

Box 4.2. Organic certification loopholes in Australia

There are currently seven nationally-recognized organic certification bodies in Australia. These include:

- Australian Certified Organic
- Bio-Dynamic Research Institute
- National Association for Sustainable Agriculture Australia
- Organic Food Chain
- Organic Growers of Australia
- Safe Food Production Queensland
- Tasmanian Organic-Biodynamic Producers

The standards outlined by each of these organizations have been accredited by the Australian Quarantine and Inspection Service (AQIS) as meeting the National Standard for Organic and Biodynamic Produce (National Standard). This standard was established in 1992, representing one of the world's first national organic standards. Each of these certification organizations has an organic logo, which certified growers and processors can utilize on their produce. In addition, AQIS has developed a voluntary national organic logo which also can be applied to certified organic produce.

However, while organic certification is required for the sale of all organic produce on the international market, it is not required for domestic retail sales. Despite the fact that the primary market for Australian organic produce currently is domestic—with exports representing 15–20 per cent of production by value (DAFF 2005; Halpin and Sahota 2004)—comprehensive national regulation exists only for export trade. This has resulted in considerable confusion on the domestic market, as a lack of legislative authority enables processors, retailers and others to make unsubstantiated 'organic' claims. In fact, one small survey of self-proclaimed 'organic' stallholders at farmers' markets in Western Australia and Tasmania found that around half were not officially certified; with the majority claiming the cost of certification to be prohibitive (Halpin and Brueckner 2004b). Irrespective of whether this complaint is justified, it appears that the presence of non-certified 'organic' foods in the marketplace has magnified consumer confusion and mistrust of organic food claims (Lockie *et al.* 2002).

It should be noted, however, that despite this loophole in national organic regulations there have been few reported cases of fraudulent *'certified organic'* product claims in Australia. In these instances, farms have been de-certified and, in some cases, growers have faced hefty fines.

Another area, according to critics, not covered adequately by organic standards is the social conditions under which organic foods are produced. As argued in Chapter 2, the relative dearth of social standards in organics stems both from the inherent difficulty of defining standards that are relevant to the multitude and diversity of communities involved in agricultural production and from the lack of a clear social agenda for organic food and agriculture. By focusing on environmental and food safety measures, organic standards provide no incentive to producers, traders, processors and others to address social issues (Allen and Kovach 2000). This is not to deny the very real social and economic benefits that have accrued to organic farmers and rural communities around the world as a consequence of organic certification. In Mexico, for example, price premiums received for organic produce have resulted in a doubling of income for many organic coffee growers (Mutersbaugh 2004). However, there is no guarantee that higher farm incomes result in better pay or working conditions for farm workers. As we saw, again, in Chapter 2, the organic production sector in California has been justly criticized for the widespread exploitation of migrant and other cheap labour. According to Allen *et al.* (2003: 65), Californian agriculture is dependent on a veritable army of over 800,000 temporary farm workers—most of whom are immigrants from Mexico. These workers experience difficult working conditions, poor pay, hunger, substandard housing, insecure employment and tenuous citizenship status. Employment of them is so cheap that they are used by all but the smallest and most politically motivated farmers. Some organic farmers even go so far as to claim that their farms are 'fertilized' by the availability of temporary labour. As certified organic production continues to expand in countries of the majority world (especially through Africa, South America and Asia) (Parrott and Elzakker 2003; Parrott and Marsden 2002), social justice issues such as these will be of increasing significance.

The challenge remains to incorporate explicit social criteria within organic certification standards. To date, this has far more effectively been achieved by the Fair Trade movement, which builds both socially just networks of exchange and more ecologically sustainable systems of production (Raynolds 2000; Raynolds 2003). As noted in Chapter 1, the International Federation of Organic Agriculture Movements has developed a Code of Conduct for Organic Trade that emphasizes linkages with the Fair Trade movement and the importance of issues such as employment conditions and wages, local marketing opportunities, community development, and gender equity. In the meantime, IFOAM members such as SEKEM in Egypt and Rapunzel in Germany have developed their own social criteria as part of their organic standards (Parrott and van Elzakker 2003), while growers, processors and exporters elsewhere are seeking both organic and Fair Trade certification in order to assure consumers of the environmental and social integrity of their produce. Throughout East Africa for example, a number of coffee projects including Gumutindo in Uganda and the Kagira Coffee Union in Tanzania certify as both organic and Fair Trade.

## Unifying standards/dividing a movement?

One of the most obvious answers to the challenges posed by regulatory loopholes and certification costs is the international extension and harmonization of standards. The existing plethora of production standards both continues to obscure the social conditions under which food is produced and traded while actively discriminating against particular groups of producers, traders and, indeed, countries in permitting access to key organic markets. Yet, even harmonizing production standards across international borders is potentially problematic. As we have already discussed, geographic, climatic and cultural diversity place significant limitations on the ability of standards to capture organic principles and values in a manner that is relevant to specific production contexts. Requiring all Tanzanian organic farmers, for example, to keep a first aid kit on their farm is prohibitively costly and ignores the social conditions (including the close proximity) of small-scale farmers. Harmonization, or conformance, also has the potential to reduce the stringency of organic standards. The US Department of Agriculture's uniform national standard described above, for example, no longer requires livestock handlers to feed their animals 100 per cent organic feed if the cost is double that of conventional feed. This rule is inconsistent with regulations in most other countries (in Australia, for example, no more than five per cent non-organic feed is acceptable in livestock sold as organic). This rule also is inconsistent with the standards of many domestic US certification groups as they stood prior to implementation of the uniform national rule. However, the USDA rule acts as both a minimum and maximum standard. In other words, USDA accredited certifiers are no more at liberty to set standards stricter than the national rule than they are to set more lenient standards. Exporters targeting the US may thus alter their feed regime to meet US requirements at lower cost than that of meeting domestic requirements, while those exporters who do no alter their feed regimes to meet lower US standards may effectively be shut out. Critics warn further that the US standard could open the floodgates for the entry of genetically engineered feed into the organic livestock chain (Coody 2003).

Equally insidious is the extent to which the imposition of conformity in standards might perpetuate colonial power relations between the minority and majority worlds. The current paucity of international recognition for organic certification organizations located in the majority world exacerbates this tendency. Third World farmers and exporters often are forced to seek certification from external agencies in order to access international markets. The translation of such 'global' standards in a particular local context can raise considerable challenges for farmers and inspectors. According to Mutersbaugh (2004), practices required to make organic farming intelligible to global certifiers can have the opposite effect of making them less intelligible at the village level. Certification bodies seeking compliance with the US NOP and ISO 65 rules, in

particular, are faced with an impossible task in complying with regulations stipulating the separation of inspection/certification and advisory/consultancy services, and prohibitions against discriminating against any parties involved in the certification process. In other words, certifiers are barred from allowing field-level inspectors to help farmers overcome barriers to certification as this creates a conflict of interest that potentially undermines confidence in the integrity of standards. Yet not to offer such assistance to poor farmers does effectively discriminate against those with no other practical options for accessing support. It adds also to the cost of certification by increasing the number of officers required to operate a functional certification body and decreasing the efficiency of communication between those officers. In practice, much of the responsibility for resolving these contradictions falls on field-level staff (Mutersbaugh 2004) while farmers either re-align their practices with externally-defined standards or forego access to export markets (Mutersbaugh 2002). The dominance of global standards also often forces farmers to seek multiple certifications to ensure access to desired markets. This is evident among organic coffee growers in Oaxaca (Mexico), whose products are handled by both EU and US based organic certification organizations so as to meet multiple market requirements. Retailers and processors may also stipulate additional certification requirements. For example, the retail chain Sainsburys in the UK demands produce that has obtained IFOAM certification. This trend towards multiple certifications obviously exacerbates the costs and complexity of organic trade, particularly for those operating in the Third World.

While the international regulatory terrain for organic produce appears to be highly disadvantageous for small, and particularly Third World, producers, it is naive to dismiss altogether the agency of Third World actors. The formation of regionally and nationally based organic certification organizations has provided voices to engage in international dialogue. In Uganda, for example, the local certification body UgoCert now undertakes inspection on behalf of overseas certifiers for the majority of organic exports (see Box 4.3). This has reduced the costs of certification for growers, and has begun the process of ensuring the local relevance of certification procedures and standards. The formation of organic associations and cooperatives also has played a vital role in local capacity building at a regional, national and sub-national level.

Box 4.3. Local certification in Uganda: the case of UgoCert

Uganda is a significant producer of organic cotton, coffee, tropical fruits (including pineapple, apple, banana, paw paw, mango and passionfruit) and sesame. In response to on-going demand for this organic produce on the international market, in recent years the Ugandan organic sector began a consultation process to devise a set of organic standards. While developed alongside IFOAM standards, the consultation process sought also to ensure that organic standards adequately reflected the practical realities of Ugandan farmers. The National Organic Agricultural Movement of Uganda (NOGAMU)—the peak body for organic and sustainable agriculture movements in Uganda—played a significant role in networking groups in this consultation process. Following this consultation phase, UgoCert officially launched their organic standard in October 2004. UgoCert currently undertake local certification on behalf of international certification organizations. Indeed, the majority of organic export projects now stipulate that UgoCert should undertake organic inspection. Local inspection reduces costs for producers, as well as supporting further expansion of UgoCert. As a representative from UgoCert explained:

> *Many operators here in Uganda are actually putting pressure on their certifiers to use the local inspectors, so that the costs can be reduced. So many of the operators are refusing to meet the costs of flying in an inspector from the UK, or Germany.*

The success of this move is evidenced in the recent initiation of similar standards in Kenya and Tanzania. UgoCert is currently working towards ISO 65 and IFOAM accreditation.

As well as supporting organic exports, the formation of UgoCert is assisting to support the development of the local organic market. Domestic demand for organic food is currently very small, and most organic produce is sold through the NOGAMU shop (NOGAMU means 'Harvest' in the local language of Lugandan). Local standards can enable farmers to verify their farming practices at minimal cost. In the future, this might encourage increasing numbers of farmers to undertake conversion to certified organic production, particularly where a premium price is paid. It also is argued that the formation of a local organic standard will increase domestic awareness and demand for organic produce.

The emergence of organic exports has created new opportunities for Ugandan farmers. For many, incomes have increased, providing a financial basis to improve housing, as well as covering the cost of school fees and the basic domestic items such as salt, paraffin and soap. For some, entry into the export organic sector has also stabilized market access, enabling them to plan around the receipt of regular income. This is a positive shift. As a NOGAMU representative stated, fluctuating market access and unreliable incomes, which constrain the ability to save and undertake financial planning, is a major impediment to poverty alleviation.

## Mobilizing the state: governmental motivations for involvement in organics

Across the globe, governments have engaged to various degrees and in a diversity of ways in regulation of the organic sector. The Australian Federal Government, as stated earlier, has taken a direct role in organic regulation by evaluating and approving (or accrediting) the national standard for organic exports. The clear and apparent impetus for Australian Federal Government involvement in the organic sector was to ensure access to the burgeoning international organic market. However, the Australian political landscape demonstrates little other support for expanding the organic sector. Indeed, at a state level, Departments of Primary Industries and Departments of Agriculture are noted for their (until recently) strident critique of organic farming systems. Even national and state level farm associations or unions do not acknowledge organic farming as an important sector (in contrast to the Danish example). Recent state level government engagement in the organic sector—including research and publication of reports—appears to reiterate this emphasis on expanding export markets. In a similar vein, the United States government have adopted an export-focused approach to organic regulation. This is evident in their heavy-handed approach, which requires importers to certify with an organization registered with the US Department of Agriculture NOP (National Organic Program). The formation of the NOP demonstrates a strategy by the US government to control the terms of international trade agreements and, as such, mirrors the Free Trade Agreements articulated between the US and Australia.

The EU demonstrates a divergent pattern for government engagement in organics. Denmark and Germany, for example, have developed government policy to ensure the transformation of farmland to certified organic, and are providing farm subsidies to support this conversion process. The former country has been at the forefront of the European trend for formal national organic action plans. In an analysis of governmental assistance of EU nations, Lampkin *et al.* (1999) highlight the variation of types of assistance. Broadly put, these include area payments, in-conversion subsidy payments, special advisory services, education programs and other rural development related payments. It is important to recall that the level of generosity varies markedly within the European Union at both national and sub-national levels. These overt strategies to not only regulate, but to build the organic sector, appear to be driven by broader philosophies and agendas of rural development, environmental sustainability and public health. That many of these priorities dovetail with the European model of multifunctional agriculture[3] is partly why assistance to organic farming continues.

[3] The EU argues that multifunctionality provides a policy link between 'sustainable agriculture, food safety, territorial balance, maintaining the landscape and the environment and what is particularly important for developing countries, food security' (cited in Hollander 2004: 302). This concept has allowed the EU to redirect the farm support measures of the Common Agricultural Policy away from

Australia, in contrast, appears reluctant to locate organics within these broader policy discourses; its trade liberalization stance creating less room for the attachments between agricultural policy imperatives and governmental intervention or regulation achieved in Europe.

## Alternative models of organic governance

This chapter has highlighted the emerging centrality of independent verification programs in defining trade in organic produce. In essence, these models of regulation have been established to provide traceability within an increasingly complex organic food sector. Organic certification programs have provided an alternative means of verifying the sense of authenticity that previously was maintained through comparatively direct relationships between producers and consumers. While the formation of organic standards has assisted in making complex agri-food networks more transparent, this has not come without its costs, some of which have been discussed above. Among these is the potential for standards to homogenize the organic sector in a manner counter to the principles of cultural and agronomic diversity that historically defined the organic movement. Such costs are not unknown to members of the organic sector and a range of initiatives have been put in place to establish alternative paths.

Within the framework of organic standards setting, a number of noteworthy programs have developed that seek to ensure the diversity of the organic sector. These include the recent formation of a set of Smallholder Organic Standards by IFOAM. The introduction of these standards reflects the rapid growth in organic production in Third World countries, which are primarily composed of smallholders. These standards have emerged from consultation with representatives from IFOAM member countries. As an outcome of this collaboration, these standards have the potential to reflect more adequately the cultural, agronomic and political complexities of small-scale farms. To date, these standards have been particularly relevant to organic coffee producers in Africa and Central America. The implementation of these standards is assessed by way of Internal Control Systems (as discussed in Box 4.1), a method for the communication of standards and record keeping more specifically designed to meet the needs of smallholder farms.

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agricultural production and towards public good values such as cultural heritage and biodiversity that are not seen as trade distorting by the World Trade Organization (Hollander 2004). Critics, such as the Cairns Group of free trade proponents led by Australia, are sceptical that multifunctionality is anything other than a new form of protectionism (Dibden and Cocklin 2005; Hollander 2004). Others point out that the concept of multifunctionality promotes the protection and extension of private property rights while defining landscape features such as biodiversity as public goods that lie outside the sphere of responsibility inhering in private land use (see Mansfield 2004; McCarthy 2004). This ignores the long-term contribution of these values to sustainable production and potentially discourages landholders from coordinating their activities in order to manage landscape-scale ecological processes (Lockie and Goodman 2006; Reeve 2001a).

It is important to note that alongside on-going expansion of the certified organic market is the dynamic expansion of trade in non-certified organic produce. The size of this market is difficult to calculate, but many suspect that it far exceeds that of the certified organic market. In many Third World countries, 'de facto' organic produce is thought to comprise the majority of the market (Parrot and Marsden 2002). But with very small and immature domestic markets for explicitly organic produce (Sahota 2004), there is limited incentive for growers to seek certification on anything other than export-oriented cash crops such as coffee, high value vegetables, and so on. The largely subsistence agriculture that dominates many Third World countries often mirrors the principles underlying organic agriculture in terms of its reliance on regenerative practices such as composting, green manuring, and so on. However, subsistence agriculture is also potentially vulnerable to industrialization where its practice is based more on lack of choice and alternative livelihood strategies than it is based on a deliberate commitment to particular agro-ecologies, knowledge systems and ways of life. In fact, much of the produce described as 'de facto' organic could also be described as organic 'by default' or 'by neglect', in the sense that farmers simply cannot afford to purchase external inputs. Nevertheless, the opportunity still exists to shift these farmers to the deliberate and committed production of certified organic food and fibre. This has occurred on many farms in the former Soviet countries of Eastern Europe, where certification systems and proximity have facilitated access to lucrative export markets in the west.

Assisting more farmers in poorer parts of the world to shift towards certified organic, rather than industrialized, production practices requires not only that standards schemes and other regulatory devices are adapted to the needs of smallholders—as in the case of Internal Control Systems—but that proactive steps are taken to develop viable livelihood strategies with farmers and rural communities that meet local needs and aspirations while preserving sustainable agro-ecologies. To date, this has been addressed more extensively within the Fair Trade movement than it has the organic. Nevertheless, a recent attempt by the organic movement to more explicitly address these ecological and social conditions is reflected in the development of Participatory Guarantee Systems (PGS). Within a PGS, farmers, consumers and other interested groups engage in a process to define ecologically and socially acceptable practices. This differs from traditional certification procedures (including ICS), whose standards are imposed by an external body. The grassroots philosophy of PGS is particularly suitable for local and direct markets, and the PGS model is now operational in a number of countries, including Brazil, India, New Zealand, the United States and Uganda. Advocates of PGS suggest this alternative model of regulation reduces the costs for both farmers and consumers, while building communities around the production and exchange of food.

In wealthier countries, such as Australia, Canada, Japan, New Zealand, and the United States, recent growth in the non-certified organic market is reported to be staggering. Much of this growth is concentrated in local food production and

retailing networks that sell both certified, and significant quantities of uncertified, organic produce (see also Box 4.2). There are currently an estimated 2,000 farmers' markets and 1,000 community-supported agriculture projects scattered throughout the US, and 300 box schemes in the UK (Barber 2002). A recent report released by the Department of Primary Industries in Victoria estimated that Australians spend around $40 million each year on produce from farmers' markets, and that there are now around 80 farmers' markets in both capital cities and regional centres (DPI 2004). The recent formation of the Australasian Farmers' Markets Association, and the first national farmers' markets conference in 2002, suggest a growing interest in local food initiatives. Such marketing schemes are discussed in more detail in Chapter 6. The important point here is that alternative retail options also establish very different governance options for the entire organic food chain. As will be argued in Chapter 6, the overwhelming market dominance of mainstream supermarket chains has been a major force for non-state regulation of food networks. To date, this influence has been concentrated mostly on issues of quality and safety in conventional food chains which have been subjected to similar processes of standardization and certification. The simultaneous growth of both mainstream supermarket and alternative retail outlet sales of organic foods thus raises interesting issues for organic food governance. These include: the relative future importance of non-certified organic food in the marketplace; the possible need for relatively direct relationships with at least some organic producers and consumers in order to maintain consumer confidence in the integrity of organic food in general; and the extent to which notions of eating locally might permeate organic food networks and challenge the buying practices of mainstream supermarkets. The simplicity of direct sales provides an experience of authenticity grounded not only in the personal guarantee that production practices have followed organic guidelines but in the evocation of 'community', 'locality', 'tradition' and 'freshness'. This is difficult to replicate in an international organic regulatory terrain that is increasingly complex, and constantly re-negotiated by diverse and (sometimes) conflicting interests. An on-going challenge for the organic sector will be to ensure the integrity and trustworthiness of these traceability systems.

## Conclusion: future challenges in the governance of organics

Regulatory regimes based on a mix of public and private certification of organic production and processing standards have provided a fundamental platform for the mobilization of more widespread participation in organic food networks from producers, processors and retailers to consumers. Standards have provided a means of ensuring the integrity of organic produce despite the increasingly long and complex nature of organic networks. The integrity of certification procedures is maintained by approval from a so-called 'uninterested' third party. There are

many benefits arising from the development of this regulatory framework. This system of verification provides assurances to all actors in the food network. Through the purchase of certified organic produce—demarcated through use of an organic logo—consumers, food processors, retailers and others are reassured they are getting what they pay for. However, there are disadvantages also. Organic certification has added an additional cost for farmers, processors, retailers and others. For many, this cost makes certification inaccessible. Due to the normalization of certification as a pre-requisite for international organic trading, this marginalizes the non-certified from the global organic market. In addition, the proliferation of organic certification organizations—and organic logos—has created confusion among consumers. While organic certification systems provide assurances in regard to the integrity of organic produce, this must also be matched with public education programs to increase understanding of these organic regulatory mechanisms. The lack of domestic organic production legislation in countries such as Australia presents a significant challenge to building domestic consumer trust and understanding of certification processes. Yet, the role of the state in 'organic movement' affairs is an ongoing controversy within the sector. For some, the state's involvement in organic production and consumption will ensure that their imperatives of food safety, cheap food and export growth colonize a movement created on different values. Yet, for others, without state involvement, broad 'mainstream' consumer trust will not be generated and the sector will stagnate.

This chapter has pointed to some of the challenges facing the on-going development of organic certification systems. The first of these is the pressing need to include social criteria within organic standards. The Fair Trade movement provides an invaluable model for regulation of social justice issues. Incorporation of these issues will be vital for ensuring the organic sector proceeds in ways that are both ecologically and socially responsible. Furthermore, incorporation of these standards will reduce the need for multiple certification, as some growers currently certify to both organic and Fair Trade standards. Over recent years the interests of actors engaged in organic standards setting have become increasingly diverse. Of particular concern here is the reported lobbying by some actors to liberalize organic standards. As a consequence, the development and implementation of standards has become increasingly contested terrain. The on-going challenge remains to ensure the transparency and rigour of these processes. And finally, the on-going development in organic governance must seek to sustain the grassroots organic movement and to be inclusive of small-scale organic growers and organizations. The historical origins of the organic sector are characterized by diversity, and this should not be sacrificed in the attempt to govern.

# 5

# Producing Organic Foods

Of all the people involved in organic food and farming, two groups stand out for the volume of research attention they attract—producers and consumers. In some ways this is not surprising. Without adequate consumer demand, there is no basis for an organic industry. As we will see in the next chapter, even as demand appears to be growing it seems that inadequate quantity and quality of supply stand as major barriers to increased involvement among the processing, distribution and retailing firms that deliver the vast bulk of food to consumers. Within this context, the question of how to convince more farmers to farm organically is clearly very important. Within the context of the ecological and social consequences of conventional agriculture, it becomes even more important. However, there is a sense also in which the question of how to convince farmers to adopt organic practices reflects a traditional research focus within rural sociology on how to change farmers 'in their own interest'—on how to encourage them either to adopt technological and management innovations or to leave the industry. Such research is littered with a value-laden language of 'innovators' and 'laggards', 'business people' and 'lifestylers', that underwrites government policies designed to 'adjust' the economically 'non-viable' out of agriculture. Missing within this agenda is any sense that farmers are more than the passive recipients of knowledge, technologies and business practices developed by others; that farmers have any active role, in fact, in promoting significant change in the world of food and agriculture.

The idea that farmers—or at least the majority of farmers—respond passively to change is, of course, at odds with the popular history of organics outlined in Chapter 1. In this account, small groups of farmers concerned about the increasing use of machinery and synthetic fertilizers and chemicals developed alternative farming systems based around soil health and biological diversity. Faced by indifference—if not antagonism—from governments, research institutions and retailers, these pioneer organic farmers built their own research, information sharing and marketing networks. They were anything but passive. But does this continue to be the case? As the organic sector has grown, so too has

concern about its institutionalization and conventionalization. While we argued in Chapters 2 and 4 that caution needs to be exercised before concluding that big business has entirely colonized organics, the effects of growth at an industry level on the numbers, types, and motivations, of producers remain important research questions. Whatever else might be going on, organic farming pioneers are now vastly outnumbered by growers who have only entered the sector within the last ten years and who may have done so for entirely different reasons from those of the progenitors.

This chapter will thus begin by reviewing international and national trends in the production of organic food and the motivations and characteristics of those entering into organic production. In doing so, the chapter will assess whether the adoption of organic practices and certification continues to represent the 'conversion' of farms and farmers to fundamentally different agro-ecologies and ideologies, or whether, as discussed in Chapter 2, the adoption of organic certification has occurred alongside its appropriation into what remain essentially 'conventional' farming systems. Taking into account the historically active role of farmers in shaping the organic sector the chapter will consider how farmers continue—often in new ways—to exert their own influence over organic food networks.

## International trends in organic farming

The International Federation of Organic Agriculture Movements (IFOAM) reports that by 2005 there were over 550,000 farmers worldwide—including those in-conversion—certified for organic production (Yussefi 2005). On a global scale this appears to represent quite a dramatic increase over a relatively short period of time. Only 462,000 farms were reported in 2004, suggesting an increase in organic farm numbers of roughly 20 per cent in just one year. According to IFOAM, the real global increase in organic farm numbers from 2004 to 2005 was likely to have been slightly less spectacular, with some of those farms counted in 2005 simply missed in earlier audits of the industry. Conversely, while IFOAM reported 1,380 organic farms in Australia, Biological Farmers of Australia estimated fully certified and in-conversion farms to number around 2,100 (Moore 2003). In other words, at the same time that the quality of international data collated by IFOAM is improving and providing a better picture of what is happening at an international scale, that data may still systematically under-report the extent of organic certification. The point here is not that IFOAM's estimates are wrong, but that interpreting data on the number of certified organic farms at different times requires a degree of caution due to inconsistencies and other inadequacies in data collection both within and between countries. This is exacerbated by the essentially private regulation of most organic certification and the ensuing lack of centralized and standardized data collection and reporting.

Nevertheless, keeping this caveat in mind it is possible to discern some broad trends in the take-up of organic certification.

The first is that continuing growth in farm numbers is concentrated largely outside the traditional centres of organic farming in Europe. In fact, between 2004 and 2005, certified organic farm numbers in Mexico more than doubled to 120,000. The US also recorded a near doubling of farm numbers from around 7,000 to 12,000. In contrast, while many European nations, including Denmark, France, and Belgium, have sustained long-term expansion in the number of organic farms, this has been at a less outstanding pace. Similarly, in Australia, while the organic sector initially experienced a doubling effect, expanding from 491 growers in 1990, to 862 growers in 1995 and then 2100 growers (including growers who were 'in conversion') by 2003 (Moore 2003; RIRDC 1996), this number has levelled out in recent years. While less dramatic, in Egypt the number of certified organic farms increased from zero in the early 1970s, to 220 by 2001. In countries such as Italy, Peru, Brazil, the UK and Spain modest declines in organic farm numbers occurred between 2004 and 2005, while Chinese farm numbers declined more dramatically from almost 3,000 to a third that number. Again, some of these fluctuations are likely due to changes and improvements in reporting processes. Some of those countries that appear to have suffered declines may simply have reduced the double-counting of producers certified by more than one organization. The introduction and/or tightening of certification procedures may also have reduced reliance on estimates and the inadvertent reporting of non-certified producers as fully organic. What is beyond doubt, however, is that while the general international trend continues to be one of growth, that growth appears to have slowed in a number of countries where not only are less farmers converting to organic practices, but an increasing number of growers are relinquishing their organic certification. We will discuss this phenomenon in more detail below.

Table 5.1. Changes in the number of certified organic farms over 10 years for selected European countries (source: Michelsen 2001a)

| Country | 1987 | 1992 | 1997 |
|---|---|---|---|
| Italy | 800 | 2,500 | 30,844 |
| Austria | 600 | 6000 | 19,996 |
| Germany | 2,006 | 10,225 | 12,368 |
| Sweden | 466 | 1,867 | 10,869 |
| France | 2,660 | 2,968 | 4,784 |
| Spain | 320 | 585 | 3,526 |
| Denmark | 163 | 675 | 1,617 |
| United Kingdom | 600 | 800 | 1,026 |
| Netherlands | 300 | 490 | 810 |
| Ireland | 52 | 195 | 808 |
| Belgium | 103 | 176 | 291 |

The second broad trend since 2004 is that the number of certified organic farms included in international statistics has increased at double the rate of certified organic land area. This, in part, suggests that there have been limited additions to the stock of extremely large Australian and South American rangeland grazing properties certified as organic. To demonstrate the scale of these operations that established their organic status in previous years, the world's largest certified organic farm, a beef cattle property located in Australia, is 994,000 hectares (FAO 2002). In fact, while the average organic farm size in Australia in 2004 was over 7,000 hectares, a figure somewhat distorted by a small number of very large rangeland grazing properties (see Table 1.1), the typical organic farm was actually much much smaller with a median size of 50 hectares—an area remarkably similar to the average farm sizes of Europe. However, more rapid growth in international organic farm numbers than acreages also reflects moves to make organic certification and markets more available to smallholder producers in the poorer countries of Africa, Asia and Latin America. Group certification based on Internal Control Systems, as described in the previous chapter (see Box 4.1), has helped some 18,000 cotton and coffee farmers in Uganda attain organic certification despite an average farm area of only four hectares.

Data on the size and number of organic farms can only tell us so much, of course, about what is happening in the production sector. They tell us nothing about the relative market share of smaller and larger producers or about how the sector is likely to develop in the future. They also say little about the potential for this future to be characterized by the 'conventionalization' of organic production: that is, by the *concentration* of market share among a relatively small number of large enterprises; the *codification and de-radicalization* of organic values; the *erosion of standards*; the *substitution* of allowable inputs for synthetic fertilizers and chemicals in otherwise very 'conventional' looking farming systems; and the *bifurcation* of the sector between large conventionalized organic enterprises and a residual artisan smallholder sector. Chapter 2 argued the need to be wary of conflating all these possible dimensions of conventionalization into one unified and inexorable process. However, it also argued the need to stop generalizing from limited case studies and to explore these dimensions in more empirical detail. The next section of this chapter will consider the motivations farmers provide for requesting, or relinquishing, organic certification, before turning to an examination of how these motivations relate to the structural characteristics of organic farms and what this tells us about the various dimensions of potential conventionalization.

## Conversion versus conventionalization?

The conventionalization thesis assumes that with demand for organic foods generally outstripping supply, the opportunity to target a rapidly growing high value market attracts more and more large conventional farmers whose main interest in organics is economic. These growers are not converts to the values and beliefs that underpin organics. They are in it for the money. But is this really the case? Guthman's landmark study of organic agriculture in California (see Chapter 2) identified a range of structural factors largely outside the control of farmers that made it very difficult to operate agro-ecologically diverse farms on a small scale. Exceptionally high land values and the economies of scale available to large agri-business corporations provided powerful incentives for large-scale and highly specialized production. At the same time, however, growing demand for locally-grown and in-season food sourced through farmers' markets, community supported agriculture schemes, and so on, has continued to support smaller growers. Critics of Guthman have often identified the subsidies and other measures implemented by governments—particularly in Europe—specifically to support smallholder agriculture (Michelsen 2001a). Relatively few, however, question whether growing economies of scale necessarily mean a loss of fundamental organic values. It simply is assumed that large conventional farmers must be driven by financial opportunity while smallholders are driven by 'higher values'. Testing this assumption and, indeed, moving beyond requires that we take a look at what farmers have to say themselves about their motivations for taking up organic farming. Before doing so, we will examine in more detail the level of financial incentive to go organic.

### *So, are organic farmers just in it for the money?*

Chapter 3 highlighted a number of charges that are routinely made of organic farmers. According to critics, organic farming is so unproductive, compared with high-tech conventional farming, that growing enough food for the world's growing human population using strictly organic practices would be impossible. It is claimed that an organic future would necessitate massive deforestation so that new lands could be brought into production. Further, the organic industry, it is claimed, spreads irrational fear about the products of conventional agriculture and campaigns against the legitimate right of conventional farmers to use productivity enhancing and environmentally beneficial technologies such as genetically-modified organisms. Why? Some critics think organic farmers are simply misguided. Others, however, claim that the organic industry is concerned with little more than protecting its own high value niche market. If this is true, it would provide powerful support for the conventionalization thesis, with organic farmers emerging as no less profit-oriented than any other capitalist enterprise.

Actually comparing the productivity and/or profitability of organic and conventional farms at any broad scale is, however, potentially misleading. Comparisons based on the yield per hectare of single crops ignore the greater diversity of produce typically grown on organic farms. Similarly, comparisons based on crops that are produced primarily for sale tell us little about food that is grown either for direct household consumption or for bartering with neighbours. In neither case do we learn much, if anything, about the wider economic benefits of increased biodiversity, reduced water pollution, improved food security, and so on. In other words, the further we get, socially and ecologically, from the highly specialized farms that characterize highly industrialized agriculture the less meaningful straightforward comparisons of yield and net profit per hectare become.

According to Wynen's (2006) review of economic studies of organic farming in developed countries, where the synthetic inputs used on conventional farms are easily sourced, organic farms are generally less productive per hectare of land than their conventional peers. This is not inevitable. There are many examples of organic farmers who prove to be exceptions to the rule by outperforming conventional farmers (Pimentel *et al.* 2005; Pretty 1998). However, wider patterns suggest that those enterprises and production areas that rely most heavily, in their conventional guise, on intensive use of synthetic inputs tend to be the ones that suffer the highest productivity losses per hectare under organic management (Wynen 2006). Thus, while some European countries recorded cereal crop yield reductions of up to 40 per cent in the 1990s following conversion to organics, reductions in Australia, Canada and the US ranged only from 10 to 20 per cent. In developing countries, where synthetic inputs are not always readily available or affordable, yields have, in some cases, increased following conversion to organic practices due to improved management. The flip side to this trend is that not only do extensive farming operations appear less likely to suffer dramatic declines in productivity following conversion to organic management; they also appear easier to convert and have, in fact, done so in larger numbers (see also McEachern and Willock 2004). Generally speaking, extensive farming operations require less dramatic changes in management. There is less to learn in order to make whatever remaining changes are necessary for fully certified organic production, and more likelihood that some of the farm's natural processes of pest control, nutrient and energy recycling, and so on, remain intact. As a consequence, there is less chance that synthetic input use will simply be replaced with escalating labour demands and/or similarly expensive certified organic input use. Altogether, therefore, less intensive farms present less risky economic propositions for conversion. Box 5.1 describes one of Australia's extensive broadacre farms.

Box 5.1. Kialla Pure Foods

Graham and Sandy McNally converted their conventional mixed grain farm in South East Queensland to organic in 1983 and established Kialla Organic Farm. Their decision to go organic was influenced by a number of circumstances, including finances and family health issues. The farm is managed organically by growing green manure crops—fenugreek in winter and mung beans and cereal buckwheat in summer. Cattle are also included in crop rotations to provide essential rumen bacteria to the soil.

From its inception as an organic farm, Kialla has transformed into one of Australia's biggest organic food processors. The Kialla farm is now one of 300 farms supplying Kialla Pure Foods. Graham and Sandy grow and process over 20 grain varieties, including ancient grains such as spelt and kamut, to supply their domestic and international markets. While continuing to grow organically on their farm, Graham and Sandy are also key players in supporting growth of the organic sector. They provide organic training and education facilities to support the organic farming community. Far from competing with their neighbours, Kialla Pure Foods provide support to encourage the long-term viability of organic farms.

Despite an assumption underlying the conventionalization thesis that successful organic farms will expand in size and scope, leaving small-scale farms increasingly vulnerable, in recent years the Kialla Farm has actually reduced in area. The farm is now about two-thirds its original size; around 200 hectares. Despite this reduction, Kialla Pure Foods has expanded into a multi-million dollar farming business, recognized nationally and internationally for its contributions to community and organic industry development.

Graham and Sandy's motivation to reduce their farm size represents a telling story of the unique challenges facing organic producers. The Kialla farm was located directly in the path of the Queensland Government's proposal to build 45 metre high, 330 megawatt powerlines between Milperra and Toowoomba. The electric and magnetic fields emitted from their construction through Kialla farm would cancel a significant portion of the farm's organic status. In response, Graham and Sandy generated significant community support in their battle against the State Government, and one fundraising event alone raised over $50,000 to assist their campaign. Despite these efforts, the powerlines were built. The decision to sell part of the farm represented a strategic decision to avoid de-certification. Despite this apparent loss for Kialla, Graham optimistically reflects upon the community morale that was generated around this campaign. And while the farm has reduced in size, the Kialla Pure Foods business continues to grow. The recent construction of a 100 per cent organic certified organic maize mill—funded by a $110,000 Federal Government New Industries Development Grant—demonstrates Graham and Sandy's emphasis on innovation. Far from victims, Graham and Sandy McNally represent farm business innovators, and make a significant contribution to the Australian organic sector. While their broadacre farm has been significantly downsized, their business continues to grow.

Price premiums and other financial incentives for organic production differ widely between countries and between industries. While retail price premiums are known to vary from zero to anything in the order of 300 per cent (see Chapter 6), data on farm-gate premiums are comparatively sketchy. What we do know is that they rarely are as high as retail premiums due, in part, to increased distribution, processing and retailing costs associated with the smaller economies of scale of organic supply chains. One of the attractions for farmers, therefore, of selling direct to consumers via farmers' markets and community supported agriculture (see Box 6.1) is the opportunity to sell their produce at this higher retail premium. Indeed, many Australian organic farmers with small-scale farm operations believe this premium keeps them financially viable, and assists them to resist the mantra of 'getting big or getting out' of farming (Lyons 2001). Nevertheless, with the majority of farm-gate premiums rather more modest than those premiums routinely paid by consumers, the net profitability of certified organic farms tends not to be wildly different from similarly sized conventional farms (Reed 2004). Overall, modest premiums and reduced input costs help to compensate for modest declines in productivity and increased labour demands. Thus, Nieberg and Offermann's (2002) comparison of net profits per hectare between organic and conventional dairy farms across 10 European countries revealed differences between the two systems of seldom more than plus or minus 20 per cent. As suggested above, the more intensive the systems under comparison the lower the relative economic performance of organic farms in Nieberg and Offermann's study. Studies of dairy farming in Australia, Canada and the US also found lower levels of profitability on biodynamic and organic farms by a similar order of magnitude (Wynen 2006). Again, there are exceptions to the rule, but the general pattern is one in which larger organic farmers achieve levels of economic performance that are more-or-less commensurate with their conventional peers, not substantially higher or lower.

Levels of profitability that are no more than 20 per cent poorer than conventional farming may at least seem not to offer a powerful disincentive to farm organically; particularly when it is considered that other measures of productivity and profitability—such as return per unit of family labour or per dollar spent on inputs—tend to present a more positive picture. Nevertheless, 20 per cent per hectare is potentially a very large number for business people facing debt, family responsibilities, and volatile terms of trade. Indeed, when it is considered that the first few years following conversion to organic practices represents a period in which productivity may fall off dramatically as farmers learn new ways of doing things and the ecological processes of their farms are restored (literally, as the farm is weaned off chemical inputs), conversion starts to look like quite a risky financial proposition. These risks may help to explain why many farmers choose to convert only a portion of their farm to organics at a time.

This is not to say that there are no economic incentives for organic farming. What can be said is that the nature of these incentives is not generally the opportunity to make a fast buck! Rather, economic incentives are an opportunity,

provided by lower cost structures and farm-gate price premiums, for conventional farmers to switch to organic practices without necessarily being forced to adopt an entirely different lifestyle to that of their peers. They are the opportunity for others to stabilize their incomes by taking more control over the supply chain and developing closer relationships with their customers. They are the opportunity for smaller growers to remain viable by selling directly to consumers at the higher retail price premium. They are the opportunity for smallholders in developing countries like Uganda (see Chapter 4) to get a price that supports their basic livelihood and contributes to community development. And, they are the opportunity for farmers of all sizes to reduce their exposure to risks associated with the cost of synthetic inputs. Look hard enough and it is possible to find people who have made a lot of money out of organic farming. However, it is a lot easier to find growers who talk about the way in which organic price premiums have helped them to farm organically than it is to find farmers who talk about how farming organically has helped them to achieve premium prices. This suggests that while financial motivations may actually have been an important part of the decision to farm organically for many certified growers, other motivations have, more than likely, played their own role. While organic premiums support organic farmers, it is clear that this incentive, alone, does not drive farmers. Instead, farmers negotiate a range of competing values and needs in the decision to farm organically. One farmer in Lyons' (2001) study articulates the interface between financial and other considerations:

> *I'm more philosophically inclined that way which is probably why I thought about it in the first place, but the bottom line was the dollars coming in, which is what you've got to think about. If it's not economic we can't do it. It all boils down to are we going to make money out of it? And if we can't, then we can't operate as a business, so you've got to be reasonably economic about it* (organic pea and lamb producer, Kirwee, New Zealand).

So if they are not just in it for the money, why else are farmers going organic?

### *What motivates conversion to organic production?*

There are numerous motivations that farmers cite for their adoption of organic practices and certification. Based on a comprehensive review of European research, Susanne Padel (2001) summarizes these (see Table 5.2) as: personal motives related to concern both for the health and safety of the farm and farm family, and to wider social and ecological concerns such as environmental protection and the development of rural communities; and farm-related motives concerned with both the health of soils and farm animals and the short and long-term financial well-being of the farm business. Strangely under-developed, or absent, in the research Padel reviews is any systematic comparison of how

important these motivations are in the day-to-day activities of certified organic farms relative to how important they are in the day-to-day activities of conventional farmers. In itself, knowing that organic farms are motivated to conserve natural resources tells us very little since conventional farmers also claim they are motivated to leave their farms in better condition for the next generation, to preserve the soil, and so on. As Chapter 1 showed, there is more than one way in which growers might practically express their concern for the sustainability of their farms.

Padel (2001) introduces two comparative dimensions to her review that are extremely useful. The first is a comparison of how European organic farmers differ demographically from their conventional counterparts. The majority of studies, she suggests, show organic farmers to be younger and more highly educated than conventional farmers. Further, organic farmers are less likely to come from a farming background and less likely to participate in traditional farm organizations and networks, but more likely to be women. European organic farms also are smaller than conventional farms. The second comparative dimension relates to how the motives and other characteristics of organic farmers appear to have changed over time. This comparison suggests not only that organic farms and farmers differ from their conventional counterparts, but that newer organic farms and farmers differ from their more established peers. Late adopters, Padel argues, are more likely to have come from conventional farming backgrounds, to operate larger than average farms, and have tested out organic practices on a small part of their property before considering certification of the whole enterprise. Further, while earlier studies pointed to husbandry concerns as primary motivators for conversion, more recent studies have shown newer organic farmers to be more motivated by concerns for financial security and general environmental concerns.

Table 5.2 Motivations for organic farming among European farmers (source: Padel 2001: 46)

| **Farming related motives** | **Personal motives** |
|---|---|
| **Husbandry and technical reasons** | **Personal health** |
| Animal health problem | Own and family health problems |
| Soil fertility and erosion problems | Ergonomic reasons |
| | |
| **Financial motives** | **General concerns** |
| Solve existing financial problems | Stewardship |
| Secure future of the farm | Food quality |
| Cost saving | Conservation |
| Premium marketing | Environmental |
| | Rural development |

In other words, a broad review of the literature seems to suggest that, as more people have taken up organic certification, the profile of organic farmers in Europe has become less distinct from that of conventional farmers. But does this mean that the organic production sector is being 'conventionalized'? For Padel, the changing profile of organic farmers is not entirely surprising. Previous studies of technological innovation in agriculture have found that particularly innovative farmers tend to be more highly educated than their peers, more tolerant of uncertainty, and more connected with other innovators than they are with their immediate neighbours. They are not 'typical' farmers. Early adopters—who are among the next group to take up new practices—help to test and legitimize those practices on a wider scale. Early adopters are generally more integrated within their local communities than are innovators and have larger farms than do later adopters. Thus, it appears that there is a good deal in common between organic farming pioneers, more recent converts, and the technological innovators and early adopters found more generally within farming communities. While it is important not to overstate these commonalities, the fact that they are evident at all shows that the conversion of conventional farms and farmers to organic may signal a maturing production sector that has proven its practicality and viability just as easily as it might signal the capture and transformation of that sector by cynical opportunists. Padel's (2001) review does not provide clear guidance on how these potentialities are being played out. However, it does note a number of barriers to the uptake of organic practices among the vast bulk of conventional producers. Organic practices are not typical of the simple productivity boosting technologies that diffuse most rapidly among the agricultural community (see also Vanclay and Lawrence 1995). They are complex, difficult to try out on a small scale, and carry significant economic risks as farmers learn to farm in fundamentally different ways. Further, as farmers take this risk, they are likely to find there is relatively little information or institutional support available to support their conversion compared to that available for conventional farming (see also Lockie 1997). They are also likely to experience a certain amount of direct opposition among their conventional farming peers.

Padel (2001) speculates that as the organic production sector has grown, some of the social and institutional barriers to its adoption have been reduced. Indeed, state subsidies can be found to support the adoption of organic farming in several European countries. Nevertheless, the nature of the barriers identified by Padel speaks more, as argued in the previous section, of a process of conversion to organics that is fraught with economic risk than it does of easy dollars to be made on the back of high retail price premiums. This brings us back to the question of how financial issues and motivations interact with others in the decision to farm, or to keep farming, organically.

### *What is the relative importance of different motivations and farm characteristics?*

The National Organic Farm Survey (see Appendix 1) examined how important those motivations identified by Padel were in the day-to-day decision-making of both certified organic and conventional farmers in Australia (Lockie and Halpin 2005). It also examined the relationships between those motivations and the structural and demographic features of organic farms and farmers. While Australian farmers are not necessarily representative of all growers worldwide, there are reasons to suggest they represent a case study of particular interest. Agriculture in Australia receives very low levels of state support[1], with most government investment directed towards research, development and training activities that are of arguably little benefit to organic producers. This was articulated by many organic farmers in Lyons' (2001) study, who pointed to the difficulties in accessing useful organic grower information from government departments, and the subsequent conflict and misunderstanding between state agencies and the organic sector:

> *The Department of Primary Industries (DPI) can give us grower advice, but we know we've been the joked about farm within the DPI office at Emerald. One time we had someone from an overseas newspaper interview us here, and to get a second opinion they went into the DPI and spoke with one of the officers, and they just made a joke about us. The interviewer was quite surprised to see that although we are a very successful farm we were getting that sort of reaction from government, that we were doomed before we even started* (organic grain grower, Clermont, Queensland).

Left almost entirely at the mercy of unfettered market forces, the Australian organic sector provides useful insights into the inevitability of conventionalization outside the bounds of both European-style state subsidies to promote organic production as an agri-environmental measure and the particular circumstances that have promoted the rapid industrialization of Californian agriculture. Reflecting the concern we have expressed throughout this book with treating conventionalization as a simplistic binary between artisanal and industrial production, the National Organic Farm Survey enabled examination of three potential dimensions of conventionalization—namely, ideology, scale and market linkages—and the relationships between them.

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[1] Australian farmers receive an effective rate of subsidization of only four per cent of gross income (compared with 37% in Europe, 58% in Japan and 18% in the US). Further, the receipt of that state support which is available is often contingent on farmers being able to demonstrate their economic viability and/or participation in business management training or, in other words, their ability to 'help themselves' maintain financial self-sufficiency (DAFF 2005).

The demographic profile of organic growers to emerge through the National Organic Farm Survey contained a few notable differences to the general profile of conventional farmers in Australia. Although the average age of organic growers was 51 years—close to the average age for all farmers—their average age when taking up organic certification was a comparatively youthful 44 years. Also, a quarter of participating farmers were women. While there are no reliable data on the number of women on Australian farms who participate actively in the management of those farms, the number willing to answer farm-related surveys rather than hand them over to male partners is generally quite small. This is suggestive, but not conclusive, of higher levels of involvement in organic farming among women. Around two thirds of participants came from farming families and a similar number converted existing farms, while about a third of organic farmers had university or other tertiary qualifications. These high levels of education amongst organic farmers can be explained, at least in part, by the shift into organics by people previously employed across a range of professions requiring tertiary qualifications. Lyons (2001) found many highly qualified city people looking for a 'sea change' were recent entrants to organics:

> *Organics made sense to us. Living in Sydney and just being surrounded by buildings, we thought there must be more. And I guess for me, I was interested in organics over conventional because while living in Sydney I had become quite interested in environmental issues. Not, you know, not as in waving placards, I'm not that sort of person. But I am very interested in all that sort of stuff* (organic orchardist, Takaka, New Zealand).

Reflecting the comments made here, the national survey also showed that organic farmers participated far less actively in mainstream farming organizations—including those with an environmental orientation—than did conventional farmers. All this is consistent with Padel's review of findings from European studies.

Figure 5.1 compares the importance attributed to a number of potential motivations for farming by certified organic and conventional farmers. Responses are based on a scale in which one indicates that a motivation is not at all important and five indicates that a motivation is extremely important. The most important motivations for certified organic farmers were chemical safety, food quality, environmental health and animal health. Conventional farmers also considered these important, but they did not think them significantly more important than maintaining profits and productivity in the same way that organic farmers did. Similarly, profits and productivity were not dismissed by organic farmers—who needed to grow and sell food, often at a premium, in order to make money—but they remained secondary to the production of other environmental and social values. Both groups were equally motivated towards minimizing costs, risk aversion and rural development, all of which were somewhat less important than other motivating factors. The overall picture that emerges is one in which all

of those motivations that are cited by certified organic growers as fundamental to their day-to-day activities are also acknowledged by conventional farmers as important considerations. The same is true of those motivations cited as most important by conventional farmers. The difference is in the rankings and the ways in which these motivations are likely to be prioritized when growers are faced with decisions that require making compromises or trade-offs.

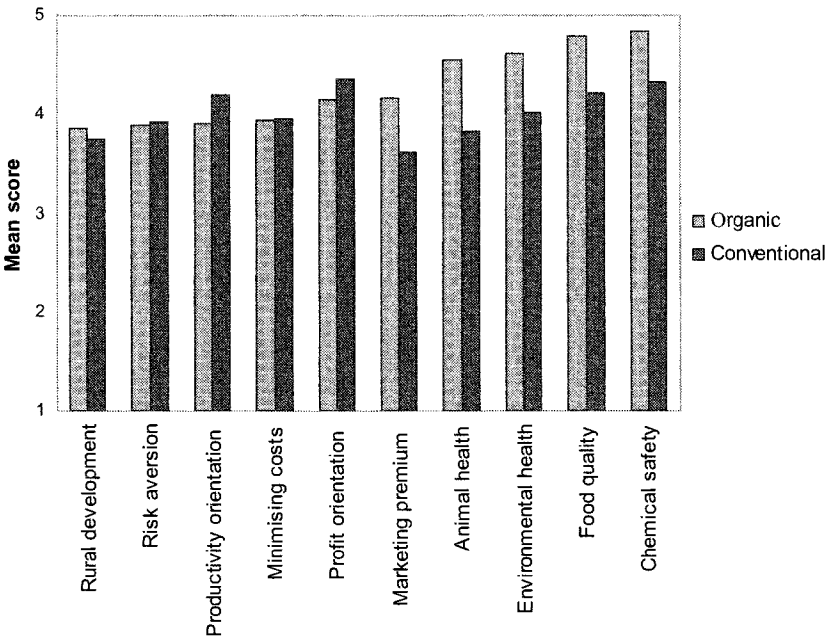



Figure 5.1. Mean scores among organic and conventional farmers—motivations for farming

Figure 5.2 compares the attitudes of certified organic and conventional farmers towards a range of political, environmental and health issues affecting contemporary agriculture. These included the seriousness of land degradation, farmers' responsibility to address land degradation, the appropriateness of compensation for restrictions placed on private property rights to protect environmental values, the quality and safety of organic foods, the potential benefits of genetic engineering and risks to consumers from consumption of industrially-produced foods. Responses to these questions are based on a scale in which one indicates strong opposition to the particular issue and five indicates strong support for it. As Figure 5.2 shows, while there were significant differences between organic and conventional farmers, they were differences of degree rather than indicative of fundamentally opposed attitudes. For example, on average, organic farmers agreed strongly that organic foods were high in quality

while foods produced using industrial processes such as synthetic fertilizers and chemicals, genetic engineering and irradiation presented health risks to consumers. In her research with Australian organic producers, Lyons (2001) found organic producers were especially worried about the health risks associated with growing and eating genetically engineered food crops:

> *I am a firm believer that if you go and splice genes ... we just don't know what the long term effects will be. Like what they have done with the tomatoes, now they have put a fish gene into it to enable the tomatoes to be frozen, and to come out feeling crispy and nice. But what if in the future these genes attach themselves to the human body? There have been a lot of instances ... boys growing breasts because of hormones in chickens and people growing fat from pig meat because of the hormones given to the pigs that transmit to the human body. We haven't been eating pork for quite a while because of all the experiments they have been doing with pigs* (organic mixed vegetable grower, Childers, Queensland).

Intuitively, we might expect conventional farmers to disagree quite adamantly with the views of certified organic farmers, and some did. However, on average, conventional farmers were ambivalent, neither agreeing nor disagreeing with the views of organic farmers. In other words, for every conventional farmer who believed that foods produced using what are increasingly standard technologies in the conventional food sector are safe, there was at least one more who expressed reservations about their safety, and a large number who were simply unsure. Similarly, and perhaps surprisingly, conventional farmers were very ambivalent, on the whole, about the potential benefits of genetic engineering. While conventional farmers agreed that genetic engineering offered potential productivity and consumer benefits, they also thought that it posed risks for agriculture and was unlikely to offer substantial environmental or animal welfare benefits.

Organic farmers expressed stronger views than did conventional farmers about the seriousness of environmental degradation associated with agriculture and the responsibility of farmers to do something about it. Further, Lyons (2001) found that organic farmers understood the impacts of their farming practices on the environment and stressed the imperative to take immediate action to remedy these impacts:

> *To me, organic farming means bringing the country back to what it was ... You used to just scratch it, throw some seed in and it grew like mad. Today it will not do that. Some will, but a lot won't. So, the important thing is to start getting the land back to being able to grow stuff again, without having to put all this crap (fertilizers and pesticides) on it, like they do around here* (organic beef producer, Toowoomba, Queensland).

Conventional farmers did, on the whole, agree that they had a responsibility to deal with environmental degradation, but they were not quite as convinced of its current seriousness. They were also more of the view that they should be compensated for any costs that are imposed on them in order to protect the environment. In fact, this was the issue towards which conventional farmers expressed the strongest view.

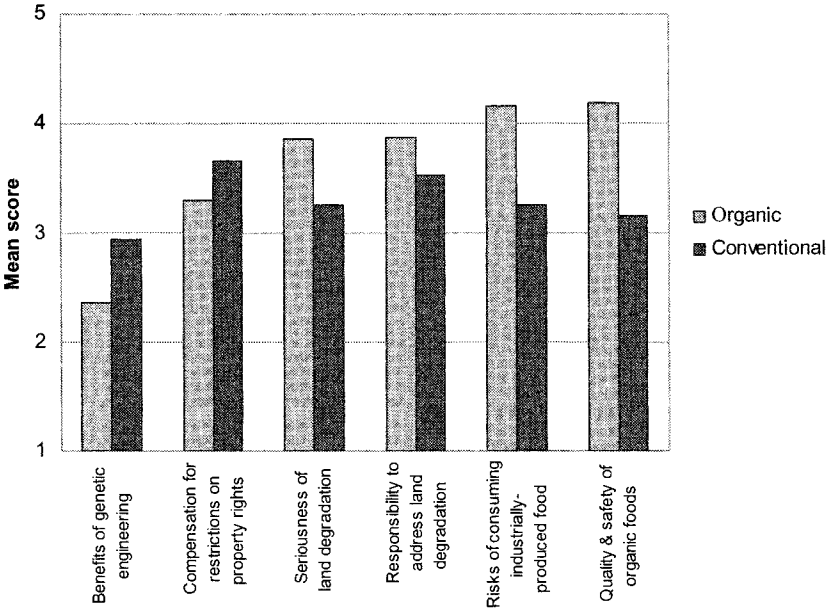



Figure 5.2. Mean scores among organic and conventional farmers—attitudes to issues facing food and agriculture

Most of the differences that we have noted here between certified organic and conventional farmers make sense. The question is, are there some groups of organic growers whose motivations and attitudes are more like those of conventional farmers than they are like their certified organic peers'? Before answering this question we look first at how organic farmers differ among themselves according to the scale of their farming operations and the marketing options they pursue.

Earlier in this chapter it was noted that while the average area of certified organic farms in Australia is estimated to be over 7,000 hectares, a middle-size farm is actually only 50 hectares. With the vast number of enterprise mixes and production environments found in the Australian organic sector, a more reliable indicator of farm size is gross income. The National Organic Farm Survey found annual gross farm income (excluding off-farm income and averaged 2001-2003) to range from zero to AUD$4.4 million with a median income of $50,000. This

compared with a median farm income on conventional farms included in this survey of $280,000. That the typical certified organic farm in Australia is a fraction of the size, in economic terms, of the average conventional farm is obvious. But there are a number of additional observations we should also make of these data. First, a large number of existing organic farms make little, or no, money, surviving on off-farm income and low levels of personal consumption (Lyons [2001] found that women undertook the majority of this off-farm work). In fact, a quarter of organic farms surveyed reported average annual farm incomes of $10,000 or less. Second, despite this, the distribution of gross farm income on organic farms is what statisticians call normal; that is, the majority of respondents fell in the middle of the distribution—with incomes of around $50,000—while smaller numbers earned less than or more than this figure. Three quarters of those in the sample operated their farms as their main occupation. Third, most of the differences in gross income were accounted for by the types of enterprises that farmers operated. More specifically, broadacre agricultural enterprises (grazing and cereal cropping) that require large acreages and heavy machinery were associated with much higher median gross incomes than were horticultural enterprises (vegetable, fruit and nut production) that are possible to operate on a much smaller scale.

While there is no obvious 'bifurcation' as implied by the conventionalization thesis between an increasing number of very large industrialized organic operations and a residual artisanal sector on financial grounds alone, it is important to assess whether this is likely to develop in the future and whether there are any grounds to attribute to those larger enterprises that exist already any of the other characteristics of conventionalized farms. In these respects, data from the Australian Organic Farms Survey show that:

- There is a strong expectation right across the Australian organic production sector that farm sizes will increase dramatically over the next few years. However, this does not mean that small organic farms expect to disappear as large farms put them out of business, but that almost all organic farms have plans to increase their production.
- There is no relationship between the length of time farmers have been certified as organic producers and the size or value of their operations.
- Just as broadacre farms tend to be larger economic units than horticultural farms, so they are more likely to have been converted from existing conventional farms rather than to have been started up as certified organic enterprises. Again, this is more likely due to the capital requirements of this kind of farming under Australian conditions than it is due to comparatively greater interest among conventional farmers in chasing price premiums.
- There are no meaningful relationships between the economic scale of organic farms and the motivations their owners express for farming them and their attitudes to most farm-related issues. Ideologically, larger organic farms are

just as easy to distinguish from conventional farms as are their smaller peers (see also McEachern and Willock 2004).

- There is also no relationship between farm size and membership of conventional farming organizations likely to promote a different political agenda to that of organic organizations.
- Similarly, there are no meaningful relationships between the economic scale of organic farms and the marketing channels they pursue for their produce. Across the sector it is evident that the largest determinant of preferred marketing channels is the nature of the produce being sold. Produce that requires processing, such as meat and cereals, is mostly directed towards processors while fresh produce is directed primarily towards wholesalers and retailers. Interestingly, a fairly common strategy across the entire Australian industry is for farmers to sell 10–25 per cent of their produce direct to consumers and the rest to a single market intermediary. There is also little interest across the sector—despite the much publicized success of cooperative ventures such as Organic Beef Exporters Pty Ltd—in using cooperatives or other arrangements to put together the larger and more consistent consignments of produce preferred by distributors and retailers (see Chapter 6).

Based on the analysis so far, there is little to suggest that rapid expansion of certified organic production in Australia has stimulated, or been stimulated by, the conversion of larger growers seeking nothing more than to capitalize on premiums and/or market growth. There also is little to suggest that those larger growers who do join the industry do so for any different reason than do smaller growers. Indeed, it appears that differentiating between certified organic and conventional farmers on almost any basis is relatively straightforward, while the differences among organic farmers tend to reflect more the types of commodity they are producing than anything obviously related to processes of becoming more like conventional farmers. To test these conclusions more thoroughly, a statistical procedure called hierarchical regression was used that examined, in this case, the relative contribution made by all the different factors referred to above to the likelihood that farmers might: firstly, be an organic rather than conventional farmer; and, secondly, have started up that organic operation from scratch rather than converting an existing farm business (see Appendix 2).

The first model compared organic and conventional growers. It showed that membership of farm-related and environmental organizations accounted for about 12 per cent of the variance between organic and conventional growers. This suggests that the networks farmers circulate in make a small, but significant, difference to the likelihood that they will become organic farmers and, vice versa, that being an organic farmer makes a small, but significant, difference to the likelihood growers will join particular organizations—including those that claim to be relevant to all farmers on both political and environmental grounds. The significance of these networks in shaping the uptake of organic farming methods

is also demonstrated by Lyons (2001). In both Australia and New Zealand, organic farmers cite the importance of participation in informal networks and communities in shaping the decision to go organic. One or more key people within the local community who were able to demonstrate the success of organic farming practices supported farmers in their decision-making processes.

Nevertheless, this still leaves 88 per cent of the variance between organic and conventional growers unaccounted for. If we add farm structural variables, such as enterprise mix and farm size to the model, however, the variance accounted for jumps to 49 per cent. Looking at the contribution of individual items, the most important structural variables are those that relate to the distinction made above between broadacre and horticultural enterprises, with the larger scale cereals and livestock farms clearly much less likely to be certified organic. Financial variables are considerably less important. Finally, if we add attitudinal and motivational variables to the model we account for a considerable 69 per cent of the variance between certified organic and conventional farmers. Interestingly, this model showed that chasing premiums and worrying about chemical safety—when considered in relation to all the other variables—can actually push farmers away from organics. Those people more likely overall to be organic growers are more focused on their opposition to genetic engineering and their belief in the quality of organic produce than they are on the opportunity to target high value niche markets.

The second regression model compared organic farms that had been converted from conventional with those that had been established from the outset as certified organic enterprises. The first group of variables examined in this model were those related to motivations for farming and attitudes to farm-related issues. Even as a group, these did not account for a significant degree of variance (11%) between the two groups. When farm structural variables were added to the model, the variance accounted for increased to 28 per cent. And when membership of farm-related and environmental groups was added the total variance accounted for increased moderately to 39 per cent. Altogether, it was possible to explain substantially less than half the variance between converting and start-up organic enterprises. This means, in simple terms that there is much less difference between certified organic growers who have converted existing farms and those that have started organic enterprises from scratch than there is between organic and conventional growers.

The overall picture that emerges from the National Organic Farm Survey is one in which certified organic farmers: (1) are younger and more educated than the average Australian farmer; (2) are far more critical of industrial production methods and motivated to address environmental, animal welfare, food quality and chemical safety issues; (3) tend to shun the farming and environmental organizations favoured by conventional farmers; and (4) are somewhat disproportionately represented in less capital intensive horticultural industries that are, arguably, easier to convert. The overall picture that emerges of those who have converted existing—and usually larger—conventional farms to certified

organic production is not one of opportunism but, again, of younger and more educated farmers who are, in this instance, more concentrated in the broadacre industries and who have either have inherited or been assisted to purchase their farms by farming parents.

## Leaving organics: why some farmers convert to conventional production

Further insight can be gained into why some people are mobilized as organic farmers while some are not by looking at a small, but growing, group of farmers who are relinquishing organic certification and returning to conventional growing. The exact number of farmers making this switch is not known and cannot necessarily be derived from raw certification numbers since the exit of some organic growers may be masked by the entrance of others. Further, some farmers may simply suspend certification temporarily—perhaps due to difficulty finding explicitly organic markets or paying certification fees—or elect to sell non-certified organically-produced goods. It is known, for example, that some growers took this route in opposition to the USDA's imposition of a uniform national organic standard that they believed failed to capture all the principles of organic farming (see Chapter 4), but it is not known how many. Further, some farmers in Brazil, New Zealand, Uganda and the United States have withdrawn from certification to engage in alternative governance models, including Participatory Guarantee Systems (PGS). PGS represents a localized, participatory and community oriented model for organic regulation (see Chapter 4). In Denmark, where comprehensive data appear to be available, some 500 certified organic growers, out of a national total of 3,500, are reported to have relinquished their certification in 2003 (Kaltoft and Risgaard 2006).

Rigby and Young (2000; see also Rigby *et al.* 2001) interviewed 35 of the 204 farmers who abandoned the UK's organic scheme between 1990 and 1998. Despite the small sample, their results pointed fairly consistently to financial reasons for relinquishing certification. These reasons ranged from a failure either to secure explicitly organic markets or price premiums to a failure to resolve production problems in a cost effective manner to a failure—perhaps due to inexperience and/or lack of knowledge—to establish a viable farm business. The more farmers were motivated to make money or reduce costs, the more likely they were to revert to conventional production. Importantly, and in stark contrast to Rigby and Young, Lyons (2001) found that while a number of Australian organic grain producers lost contracts when food company Uncle Tobys temporarily halted manufacture between 1997 and 1999 of 'Organic Vita Brits' breakfast cereal, they retained their organic certification. Many of these producers were unable to find organic markets for their grain, and were forced to sell on the conventional market. Despite this, these farmers did not consider disbanding organic certification.

Interestingly, Rigby and Young also discuss the role of social networks in the decision-making process, with group membership cited as both a reason to abandon organic production and a reason to stick with it. More recently, McEachern and Willock (2004) have pointed out that the end of the conversion period has become a particular danger time for dropping out of organic certification in the UK as—with the identification of organic agriculture as a target for state support—government assistance has been concentrated on helping growers through conversion. Thus, while the attainment of full organic certification at the end of this period should be associated with better market access and more competence as an organic farmer, it may also be associated with a decline in subsidy-based income. Similar challenges are also apparent in East Africa. Development agencies frequently provide financial assistance to organic export companies to obtain certification and develop international markets. However, there is no guarantee this funding will continue, despite the potential on-going financial needs of farmers and exporters.

Kaltoft and Risgaard (2006) generated similar results from their interviews with 11 farmers and eight farm advisors in Denmark. However, in addition to the marketing and production problems identified by Rigby and Young they identified the length of the compulsory five year conversion period, the inconvenience of dealing with subsidy and certification bureaucracies, limited land availability for extensive farming practices, and the comparable profitability of letting land out to others, as important motivations for reversion. While Kaltoft and Risgaard argue that none of the farmers reverting to conventional production felt good about the resumption of chemical spraying and similar activities, it remains the case that the main reason for conversion to organics in the first place for these farmers was to access the higher subsidies that were available to organic farmers.

Kaltoft and Risgaard's observation that reverting farmers were uncomfortable with the resumption of chemical use—and often paid contractors to do it for them—is telling, for if all the farmers who had reservations about agri-chemicals were to stop using them it is arguable that chemical use would become *un*-conventional and organic production mainstream. Lockie (1997; see also Barr and Cary 1992; Lockie *et al.* 1995) argues that while large numbers of conventional farmers believe there are significant environmental and economic risks associated with the use of agri-chemicals, abandoning their use carries its own risks. Conventional practices are not only familiar to farmers, they are supported by massive public and private investment in research, development, training and marketing. Abandoning these practices is not only a step into the unknown but a step away from the institutions and social networks—as identified by Rigby and Young—that help to manage the risks inherent in any farming enterprise. In a sector characterized by both environmental and market instability farmers are traditionally risk-averse people. Agri-chemical use also is represented in the rural media—through both advertising and editorials—as the normal way to farm (Lockie 2001). When farmers open their local trade magazines and rural

newspapers they see farmers 'like them' talking about the role of synthetic inputs in their success.

This is not to suggest that conventional farmers—including those who have reverted to conventional production—are duped by the 'propaganda' of chemical companies and advisory services. Rather, it is to suggest that—despite any reservations they might hold—there is plenty out there to reassure these farmers that using synthetic inputs is economically rational and environmentally responsible. What our analysis in this chapter shows is that it is those farmers who place less priority on the economic performance of their farms relative to environmental and social values who are most likely to turn their backs on the institutional and moral support of conventional agriculture, mix in different networks, and farm in a fundamentally different way. As a consequence, it seems that the more economic incentives are put in place to encourage conversion to organic production, the more likelihood that converts will not be committed to a long-term future in organics and will revert to conventional production when economic signals change. Australian organic farmers reiterate this, and fear recent entrants to organics motivated by financial incentives will not stay if, and when, price premiums for organic produce decline (Lyons, 2001). While this does not, in itself, mean there is any reason to abandon the treatment in the EU of organic farming as an agri-environmental measure that deserves state support, it does need to be recognized that the more mobilization of people as organic farmers is based on the payment of additional subsidies over those available to conventional farmers, the more people will take it up as a short-term economic strategy.

## Producer agency shaping food networks

As mentioned earlier in this chapter, producers have historically played a pivotal part in the formation of the organic movement. Producers were groundbreaking in trialling and refining organic farming methods, and were integral in establishing the philosophical and political boundaries of the movement. The conventionalization thesis, however, argues that producers' agency (that is, their ability to make a difference) is increasingly constrained and/or eroded by corporate, state and other interests, whose priorities are not necessarily commensurate with those associated with the traditional organic movement. Despite this theory, today's producers demonstrate an on-going stake in shaping both organic farming practices and principles. There are at least two notable fields where producers' active engagement in shaping organic networks is evident. Firstly, many organic producers were involved in the initial drive to establish organic certification standards, including the formation of national certification bodies such as the National Association for Sustainable Agriculture Australia and the Tasmanian Organic-Dynamic Producers. This was both a political and pragmatic strategy to establish the ground rules for defining organics in the market and legislature. Producers (alongside other stakeholders) continue

as active players in on-going revisions to these standards. Perhaps more influential than setting these standards alone, producers are also at the coal-face in implementing these standards. Many producers are 'organic inspectors', and are responsible for interpreting standards and evaluating other producers' compliance with these standards. Decision-making around these issues forms the basis of membership in organic networks—either producers meet organic standards and they are in, or they fail to comply with the standards and they are out! The formation of alternative certification schemes, including Participatory Guarantee Systems (PGS), outlined in Chapter 4, also represent producers' active engagement in designing alternative organic governance arrangements. Small-scale producers who are unable, or unwilling to pay the increased costs associated with certification, for example, are not necessarily casualties of a codified organic sector. Instead, many producers choose to become active participants in locally managed governing arrangements.

Formation and participation in organizations represents a second strategy by organic producers' to actively shape the political, ecological and social landscape of the organic sector. At the national level in Australia, organic producers are members of a number of organizations that engage in policy debates. Producers represent one of many stakeholder groups on the board of the national peak body the Organic Federation of Australia (OFA). The OFA has: actively participated in public debates on genetic engineering; engaged in long-term lobbying to establish domestic standards that can protect against misuse of the word 'organic'; and campaigned for effective labelling on organic products. Many organic and conventional producers have also joined forces in the formation of the Network of Concerned Farmers. This producer group is arguably one of the most active advocacy groups engaged in debates related to: the commercial release of genetically modified crops; techniques and costs of segregating GM from non-GM crops, and; opposing liability laws that protect GM seed companies and GM farms. The moratoriums currently constraining further releases of GM crops across most states and territories demonstrate the affects of this organization and others, including Greenpeace and the GeneEthics Network, in shaping organic food networks.

Many organic producers are also active participants in regional and local organizations. These organizations can provide central hubs for knowledge exchange amongst producers. In northern NSW, the Tweed River Organic Producers Organization has provided these services to new and established organic producers for over two decades. In some cases, producers may also establish informal cooperative arrangements to share farm equipment, cold room and transport facilities, as well as industrial kitchens for value adding fresh produce. In doing this, producers have often strengthened community networks, as well as improving their financial situation. Further, and unlike many conventional producer organizations, these regional groups often present alternative organizational structures and group processes that are based on non-hierarchical and collective decision-making. In south-east Queensland, Food

Connect (an enterprise modelled on the philosophies of a CSA) is experimenting with these processes. While not without their challenges and limitations, they represent innovative new ways of engaging with people and environments.

The activities undertaken by producers outlined above demonstrate their capacities as active players in shaping the on-going transformation of the organic sector. Many organic producers demonstrate a commitment not only towards determining their own personal social and economic circumstances. They are also part of a broader political project to shape organic food networks. To date, this is demonstrated in the emergence of alternative governance arrangements, national and regional representative bodies, and informal cooperatives for sharing intellectual, biological and mechanical resources.

## Conclusion

This chapter has highlighted the diverse values and beliefs that shape producers' decision to undertake organic farming. While financial considerations weigh into this decision, they are clearly not the only, and indeed for some producers not the priority, consideration. This is evident amongst the group of Australian organic grain producers who lost their organic market in the late 1990s. These producers continued to sell their grain at a lower price on the conventional market until they could re-establish an organic buyer. Cutting costs by getting out of organic certification was not an option. This chapter has also demonstrated that many organic producers receive only a small premium relative to their conventional counterparts. Given the complicated management systems associated with organics and the risks associated with conversion, it is difficult to imagine why producers would undertake this path unless a range of additional concerns beyond profits also drove them. While no doubt some recent entrants to the organic sector might be attracted by conversion subsidies and price premiums, the fact that the overall profitability of certified organic farms remains relatively similar to that of similarly sized conventional farms leads many of these financially-motivated farmers to de-certify and return to conventional production.

It is difficult to characterize a typical organic producer. There appears to be nothing typical about the people who choose to grow organically. This is the case for both recent entrants to organics, and those who have been involved in organics long-term. Indeed, organic and conventional farmers also appear to share similar values and beliefs. However what appears to differ is the extent to which they prioritize their concerns. While the conventionalization thesis contends that the organic sector has come to resemble its conventional counterpart, this chapter suggests the changes occurring are more complex and subtle than this. Rather, what we are witnessing is the on-going conversion by producers who value a diversity of philosophical principles compatible with the historical origins of the organic sector. These producers are also financially astute. The agronomic and

political projects undertaken by these producers are part of the vanguard in negotiating the boundaries of organic food networks.

# 6

# Distribution, Trade and Retailing

There is an old argument that before farmers can do more to address the many social and environmental problems that confront rural communities, consumers must develop a willingness to spend more on food. Until they do, farmers have little choice but to continue intensifying their production using whatever means they can, and to put on hold any measures to protect the environment that do not also provide short-term productivity benefits. The argument is, in essence, that food is too cheap. And it is farmers, their land, and their communities, who suffer as a result. Yet for every dollar spent by US consumers on food in 1997, farmers received only 7 cents, the balance accruing to a shrinking number of input supply, processing, transport, brokerage, retailing and advertising firms (Halweil 2004). In 1910, by comparison the farmers' share of the US consumers' dollar was above 40 cents. Further, there are numerous recent examples of checkout prices for particular foods increasing at the same time that farm-gate prices have fallen.[1] And it is not unusual in the organic sector to hear anecdotal evidence of retail premiums substantially higher than farm-gate premiums. It seems quite obvious that the problem for farmers is not that consumers do not pay enough for their food, but that the vast bulk of monetary value created by agriculture is captured by those who either process, distribute and retail food, or who sell farmers the inputs with which to produce it. Whether or not, with higher incomes, the

[1] Coffee and milk both fit this pattern. Over the last decade, the farm-gate value of coffee has fallen dramatically, impacting heavily on the predominantly poor smallholder farmers in developing tropical countries who grow it. The magnitude of this fall, combined with the status of coffee as the world's most traded commodity, has contributed markedly to its popularity as a Fair Trade product (Lockie and Goodman 2006; Raynolds 2002). Within Australia, de-regulation of the dairy industry has seen a major restructuring of the industry with the production sector increasingly dominated by larger dairies located in particularly favourable production environments. Complicating the argument that de-regulation would lead to a less distorted market, the dominance of a small number of supermarket retailers has enabled them to push the prices they pay to suppliers down without passing these savings on, in full, to consumers (see Cotterill 2006; Edwards 2003).

majority of farmers would go about their business in a fundamentally different way is a moot point. What is beyond doubt is that when it comes to deciding what, where and how food is produced, there are a number of very influential actors who seldom, if ever, set foot on a farm.

Table 6.1. Estimated retail share of organic sales, selected countries, 2001-2002 (adapted from Sligh and Christman 2003; Lockie *et al.* 2002)

| Country | Supermarkets | Natural foods/ speciality stores | Direct from farmers |
|---|---|---|---|
| Denmark | 85% | 5% | 10% |
| Argentina | 80% | 20% | n/a |
| United Kingdom | 80% | 13% | n/a |
| Austria | 70% | 20% | 10% |
| United States | 49% | 48% | 3% |
| Australia | 42% | 32% | 16% |
| Belgium | 65% | n/a | n/a |
| Italy | 42% | n/a | n/a |
| France | 41% | n/a | n/a |
| Germany | 40% | 35% | 20% |

Table 6.2. Changes in estimated retail share of organic sales for mainstream supermarkets, selected countries, 1998 to 2002 (adapted from Richter *et al.* 2001; Sligh and Christman 2003)

| Country | 1998 | 2002 |
|---|---|---|
| Denmark | 90% | 85% |
| United Kingdom | 69% | 80% |
| Austria | 73% | 70% |
| United States | 55% | 49% |
| Italy | 23% | 42% |
| France | 42% | 41% |
| Germany | 26% | 40% |

The organic distribution, trade and retail sectors are more obviously bifurcated than the organic production sector. In addition to a number of small to medium sized enterprises that specialize in organic product lines are a rather smaller number of very large firms that operate small internal organic units (Halpin 2004a), and yet which seem to all but control intermediate sectors of the organic industry. This is particularly the case in retail where, as reported in Chapter 2, mainstream supermarket chains control a large, and generally increasing, proportion of total market share (see Tables 6.1 and 6.2). The emergence, in the US, of large natural food retail chains such as Whole Foods Market and Trader Joe's that mirror conventional supermarkets in their store layouts and scales may

be replicated elsewhere with moves by Whole Foods Market to enter the UK market and by independent entrepreneurs to establish a similar chain in Australia under the brand name Macro Wholefoods. Either way, this marked concentration in the food retail sector has massive implications for organic and conventional producers alike. As organic food chains grow from small-scale and relatively localized production, distribution and retailing networks into large, complex and global ones, it is increasingly important to understand the shifting power relations of organic trade and the implications of these for the overall trajectory of the industry.

Seemingly obvious motivations for getting involved in the processing, distribution and/or retailing of organic foods include the price premiums they attract and the rapid market growth with which they are attributed. We will begin this chapter, therefore, with an overview of evidence concerning just how high retail price premiums are and how they compare with premiums on farm-gate prices. The analysis in this chapter is based on a number of sources. In addition to documentary sources, these include semi-structured interviews with Australian organic wholesalers, distributors and processors and a national study of retail price premiums for certified organic food (more detailed information on the methodology can be found in Appendix 3).

## The pricing of organic products

Receiving a premium price for organic products is widely viewed as crucial to compensate organic producers for the extra efforts they go to in guaranteeing environmental benefits to society (Halpin and Brueckner 2004a; Sligh and Christman 2003). It frequently is argued that price premiums are justified by the comparatively lower yields and higher labour costs associated with the production of organic commodities—costs that are only partially offset by savings on synthetic pesticides and fertilizers—and to higher processing and distribution costs (Sligh and Christman 2003). While there are doubtlessly many situations in which all of these propositions are true, there also are plenty in which they are not. In fact, many of the processors and distributors we spoke to as part of this study indicated that the only extra cost incurred by them was the inconvenience of keeping organic and conventional produce separated. Furthermore, and as discussed in Chapter 4, the labour demands of organic farming relative to conventional farming are likely also to be highly dependent on both the crops grown and the particular production and social environments in which they are grown. The reality is that retail price premiums are more likely a reflection of what markets will bear than of the relative costs of production.

Retail price premiums vary widely both between commodities and between and within countries. Not surprisingly, products that are supplied in bulk, and distributed in a widespread fashion among consumers—such as organic milk in the EU—tend to receive the smallest price premiums. Average national premiums

have been reported at 20 to 30 per cent in Austria; 10 to 15 per cent in Germany; 10 to 100 per cent in both the US and UK; and 80 per cent in Australia (Halpin and Brueckner 2004b; Sligh and Christman 2003). Within Australia, average premiums in 2003 ranged from 56 per cent in New South Wales (NSW) to 64 per cent in South Australia, 83 per cent in Tasmania, 90 per cent in Western Australia, 99 per cent in Queensland and 115 per cent in Victoria (Halpin and Brueckner 2004b). Considerable variation was also found *within* cities. Neither seasonal product availability nor transportation costs can account for the magnitude of these differences. Certainly, it is true that the least expensive state in which to purchase organic foods, NSW, features a mild Mediterranean climate and more organic growers than the other states. However, the most expensive state in which to purchase certified organic foods, Victoria, is climatically similar and has a comparable organic production base relative to population. And with a highly centralized general population, transport costs are likely to be as low as anywhere else in Australia. Again, the higher retail premiums evident in Victoria most probably reflect a combination of consumer demand and marketing strategy.

Although a significant number of food consumers are not prepared to pay any retail price premium for organic produce, premiums of around 15 per cent are widely perceived as acceptable to most consumers (Halpin and Brueckner 2004b). According to Dabbert *et al.* (2004), however, a retail premium of 25 to 30 per cent seems acceptable to a broad enough range of European consumers that retailers may realistically charge this much while still attempting to broaden their organic customer base. Either way, the actual premiums evident in many countries exceed quite substantially what the majority of consumers are willing to pay and must be seen as a major barrier to industry growth. Importantly, retail price premiums also appear substantially higher than the premiums received by farmers. A survey by Hassall and Associates (1996) indicated that 30 per cent of certified organic Australian farmers received no premiums, 41 per cent received premiums of between 10 and 20 per cent, and 21 per cent received premiums of between 20 and 50 per cent. While premiums varied considerably between product groups, the general pattern appears to be one in which farmers do not receive a proportionate share of the retail premium paid by consumers.

The more that organic products are traded as normal commodities the more likely it is that the price premium will be reduced (or eliminated) under competition. For many industry participants this is seen as positive. There are concerns that basing the growth of the organic industry on consumer price premiums sends the wrong message about organic food—that it is not a food for the average consumer. Indeed, one leader in the Australian organic wine industry noted 'We don't think [price premiums are] appropriate because one day all produce will be certified organic' (Australian Organic Journal, 2002: 17). For others, however, this merely takes us backwards, with producers forced once more onto the treadmill of production and consumers, again, not paying the full social and environmental costs of food production.

## The organic supply chain

Figure 6.1 illustrates major links in the production and consumption of certified organic foods. As can be seen from Figure 6.1, farmers can, and do, market produce directly to consumers through, for example, community supported agriculture schemes, farmers' markets, box schemes and farm-gate sales. These are described in greater detail below. Farmers also sell to intermediaries including local food stores, supermarkets, food service providers and processors. Within Australia, farmers sell the majority of organic produce to processors. This is especially so in relation to products that must be processed before end-consumption such as meat, milk and cereals. Poultry and eggs often are sold to specialist retailers and health food stores while fruits, vegetables and nuts are sold mostly through distributors and wholesalers. Two important observations, however, can be made of almost all organic product categories:

- First, the majority of certified organic Australian farmers sell a small, but significant, proportion of their output—in the range of 10 to 25 per cent—direct to consumers and the rest to a single intermediary. This is consistent with international data (see above) on direct sales. In this case, it suggests that despite the relative isolation of many Australian organic farmers from potential customers, a certain number of direct sales are seen either as a useful way of spreading risk across multiple marketing channels and/or as an expression of environmental and social values underpinning the commitment to farm organically.
- Second, the organic produce sector is characterized by relatively volatile supply and demand. While this issue will be discussed throughout this chapter due to its implications for the enrolment of food distributors, processors and retailers into organic food networks, it is also worth noting that it results in the sale of significant quantities of certified organic produce on conventional markets (Monk, 1997), with several studies suggesting that as much as 35 per cent of Australian organic produce is routinely sold as conventional (Chang *et al.* 2003; Halpin 2004b; Wynen 2003).

To some extent, Figure 6.1 suggests that direct sales, speciality stores, supermarkets and food service providers are in competition for the consumer's dollar. However, it also can be argued that direct sales, speciality stores/supermarkets, and food service providers offer somewhat different products. It is really the speciality stores and supermarkets that are in greatest competition as they sell similar products. Again, however, supermarkets tend to offer different product lines to those available at specialist stores—including an expanding range of organic own label products—and, more importantly, attract a different clientele. In an expanding market, retail outlet variety may actually promote sales among erstwhile competitors by increasing the visibility of organic

foods, promoting consumer awareness, providing incentives to boost supply, building confidence in the ability of the market to supply produce of consistent volume and quality, reducing the inconveniences associated with limited supply outlets, and otherwise contributing to the 'buzz' around organic foods.

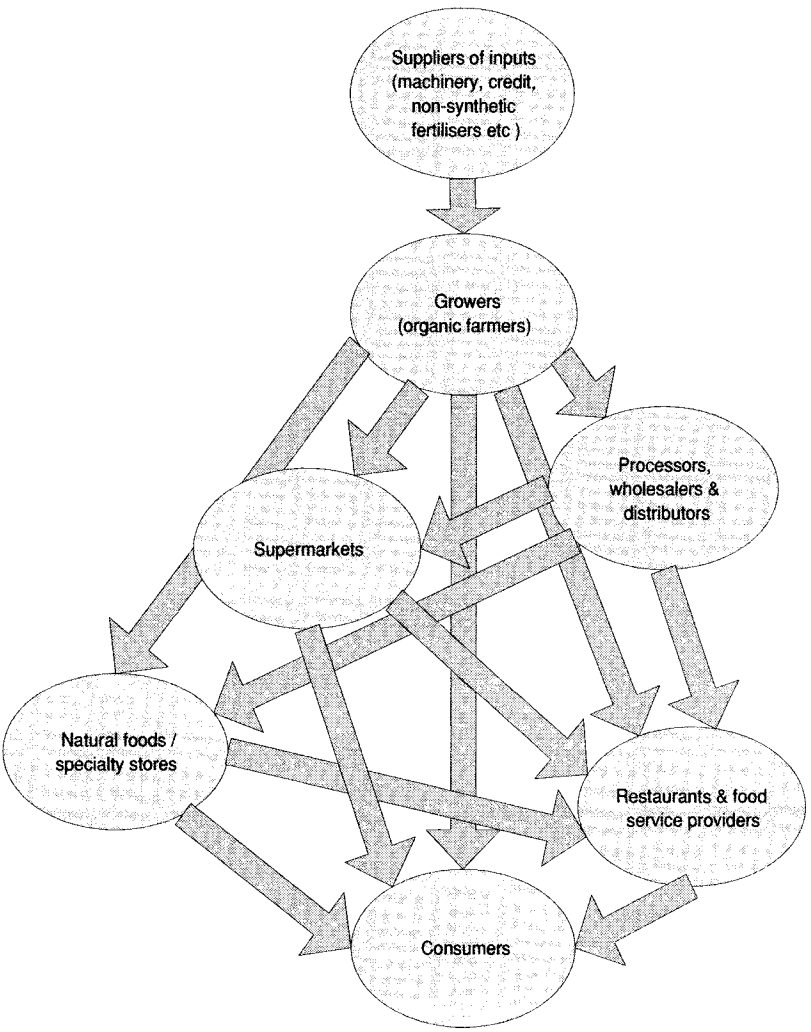



Figure 6.1. Commodity flows within a simplified organic supply chain (adapted from Burch and Lawrence 2005)

### *Market intermediaries: processors, wholesalers and distributors*

In many respects, there is rather more information available on what difficulties are faced by those processors and distributors involved in the organic industry than there is on what motivates them to get involved in the first place. Australian intermediaries claim that their own growth is constrained neither by processing capacity nor by market saturation, but by inconsistencies in the quality, price and availability of organic produce which discourage investment in product development, brand building and manufacturing technology. Intermediaries complain that seasonal fluctuations (which they believe to be more pronounced among organic than among conventionally-grown products), low production volumes, and the high perishability of fresh produce, contribute to irregular and inadequate supply. Such inconsistency of volume and/or quality imposes additional costs and coordination problems on processors and distributors who are already faced with the extra costs organic certification imposes on them through strict product separation, machinery cleaning, auditing and labelling. The dependence of processors and distributors on small producers appears also to limit their flexibility in responding quickly to market opportunities and new areas of demand. One distributor spoke of the huge demand that had become apparent for late season organic carrots in Europe. They argued that they could sell *'tens of thousands of tonnes more...if they had the produce'*, but that this would take *'hundreds and hundreds of production acres'*—an impossibility given the small-scale nature of most suppliers.

While movements such as Slow Food (as noted in Chapter 1), promote seasonality, localization and cultural diversity as dimensions of food quality, these are inconsistent with the cultures of convenience, predictability and year-round availability promoted by conventional food networks. Inconsistency of supply and other product attributes is exacerbated, according to processors and distributors, by the limitations placed by organic certification on pest control and fertility measures. One wholesaler argued that a *'supermarket was told (organic) snowpeas would be available to them for the next six months from a particular grower, but the crop was wiped out due to insect infestation. This would not have happened if sprays could have been used'*. Organic growers would counter that chemical sprays only worsen insect problems in the longer-term. Some may add that shipping their goods to more distant markets in order to supply out-of-season produce adds to freight costs and food miles.[2] In the short-term, however, the relative lack of coordination among growers in the marketing of organic produce is seen by intermediaries as a barrier to market expansion. Other barriers are

[2] The concept of food miles is used to describe the relative distance that food must travel from its point of production to its point of consumption. By highlighting, in a simple way, how dependent the food supply is on transportation using non-renewable fossil fuels, the food miles concept draws attention to the ecological cost of consuming non-local and out-of-season produce.

identified as a lack, in Australia, of government support and minimal investment in research and promotion.

Despite these difficulties, the vast bulk of certified organic food enters the market via intermediary wholesalers and distributors. In Australia, wholesalers market between 50 and 60 per cent of organic produce in all states with, significantly, the majority of produce grown and sold within the same state (Hassall & Associates 1996). Further, most of these wholesalers deal only in organic products. This part of the organic food chain has, to date, seen limited colonization by conventional food companies. However, it is important to note: first, that while most organic food produced within Australia is currently consumed domestically, there are many who believe (perhaps most significantly the national government) that the relatively small size of the Australian population, relative to food production capacity, will see long-term growth predicated on improvements in export performance and; second, that the role of wholesalers who operate at centralized markets, buying and selling at spot prices, is diminishing in importance in the conventional produce sector. Globally, large distributors and retailers are assuming an increasingly central role in the supply chain and bypassing traditional wholesale spot markets (Busch and Bain 2004; Bain *et al.* 2005). In the US, about two thirds of organic products enter the warehouses of national and international distributors. The largest of the US organic distributors, United Natural Foods (UNF), sells over 30,000 products to some 7,000 customers, generating sales of approximately US$1.2 billion (Sligh and Christman 2003). UNF is a link between other organic food manufacturers and retail outlets—particularly the independent natural food outlets. The firm Tree of Life is the biggest distributor, worldwide, of organic products (Sligh and Christman 2003). Founded in the US in 1970, it now sells over 100,000 products worth some US$3.5 billion to over 20,000 customers. UNF and Tree of Life are the only two national distributors in the US, whereas in the Europe, there are many, regionally-based distributors. Certainly, it cannot be ignored that a very significant proportion of the world's certified organic food now travels many miles from the places in which it is grown to the places in which it is consumed.

Unpredictable and low volumes of supply traditionally have promoted caution on the part of food processors in investing in organics (Halpin 2004a). As demand and supply have improved, however, increasing numbers of processors have entered the organic industry (McCoy and Parlevliet 2000). As Chapter 2 outlined, while many firms either have entered the organic sector as start-up businesses in their own right or through the establishment of new organic brands and product lines, recent years have seen the entry of many larger and more established processing companies through, primarily, the acquisition of existing organic businesses. As Figure 6.2 shows, this latter phenomenon encompasses many of the world's largest food processing firms and many of the world's most recognizable organic brands. Conversely, on-farm processing is advocated widely by organic farmers and activists as a strategy to reduce food miles, develop closer relationships between producers and consumers, and promote development of an

'alternative' food system that challenges the near monopolies of large agri-businesses and retailers (Burlace 1997; Ikerd 2001; Leu 2001).

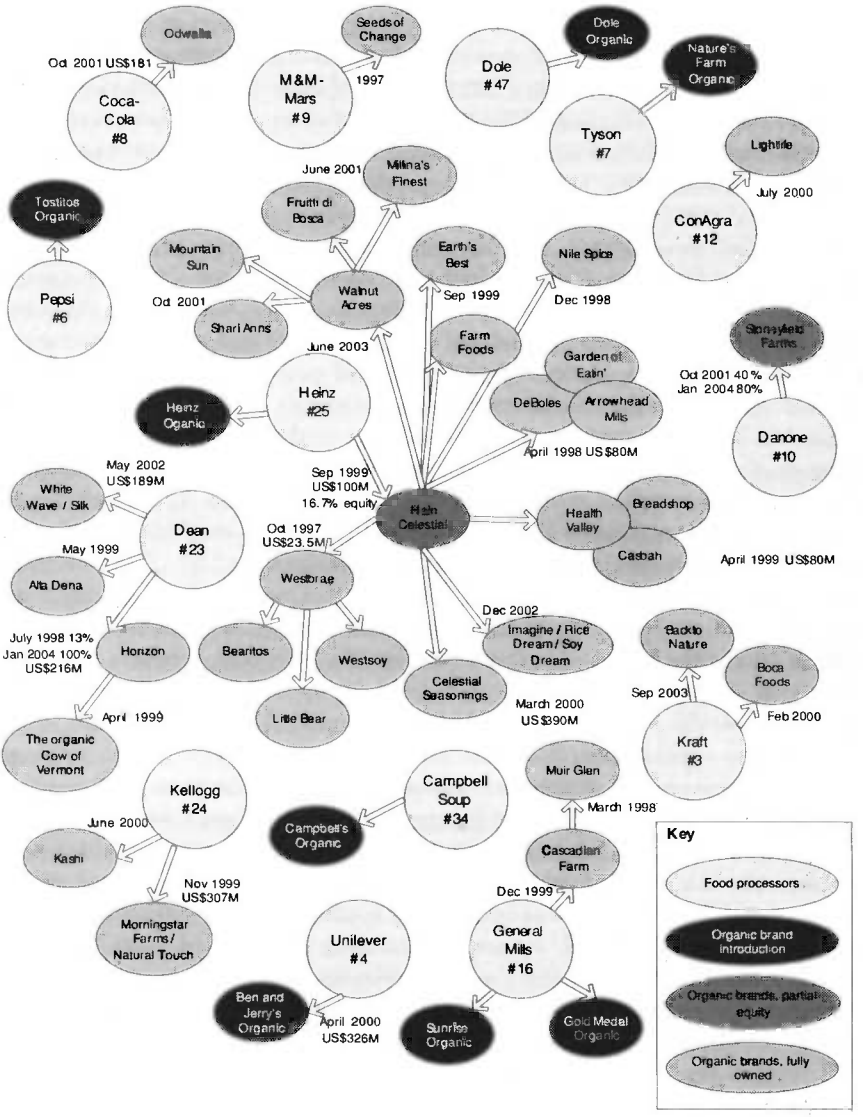



Figure 6.2. Ownership of organic brands among the world's top 25 food processing companies, December 2004 (adapted from Howard 2005)

To date, both small and large processing firms survive within the organic sector with some evidence that, even in the larger firms, some commitment to the principles of organics is important as organic operations are not necessarily any more profitable than conventional and may even operate at a comparative loss. Australian research suggests that while smaller companies are driven by an obvious sense of mission, organic champions who are similarly driven appear crucial to the development of organic product lines within the larger companies. Further, it suggests that those processors and distributors who nominate market opportunities as their primary motivation for developing organic lines are those likely to be most disappointed by the failure to reap large short-term profits. Several such processors and distributors interviewed as part of this research indicated that their own profit estimates had not been realized and questioned whether growth rates for the organic sector were any higher than a few per cent per annum.

It has been argued that the challenge of consistency will result inevitably in a bifurcation of the organic industry with smaller growers selling their fresh products to independent organic outlets, restaurants and directly to consumers via farmers' markets, and larger growers concentrating on the sale of produce to processors, wholesalers and distributors (Chang *et al.* 2003). Yet there is, as yet, limited evidence of such a phenomenon with, as stated above, the majority of Australian producers engaging in some form of direct sales. Just as importantly, processors, wholesalers and distributors have taken on roles as organic supply chain facilitators and taken active steps to smooth out cycles of over and undersupply. These steps include:

- Issuing information and requests to farmers on what to grow and when based on market demand.
- Undertaking research and/or providing technical assistance with regards to the management of barriers to production such as weed control and crop nutrition.
- Promoting the development of business plans for future growth.
- Paying full organic prices to in-conversion farmers to encourage new suppliers to commence certification.
- Assisting farmers to deal with retail outlets.
- Monitoring producers and their stock available for sale to more adequately match supply and demand.
- Pooling produce from groups of producers to ensure that manufacturers of value-added products have a reliable supply of raw inputs in terms of volume and quality.
- Selling organic product on the conventional market during periods of oversupply and/or depressed prices for certified organic produce (see Halpin 2004b; Lyons 2001).

Quite apart from the potential bifurcation of the intermediary sector described above lies a third possibility, the emergence of grower-owned and controlled

collaborative marketing arrangements. Such arrangements may be described as middle-range strategies that seek, in a variety of ways, both to scale up production and distribution from the very local and very direct and yet to avoid losing control of organic food networks by selling on to multinational food companies. The main form of grower cooperative has a business structure in which all members are equal owners. Such cooperatives have a long history in conventional agriculture and often have dominated processing and distribution in particular industries. While so-called trade liberalization has seen the demise of many grower cooperatives, some notable examples remain. These include the Fonterra Cooperative Group Ltd., a company owned by 13,000 New Zealand dairy farmers, the world's largest dairy exporter, 25th largest food processor, and manufacturer of Naturalea Organic Whole Milk. Solely organic cooperatives cannot rival Fonterra's scale of operations but they do, similarly, demonstrate the potential of collaboration to establish a third way between strict localism and corporate food globalization. OBE Beef Pty. Ltd., for example, was established in 1995 by a group of more than 30 graziers from the Channel Country of outback Australia (DAFF 2005). OBE works closely with members, contract processors, distributors and customers throughout Asia—the target market—to ensure that cattle are supplied to customer specifications within 14 days of order. Together, OBE members manage over 7 million hectares of land—nearly 30 per cent of all land certified for organic production worldwide! At the other end of the scale, cooperatives are becoming increasingly widespread among producers in developing countries whose individual operations are too small to justify either the cost of certification or the establishment of alternative marketing infrastructure (see Box 4.2).

Despite the apparent success of OBE and other cooperatives in opening new market opportunities and ensuring higher returns to growers, membership of collaborative marketing ventures is the exception rather than the norm. Indeed, less than 10 per cent of Australian organic producers are involved in collaborative marketing and few of those who are not are interested in any form of horizontal supply chain collaboration. Generally speaking, involvement in collaborative marketing (with or without formal structures) among organic growers is higher for those industries—such as dairy—that are already characterized by high levels of cooperative activity among conventional growers (Halpin 2004c). Altogether, this would suggest general satisfaction among organic growers with their relationships with wholesalers, processors and retailers. However, the reluctance of growers to enter collaborative arrangements with like-producers has been identified as a major factor in limiting the 'ability of the industry to build the capability to supply the volume, range and consistency of product which will be necessary to capture sustainable domestic and export markets' (Halpin 2004c: 45).

### *Mainstream retailers*

As Figure 6.1 illustrates, there are at least four main routes through which organic produce reaches the consumer. The most important are direct sales via box schemes, farmers' markets and so on, speciality stores such as health food stores, organic supermarkets and cooperatives, conventional supermarkets, and restaurants and other food service providers. This diversity does not necessarily translate, however, into widespread availability or diverse product ranges. Australian studies show that with the exception of processed foods with long shelf lives—such as cheese, sugar and breakfast cereals—the range of organic products in retail outlets is patchy and inconsistent (Halpin and Brueckner 2004a). According to Halpin and Brueckner (2004a), the fact that even stores promoting themselves as stockists of organic food have a narrow range is suggestive of coordination problems throughout the organic supply chain. Conversely, the increasing role of large processors, distributors and retailers in the North American and European markets suggests that many of these problems may be resolved. The question will be—as outlined in Chapter 2—whether they are resolved in a way that maintains the values of the organic sector. Either way, the relative reluctance of Australia's two major supermarket chains compared with retailers elsewhere (particularly in the UK) to embrace organics highlights some important issues in the process of mobilization for mainstream retailers.

We have already noted that mainstream retailers account for a large and growing share of total retail sales of certified organic foods. The importance of this should not be seen solely in terms of a shift from speciality stores and direct sales to mainstream retailers, but in terms of a shift to a very small number of mainstream retailers. From a market share of just seven per cent in 1991, supermarket 'giants' now sell around half the organic food purchased by consumers in the US (Sligh and Christman 2003). Wal-Mart—the largest food retailer in the US and second largest in the world—is outsold on organics by only one competitor, Whole Foods Market. This situation is, however, likely to change following the announcement in early 2006 that Wal-Mart planned to dramatically expand its organic offerings (see Box 6.1). Similarly, the large supermarket chains that dominate food retailing in the UK—such as Tesco and Sainsbury—together control 60 per cent of the organic market in the UK, with all supermarkets together controlling more than 80 per cent. Many supermarket chains are working to develop their own-label brands in organics, in much the same way as has occurred with other products (Burch and Lawrence 2005). Wal-Mart has taken a slightly different route by encouraging mainstream food manufacturers to develop organic variants of their existing lead brands. Irrespective of the strategy adopted by individual retailers—as will be highlighted in the section on the changing role of supermarkets—the latter have acquired significant purchasing power which effectively make them the most important players in the sales side of organics.

Box 6.1. Wal-Mart: democratizing or destroying the organic market?

In the face of criticism that its retail 'supercentres' destroy smaller businesses and undermine employment standards, Wal-Mart has long maintained that its distribution efficiency, product range and low prices make the company the friend of the 'working family'. With the adoption of a highly publicized sustainability strategy in 2005 designed to reduce non-renewable energy consumption, eliminate waste, and sell sustainably produced products, Wal-Mart has extended these arguments to the delivery of environmental outcomes. According to CEO and President Lee Scott (2006):

> The environmental advantages come straight from our size. As the world's largest retailer, we're in thousands of communities around the USA and 15 other countries. We buy products from more than 60,000 suppliers in 70 countries. We sell anywhere from 35,000 to 100,000 product lines in each of our 6,000-plus stores and clubs. We have 1.7 million associates serving more than 138 million customers every week. Our size and scale means that even one small pro-environment change in our policies or our customers' habits has exponential impacts all over the world ...
>
> We're buying seven million kilos of organic cotton from Turkey and India, and additional supplies from China, Texas and elsewhere. This policy will keep millions of kilos of chemicals out of the environment. What's more, we will make these organic products more affordable for consumers all around the world, thanks to our large-volume buying and distribution efficiencies. This means that families on a budget will be able to dress their children in organic cotton, and feed them organic vegetables and formula—all at a Wal-Mart price.

Well before Wal-Mart publicly announced its plans to introduce over 1000 new organic product lines in the summer of 2006 (Mangu-Ward 2006), some of the world's largest food manufacturers—including Kraft, Kellogg and General Mills—were clamouring to deliver organic versions of well-known products such as macaroni and cheese, Raisin Bran, Rice Krispies and Frosted Mini Wheats (Warner 2006). Wal-Mart's aim is to sell these, and other, organic lines at around 10 per cent more than their conventional equivalents. This will 'democratize' organic foods, they claim, for the large number of consumers interested in organics but unable to afford retail price premiums of 20 to 30 per cent.

Not surprisingly, the expansion of Wal-Mart's interest in organics has been interpreted by many critics as an indicator that conventionalization of the organic sector is set to gather pace. They question the nutritional value of the highly processed organic products sold by Wal-Mart. They believe the economies of scale required by Wal-Mart will see an increase in the number of very large organic farms, promote organic food imports, and create pressure to relax organic certification standards. Critics also suspect that Wal-Mart will use its purchasing

power to undermine other retailers and push down farm-gate prices (Warner, 2006).

But not all their competitors are running scared. Even though the greening of Wal-Mart is clearly part of an attempt to boost profits by modernizing its image and broadening its appeal with less price-sensitive customers (Warner 2006), some analysts believe there is little overlap between the Wal-Mart customer base and that of speciality stores such as Whole Foods Market and Wild Oats (Bhatnager 2006). If the same is true of the customer base of farmers' markets and other direct sales channels, it may well be that the most immediate impact of Wal-Mart's organic push is not to parasitize existing networks but to increase the total size of the organic market by mobilizing more people to both produce and consume certified organic foods. According to a spokesperson for Wild Oats, peoples' exposure to higher quality foods through Wal-Mart may, in fact, lead them, in the longer term, to develop a more 'global' commitment to organics. They may, as a consequence, become much more attuned to the variety, education, and sense of authenticity provided by speciality retailers (Bhatnager 2006), and so improve the sales figures of those retailers.

Australian supermarket chains have been comparatively conservative in their approach to organics. While the two major chains began taking an interest in organics as early as the mid-1990s (Hassall and Associates 1996; Monk 1999), their experimentation with organic lines has been limited (McCoy and Parlevliet 2000). Although, by 2001, all Coles and Woolworths stores stocked organic dry goods ranges, only 10 to 20 per cent stocked fresh fruits and vegetables or meat (Bulletin 2001). In 2004, Coles began stocking a range of own-brand organic dry goods—many of which were imported—with Woolworths following suit in 2006. It has been argued that the cautious approach of Australian retailers stems from the unpredictability of supply volumes and fluctuating consumer demand (Halpin 2004a). However, it also appears likely that Australian supermarkets have been reluctant to implicitly challenge general consumer perceptions that Australian food is safe and nutritious (see Chapter 3), or the utility of their own quality assurance processes, by promoting products that carry an implicit critique of conventional foods and systems of food provisioning. Even within the Australian organic production and processing sectors—particularly for meat and meat products—there may be found a belief among some participants that the quality and safety of conventional produce is sufficiently high that domestic demand for the organic alternative is likely to remain limited. For Australian supermarkets, why imply that existing products are second rate when they are seen already as 'clean and green'? For British supermarkets, the situation could not be more different with repeated food scares raising considerable doubts in the minds of many consumers regarding the safety of the food supply and the trustworthiness of food safety and quality agencies (see Chapter 3). Tesco and Sainsbury have, therefore, used organic foods as a major part of their corporate positioning strategies (Burch *et al.* 2001), even selling at a loss in order to attract consumers and win market share.

With supermarkets being well aware of the growing market in organics, together with the corporate responsibility 'credits' gained by marketing products claiming environmental and health benefits, they have searched the world for low-cost organic products. According to Kinnear (2004), this is having a devastating effect on smaller producers who—although appreciative of the sales made—are finding their premiums lowered (see also Smith and Marsden 2003). Further, the levels of reporting and record-keeping required by supermarkets are placing additional stresses and costs on family members. As Chang *et al.* (2003) have reported for Australia, the entry of the large-scale organic producers, in concert with the supermarkets, is placing increasing competition on the smaller producers and speciality retail outlets.

There are some very important questions to be asked about the involvement of large supermarket chains in the selling of organic products, particularly in relation to food miles, packaging, farm-gate price premiums, market expansion, the future of specialist retailers and the sustainability of organic food networks in general. Indeed, the role of mainstream supermarkets is of enough significance that it will be explored in more detail later in this chapter following consideration of trends in other parts of the retail sector.

### *Farmer/consumer direct sale arrangements*

Direct sale methods include farmers' markets, community supported agriculture, vegetable box schemes, and farm retail (Lines-Kelly and Mason 2001). A slight variation on these direct sale methods is the development of farmer-owned and supplied retail outlets that, for all intents and purposes, resemble conventional speciality food stores (Morely 2003). The basic principles behind each of these approaches are outlined in Box 6.1. The most obvious advantage of direct sales is the opportunity to eliminate intermediaries and retailers and thus both to reduce prices for consumers while increasing returns to farmers. Less obvious, but heavily promoted within the organic sector, is the opportunity to promote alternatives to conventional supermarket driven supply chains and to develop closer relationships between consumers and producers—bringing people back in contact with processes of food production and reducing food miles.

The opportunity to eliminate the so-called 'middle man' and capture more of the value generated by food production creates an obvious incentive for farmers to involve themselves in direct sales—particularly on smaller farms where surplus labour may be available. It is not surprising, therefore, that the majority of Australian farms engage in at least some direct selling. But, as stated above, the rationale for direct sales extends beyond the prospect of realizing higher profit margins. Pretty (2002) argues that direct sales reintroduce trust, local identity and a more human scale to the foods we eat. This opportunity to connect with customers is a source of satisfaction to participating farmers, not just a selling point. Further, the higher returns accruing to farmers from direct sales support higher levels of diversity and population in the farming landscape, employing

more people and contributing to more vibrant rural communities (Pretty 2002). Direct sales offer a genuine alternative to conventional food chains and a concrete means through which notions of quality based on provenance, personal knowledge, seasonality, interpersonal communication, community building and so on may be developed (Marsden 2003).

### *Speciality food stores and cooperatives*

Speciality food stores such as organic grocers and health food stores purchase directly from farmers (usually fresh produce, jams, etc.), from wholesalers, and from processors and distributors of organic products. Together with food buying cooperatives, they are the traditional outlet for organic products. In fact, prior to both the entry of mainstream supermarkets into the organic sector in the 1980s and 1990s, and the growth of farmers' markets and CSA schemes around the same time, speciality stores and cooperatives were responsible for the vast bulk of organic retail trade. Warren Belasco (1993) has documented the strong ideological agenda of these stores and coops and its fusion of ideas around ecology and food production with those around feminism, anti-consumerism and peace. Through the 1960s and 1970s, he argues, the activities of such groups coalesced into a 'countercuisine'; a concrete alternative to what they saw as the bland, nutritionally bereft, and socially and environmentally destructive trajectory of conventional food systems.

To some extent, it may be argued that the mainstream food industries responded to this challenge by embracing notions of 'naturalness' and 'health', even if only as new marketing categories and opportunities for growth (Belasco 1993). Nevertheless, despite the now dominance of organic retail sales by mainstream supermarkets, some studies indicate that speciality food stores still provide a greater variety of organic products (Sligh and Christman 2003). Many of the processed and commercially-packaged products available in speciality stores are similar to those found in supermarkets—sauces, biscuits, baby food, organic milk and dairy products, and soy products—but the range is broader, often including meats, poultry and 'exotic' and tropical fruits and vegetables that supermarkets cannot source consistently in bulk. In Australia, it is reported by Chang *et al.* (2003) that approximately 80 per cent of domestically-grown organic produce is sold through speciality health food stores and cooperatives, suggesting that mainstream retailers place a heavy reliance on imported processed organic goods. For the speciality stores, sourcing the usual products remains, at times, difficult, with the failure to provide products on a regular basis identified as a major constraint on increased demand (Chang *et al.* 2003).

Box 6.2. Direct marketing methods for organic foods

**Community supported agriculture (CSA)**

CSA, or subscription farming, may take a variety of forms. However, the basic idea is that consumers share the risks and bounties of farming with producers by subscribing for a share of total farm output over a given period. In other words, they pay farmers an agreed amount at the beginning of the season and receive, subject to availability, an agreed quantity of fresh food, usually on a weekly basis (Pretty 2002). The farmer produces what people want to eat—not what might bring the highest returns in the open market. Not only do the consumers share in the produce of the farm, they often are encouraged to participate in and learn about farm life. In the event of crop failure, they share the loss. The bonds between farmer and consumer thus have the potential to be much stronger than in the commercial world of food production and sale. Founded in Japan and Switzerland during the 1960s, community supported agriculture began to internationalize with the establishment of the first US scheme in Massachusetts in 1985. It has grown significantly since that time, with Pretty (2002) reporting that 1,000 farms in the US and Canada receive US$36 million in revenue from a membership of over 77,000 consumers.

**Box schemes**

A similar direct marketing approach is the so-called box schemes that began in Britain in the early 1990s. Currently, tens of thousands of households in Britain obtain boxes of produce (normally fruit and vegetables) directly from growers, many of whom are certified organic producers. In fact, over 200 box schemes in the UK are certified organic (Halweil 2004). The prices set are similar to those available for conventionally marketed produce in the supermarkets, but consumers have a greater variety and are guaranteed freshness (the general aim is to pick and deliver on the same day).

**Farmers' markets**

The main distinguishing features of farmers' markets are their emphasis on local production and direct connection between producer and consumer. While the ways in which these principles are operationalized vary from market to market, many are characterized by strict rules governing the distance within which food must have been produced and the involvement of vendors in production and/or processing (Kirwan 2004). Farmers' markets enable producers to take their goods directly to the marketplace where they receive the full retail price and the benefit of direct interaction with, and feedback from, customers (Kirwan 2004). In other words, not only do farmers retain more of what consumers spend on their food, they also receive better information on what customers think of their products.

Growers rely upon familiarity with buyers (and their own reputations as sellers of quality products) as part of their sales strategy. For consumers, farmers' markets (of both the organic and non-organic kind) represent value for money and a chance to access high quality food while challenging the virtual monopolies of major retailers, avoiding unnecessary packaging, reducing food miles, and so on (Kirwan 2004).

**Farm shops and restaurants**

Farm shops and restaurants offer a middle-level marketing strategy; that is, they lie somewhere between the individual farmer, or small group of farmers, selling direct to consumers and the processing and retail behemoths that dominate most food sales (Halweil 2004). Although farm shops and restaurants are not widespread enough to identify a typical business structure or marketing strategy, they may be described as business alliances through which the resources of larger groups of farmers are pooled in order to establish some sort of retail outlet or outlets. Such alliances have long been a staple of conventional food processing and distribution (albeit one that is disappearing) but are relatively new to the retail sector. Halweil (2004) describes a number of North American examples including the Centerville Market in Nebraska. Farmers deliver their produce to the store, which charges them an annual fee for shelf space and a commission on sales. The Farmers Diner in Vermont, by contrast, purchases its supplies, but serves foods grown almost entirely within an 80 kilometre radius of the restaurant and purchased directly from the farmers who grew it.

Discussions with the owners of speciality food stores suggest that few expect to get rich selling organic food. Instead, the commitment to stocking and selling organic food creates considerable extra work in sourcing produce and dealing with multiple small suppliers (see also Halweil 2004). Within this context, it is perhaps not surprising that the resurgence of speciality stores—most notably in the US—has been led by chains that mimic both the layout, scale and comprehensive product lines of mainstream retailers and the atmosphere and display styles of traditional health and natural foods stores. The Whole Foods Market chain, as stated above, has—together with Trader Joe's and Wild Oats Markets—captured nearly a third of all organic retail sales in the US. Importantly, given the rate of growth in the US market it would appear that these chains have not simply stolen market share from existing outlets but have provided the platform on which recent retail growth has been built. Through acquisition of the comparatively small British chain Fresh and Wild in 2004, Whole Foods has established a seven store base in the UK from which it intends to build the first trans-European natural and organic retail chain (Organic Monitor 2004). For the time being, at least, the phenomenon of the large natural foods chains appears likely to continue its expansion into new markets. Indeed, Australian

entrepreneurs seeking to emulate the success of Whole Foods Market have opened the first two stores in a planned nationwide chain of over 40 stores trading under the banner of Macro Wholefoods.

The names of these natural and organic chain stores (Trader Joe's, Wild Oats, New Leaf, Staff of Life, Fresh and Wild, Whole Foods etc) are deeply evocative of the principles of the 'countercuisine'; suggesting traditional, unadulterated, wholesome and natural foods sold through traditional, community-focused outlets. Are these values consistent with the business structures of large retail chains? Whole Foods Market Inc.'s corporate website (www.wholefoods.com) proudly displays both investor information and the company's nomination eight years running by Fortune Magazine as one the best 100 companies in the US to work for—a reflection of a range of innovative employment practices. Yet the company has attracted considerable criticism from trade unions for their failure to support campaigns for fair pay and working conditions for farm workers and for their antagonism to unionism in their own workplace. According to employees campaigning for the establishment of unions in Whole Foods stores, the company has become increasingly profit-focused as it has expanded (www.wholeworkersunite.org). Allegations of low wages, poor working conditions, employee intimidation and arbitrary dismissal are not uncommon. As far back as 1991, when Whole Foods operated just 13 stores, the Austin Chronicle reported that:

> Whole Foods keeps up leafy green appearances but makes no apologies for its single-minded devotion to profit and its fierce determination to keep its wages low, its venture-capitalist investors hidden and its workforce young, powerless, and union-free. The rise of this corporation—pro-New Age in rhetoric, anti-New Deal in practice—raises hard questions of progressive consumers and the labor movement. Will health food be just for rich people? Will venture capitalists who appropriate the language and symbols of the New Age be able to turn against unions by portraying them as old and unhip? (Forrest 1991: 8).

Purchasing Fair Trade coffee or chocolate in a store known for its abhorrence of independent workers' unions (or cooperatives) does seem ironic—even if a fair proportion of workers are, in fact, happy to work under those conditions. While no other speciality natural and organic food retail chain has attracted the same level of adverse publicity over labour standards, that the market leader has attracted it raises important questions regarding the extent to which such chains are likely to differ from mainstream retailers in anything other than the rhetoric they use to sell their products.

## The changing role of the supermarket

This chapter has discussed already the dominant market share in organic foods enjoyed by mainstream supermarkets. This section expands this discussion in two important ways. First, it seeks to demonstrate that this trend is, if anything, even more advanced in relation to conventional foods. Second, it discusses the importance of specific moves by retailers to extend their influence beyond the brute economic power that comes from buying and selling huge quantities of produce, through the introduction of complex systems of private regulation.

Retailers have assumed a dominance of food commodity networks that was, until recently, enjoyed by intermediate agri-businesses. Giant processing and distribution firms like Cargill, ConAgra, Tyson and Nestle have long held virtual monopolies over particular commodity chains (Cox *et al.* 2002; Friedland 2004; Heffernan 1999). With 500 factories in 77 countries, Nestle has considerable capacity to shift its sources of supply to wherever raw products can be produced at least cost and thus to play competing groups of farmers off against each other (Burch and Rickson 2001). Concentration within the retail sector, however, has increased the capacity of individual retail firms to dictate terms to small farmers and large processing and distribution firms alike (Burch and Lawrence 2005; Cox *et al.* 2002). With few competitors, large retailers are able to impose numerous conditions on their suppliers (such as charging rent in return for access to shelf space), to squeeze processing firms by developing their own in-house brands, and effectively to dictate prices. Such dominance carries obvious implications for the price premium received by growers.

With such dominance, however, also come a number of vulnerabilities (Hendrickson and Heffernan 2002). The most obvious of these are perhaps food scares (Busch 2003), a risk to which retailers have responded through the imposition of increasingly complex quality assurance schemes (Lockie 1998). While such risks are shared by others within the food chain, it is notable that supermarkets often have both pre-empted moves by governments and suppliers to develop their own schemes and have set higher and more expensive standards in order to foster consumer trust and reduce exposure and liability to food-borne risks (Lockie and Salem 2005; Pearce and Hansson 2000). European retailers, for example, have banded together to develop the EUREP-GAP (Good Agricultural Practice) portfolio of environmental, social and food safety standards. To increase its acceptance as an objective standard, third party auditing is endorsed by EUREP-GAP. Just as organic certification gives consumers a generally clear understanding of the quality claims of the product, so EUREP-GAP certification guarantees that production has taken place under conditions of Good Agricultural Practice. Included in GAP is the minimization of agri-chemical inputs, the benchmarking of on-farm practices, and traceability. According to Campbell (2004), this ensures that food exporters outside Europe will be able to sell their products into lucrative, fast growing, and high-value European markets. Importantly, however, it may not advantage the organics industry. Winners within EUREP-GAP appear to be larger-scale conventional producers who can readily

abide by the quite rigid, but certainly not organic, standards and auditing procedures (Bain *et al.* 2005; Campbell 2004).

Other vulnerabilities relate to the ability of large, centralized, retail firms to respond to smaller and more differentiated markets (Hendrickson and Heffernan 2002). Non-standard food production and consumption practices—such as the consumption of 'slow food' and boycotting of 'fast food' outlets—do not sit comfortably with either the globalization and massification of food production and retailing or the bureaucratic systems set up to regulate it (Miele and Murdoch 2003). To be sure, this is not ground that mainstream retailers necessarily wish to concede. Supermarkets in the UK are beginning to support 'short' food production chains that are promoted to potential consumers on the basis of relocalization, closer connections with farmers, community-building and corporate responsibility (Marsden 2003; Marsden and Sonnino 2005). It is common for the name of the farm and its location to be listed on the front of fresh food packaging (e.g. on cheese and vegetable packs). Regional sourcing of foods is viewed not only as enhancing authenticity and trust (through information provided on the packaging) but also as potentially challenging industrially-produced foods through the delivery of fresher produce and as an opportunity to support rural development (Marsden and Sonnino 2005).

## Conclusion

Planning, communication and coordination could all be improved within the organic supply chain. While firms in the wholesaling, processing and distribution sector are playing an increasingly important role in shaping the industry, in most countries they are dealing with a very large number of small growers and comparatively high levels of inconsistency in quantities and quality of supply. The costs and inconveniencies imposed on market intermediaries by this lack of integration and predictability has tended to discourage those firms that are not committed, at some level, to the principles of organics. In the absence of either a dedicated 'organic mission', or of internal champions for organics, the majority of intermediate firms are likely to see little benefit in their involvement. Exceptions to this generalization most notably include those intermediate firms and production settings conducive to the establishment of economies of scale—such as California's central valley (Guthman 2004b).

To suggest more generally that intermediate firms should be dealing with a small number of large growers is to predict a future for organics that is very different from the past. It is one likely to place processors, wholesalers, distributors and supermarkets in an unassailable position in determining the sorts of products grown and under what conditions. Yet, an important factor in increasing domestic and export sales is the more reliable delivery of organic products. It seems that in an industry that is 'fractured' and where there are not strong horizontal and vertical links between the major players, organics will not reach its potential sales volume. Similarly, in countries where support from government (particularly in the areas of national standards and research) is

insignificant, the industry is unlikely to become as important a component of farming and food supply as it might.

It is interesting to speculate whether processes of globalization (and along with it, the need for transnational agri-business to demonstrate global corporate responsibility) will elevate organics over other products in the pursuit of such important goals as social justice for food producers, healthy products for consumers, and sustainable outcomes for society. However, it is important to note that the economies of scale and competitive pressures almost certain to accompany such processes will have a range of intended and unintended consequences. As mainstream supermarkets consolidate their dominance of both conventional and organic food networks, for example, a number of potential scenarios present themselves. First, larger retailers are less likely than smaller processors, distributors and retailers to nurture large numbers of small producers. Preferences for economies of scale are likely to be accompanied by parallel strategies to deal more and more exclusively with a small number of very large organic producers and suppliers. Second, larger retailers interested in selling anything more than token quantities of organic food are likely to pursue what they see as 'realistic' premiums for organic produce; that is, premiums either in the range of 15 per cent or commensurate with other 'high quality' products. Third, the buying power of large retailers may be used to push down farm-gate and wholesale prices to, again, what are perceived as more 'realistic' levels. Fourth, even in the absence of overt strategies to exclude either organic produce in general, or small organic producers in particular, the requirement that all suppliers comply with supermarkets' own quality standards and quality assurance procedures may add considerably to the cost of doing business with them and, by default, discriminate against smaller organic growers.

Faced with such pressures, the motivations and principles of farmers and smaller firms become less and less important as the conditions for enrolment in organic food networks are dictated more and more by a limited number of very large businesses. However, as we have noted in this chapter, very large food businesses face a number of vulnerabilities ranging from their exposure to food scares to their ability to respond to and capitalize on changes in consumer demand. Despite their overwhelming market share, the ability of large retailers to mobilize people as consumers of their products is not something that can be taken for granted. Considerable resources are devoted by retailers through marketing, quality assurance, supply management, and so on to minimizing risk exposure and representing themselves as champions of consumer interest. For this reason, we move in the next chapter to a consideration of what it is that motivates organic consumption and the strategies that are deployed to influence putative organic consumers.

# 7

# Consuming Organics: Mobilizing 'The Consumer'

For the majority of those participants involved in organic production-consumption networks 'the consumer' is largely invisible. As organic food chains lengthen, opportunities for personal interaction disappear. At the same time, as a comparatively small and fragmented industry there are few resources available to undertake market research or, as we saw in the previous chapter, marketing and promotion. As long as produce is sold it is simply taken for granted that it must be meeting 'consumer demands'. This is not to say that the organic industry and its proponents have not been extremely active in trying to mobilize people as organic food consumers. The rapid rise in mass media coverage of organic food and agriculture during the late 1990s and early 2000s, for example, reflected a very successful attempt to represent organic foods as the 'natural' alternative to a range of concerns including genetic engineering and food scares. Nevertheless, it remains striking that the extraordinary growth we have seen in the market for certified organic foods over the last decade commenced well prior to the surge of media coverage detailed in Chapter 3, and has continued in the absence of any comprehensive marketing and industry development strategies. This reflects what many believe to be the fundamental driving force behind organic sector growth today—consumer *demand*. While the industry was founded by producers seeking to reject the chemical-intensive, so-called 'productivist', farming methods promoted on a wide scale in the years following the Second World War it has been transformed, it is thought, into an industry driven now by consumers seeking to protect their own health and well-being (Lockie *et al.* 2000). For many farmers, processors and retailers, the belief that increasing numbers of food consumers *demand* organic food, and are prepared to pay more for it, has been central to their own enrolment in organic food networks.

According to market researchers Hartman and Wright (1999), so-called 'new wellness' consumers who are likely to purchase organic food may be divided into four main groups. The first is a small group of hard-core environmentalists driven

by passionate environmental concerns. The second comprise a wealthy, older group interested primarily in their own health. The third is a younger group, members of which profess environmental and health concerns but are more influenced, in reality, by convenience. Fourth is a growing mainstream of people who are genuinely interested in health and the environment and are prepared to do more about both concerns as products become more accessible in terms of price and availability. These categories mirror a widely held perception that price premiums for organic products restrict their consumption largely to the wealthy and the fanatical; that is, to 'yuppies', 'greenies' and 'health nuts'. This perception is not only condescending: it is demonstrably wrong. As attractive as the categories identified by Hartman and Wright might appear to anyone seeking to target particular segments of the 'organic market', there is more about the dynamics of consumption ignored, than revealed, by these categorizations. They say nothing about how food consumers resolve the competing desires, concerns, claims and possibilities they face in relation to food consumption, nor about how food consumers respond to the many actors seeking to influence their behaviour.

Coming to terms with the dynamics of organic food consumption requires first that we consider a much broader range of potential motivations than environmental and health concerns—motivations such as animal welfare, food safety, quality, tradition, and so on (Cunningham 2001; Davies *et al.* 1995; Lakin and Shannon 1999; Makatouni 2001). Much of this chapter is concerned, therefore, with an analysis of what motivates people to consume particular foods and how these motivations interact with other characteristics and beliefs to influence organic food consumption. This analysis is based on a national survey of over 1,200 Australian food consumers (the National Food Choice Survey) supplemented with extensive focus group interviews (more detailed information on the methodology employed and the development of measures can be found in Appendix 4). Coming to terms with the dynamics of organic food consumption also requires us to look beyond the act of purchasing or ingesting organic foods; that is, at 'consumer demands'. As we have seen in previous chapters, actors mobilized to produce, process, sell and/or research organic foods have themselves done so for a wide variety of reasons. However, implicit in each of the strategies these actors have enacted to produce and/or sell more organic foods are a parallel set of strategic attempts to mobilize particular types of people as organic consumers. Other actors are active in their attempts to discourage consumption of organic food. Food consumers are exposed, therefore, as we saw in Chapter 3, to discourses on organic foods that present them variously as safe, high quality, environmentally friendly and traditional on the one hand, and as dangerous, fraudulent and inefficient on the other. This gives us no reason to expect a necessarily clear and direct relationship between people's beliefs and attitudes towards food and their food consumption behaviours, and every reason to consider how food consumers interpret competing discourses and how they experience their own agency in relation to food choice.

## Who accesses the organic marketplace?

At an international level, the availability and consumption of certified organic foods is strongly correlated with wealth. In 2002 it was estimated that the global retail market for organic food and drink was worth approximately US$23 billion (Sahota 2004). Of this, North America accounted for US$11.75 billion, Europe US$10.5 billion, Japan US$350 million and Oceania US$200 million. The Latin American share of the global organic retail market was a mere US$100 million. The rest of Asia and the whole of Africa accounted for less than US$200 million. Despite the presence of substantial organic production sectors (5.8 million hectares in Latin America, 320,000 hectares in Africa and 875,000 hectares in Asia excluding Japan), the vast bulk of produce from these regions is exported to wealthier consumers in the West (Yussefi 2004).

Within Western countries such as Australia it is true that organic food remains a niche market. This does not mean that its consumption is restricted to a small group of people. Indeed, over 40 per cent of Australians in 2001 consumed at least some certified organic foods. This alone tells us that organic food consumption has become a mainstream activity. The reason the organic market remains small enough still to be considered niche is that only a small proportion of people consume substantial quantities of organic food. Indeed, the National Food Choice Survey suggested that consumption of about half of all organic food in Australia could be accounted for by less than 10 per cent of the total population. This section is concerned, however, solely with the characteristics of those accessing the organic market, not with the quantities of organic food that they subsequently consume.

If we look at who eats organic food it turns out that the most important personal characteristics are gender, education and income. While over 44 per cent of Australian women claimed to have consumed certified organic foods in the 12 months preceding the National Food Choice Survey, only 34 per cent of men made the same claim. These rates are similar to those found in Northern Ireland by Davies *et al.* (1995). About half of those who had finished high school or had tertiary qualifications in either the sciences or the arts consumed at least some organic foods compared with less than a third of those with no more than primary school education. Similarly, if the sample from the National Food Choice Survey is divided into groups based on the distribution of income, it turns out that among the least wealthy group (those who earned less than $20,000 per annum) just under 35 per cent of people consumed some certified organic foods. The proportion of people reporting organic consumption increased with income until plateauing at about 44 per cent among all those earning more than $35,000 per annum. What is interesting here isn't the fact that education and income had some effect, but that the levels at which they stopped having that effect were so low—high school completion for education and almost $10,000 below the average wage of adult Australians in full-time employment during 2001/02 for income

(ABS 2003). The common sense assumption that price premiums for organic foods restricts their consumption to the wealthy is, therefore, only partly true, for at the same time that such premiums do appear to present a barrier to entry into the organic market for very low income earners, this barrier does not appear to be any higher or lower for those on very moderate incomes as it is for high income earners. Other demographic variables such as religion, age and so on were not found in the Australian context to make a significant difference to consumption of organic food (although consumption does drop off once people reach their 60s and their income starts also to decline). We will examine later in this chapter the impact of these same variables on the amounts of organic food that people subsequently consume.

## What motivates people to access organic food?

One of the most startling things about the stereotypes of organic food consumers as 'greenies', 'yuppies' and 'health nuts' is how widely these are discussed by organic food consumers who do not themselves fit such stereotypes. Many of the people consulted during the course of this research expressed their dismay at the extent to which *other* organic food consumers were driven by 'food fashion' rather than by the social, environmental or health attributes of organic foods. Participants claimed that: *'you've got to grow your hair long and wear daggy clothes to be into that sort of stuff'* and that organic store customers and staff:

> *are not very welcoming. You don't feel very welcome. There is sort of a click and it's like, well, to be in that click you have to look a certain way. Yeah, you have to look like a feral and you have to be so-called cool with it...*

The importance of these beliefs will be discussed later in this chapter although—as the previous section shows—the stereotype of organic food consumers as a small, closed sub-cultural group is not supported by other data. We will look here at the motivations that influence people when making choices about what foods to consume.

The National Food Choice Survey examined how important a range of potential motivating factors were to respondents when making daily decisions about what they would and would not eat. The relative importance of each of these motivating factors was then compared for those who had consumed at least some organic food and those who had not. Figure 7.1 shows a number of interesting differences in the responses of the two groups. The most obvious thing to note from Figure 7.1, however, is that the overall pattern of responses for the two groups is strikingly similar. Both groups, for example, ranked health and the natural content of food more highly than they did fitness and weight control. Similarly, both groups ranked animal welfare and environmental protection more

highly than they did political values. This warns us against overstating the importance of differences between the two groups and suggests that the motivations broadly influencing people to consume organic food reflect more widely held values. As Cunningham (2001: 8) states, organic consumers 'are no longer the stereotyped sixty's flower child'; rather, they are increasingly mainstream.

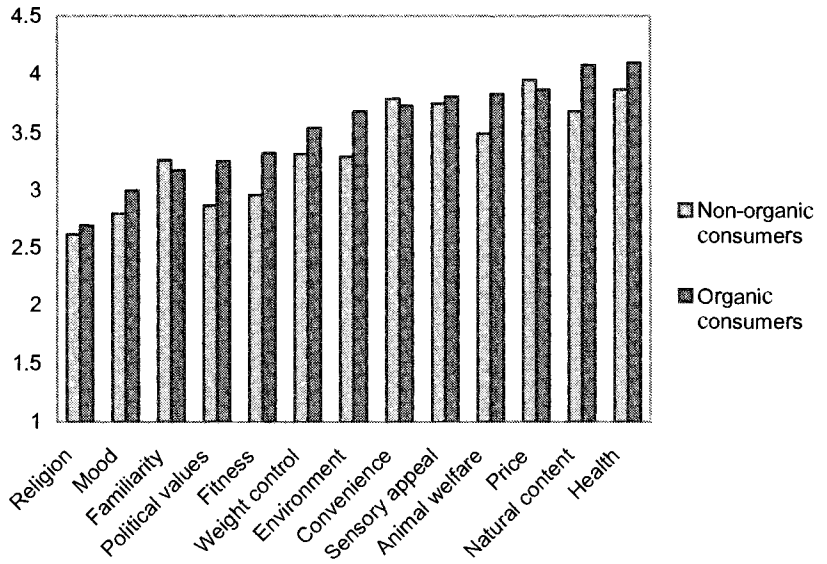



Figure 7.1. Motivating factors behind food choice (note: 1=not at all important through to 5=extremely important)

Nevertheless, Figure 7.1 does show that organic consumers in Australia were more motivated than non-organic consumers by several considerations including health, the natural content of foods, animal welfare, environmental protection, weight control, fitness, political values and mood. All of these differences were statistically significant (a more detailed table of results can be found in Appendix 5). Importantly, however, there were no statistically significant differences between organic and non-organic consumers in relation to price, sensory appeal, convenience, familiarity and religion. In other words, organic consumers were just as busy, price sensitive and risk averse as other consumers. While organic consumers had higher scores than non-organic consumers on all motivating factors that related either to the healthiness (health, natural content, weight control and fitness) or ethical attributes (animal welfare, environment and political values) of food, the importance of each of these factors in relation to the others was very much the same. Again, this suggests that despite stereotypes of greenies and health nuts, organic consumers were simply slightly more motivated

by values that were, in fact, widely shared. The same appears true when we look at the attitudes of organic and non-organic consumers to a range of food related issues that are also likely to influence food consumption (Figure 7.2).

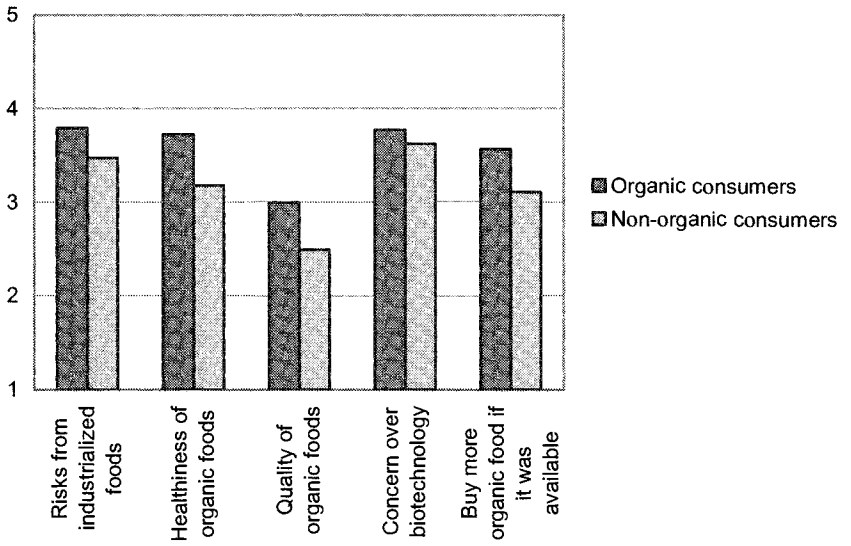



Figure 7.2. Attitudes to food-related issues (note: 1=strongly disagree and 5=strongly agree for all scales, except *risks from industrialized foods* where 1=not at all concerned and 5=extremely concerned)

What is apparent from Figure 7.2 is that despite differences between organic and non-organic consumers in relation to their attitudes towards food-borne risks and organic food quality, their responses again followed a remarkably similar pattern. It is also obvious that, on average, neither group expressed particularly strong attitudes in relation to any of these issues. Reinforcing this point, reference to the data underlying Figure 7.2 (see Appendix 5) shows that most respondents within each group did not deviate very much from the group average. With these caveats in mind, Figure 7.2 does show that organic consumers believed more strongly that industrial methods of food production and processing constituted a threat to consumers. Similarly, they were more convinced of the healthiness and quality of organic foods; they were more willing to consume greater amounts of organic food should availability be improved; and they were more resistant to biotechnologies. Respondents were also asked their views on the fairness of paying premiums to farmers for farming in an environmentally sustainable manner, with no significant differences emerging between organic and non-organic consumers.

The data presented so far suggest that the stronger motivation of organic consumers towards otherwise widely-shared values—while not as radical as the stereotypes suggest—does appear sufficient to make a significant difference to

the willingness of consumers to act on these values. This is particularly important in relation to the barriers to increased consumption of organic food that are presented by price and availability. For non-organic consumers, price was the most important consideration in food choice followed by health, convenience and sensory appeal. For organic consumers, price was just as important, but health and the natural content of food appeared slightly more important while animal welfare and sensory appeal were of similar importance. These motivations interacted with beliefs about the attributes of organic and conventional foods, personal circumstances, and so on, to produce actual food consumption behaviours—meaning that the motivational factors examined above were not the sole determinants of organic consumption. Rather, their influence lay in their interaction with a host of both individual and non-individual characteristics and processes ranging from beliefs and attitudes towards food to its availability and cost. The attempts of other actors to influence food consumers' beliefs and behaviours will be discussed later in this chapter. For now, we turn to the question of how various food-related motivations and attitudes interact with personal characteristics to influence the level of organic food consumption among that group who claimed to have consumed at least some certified organic foods in the 12 months prior to the National Food Choice Survey.

## Differentiating committed and occasional organic food consumers

Analysis of the relationships between food choice motives, attitudes and personal characteristics was undertaken using a statistical technique known as path analysis (see Appendix 4). Path analysis is designed to determine the ways in which a number of variables inter-relate to effect a particular outcome—in this case, increasing rates of organic food consumption. What the path analysis gives us, therefore, is a causal model showing both direct and indirect influences on the outcome of interest. Before conducting a path analysis it is generally desirable to reduce the number of variables to the smallest number practicable using another statistical technique known as factor analysis. From the survey questions comprising the motivational and attitudinal variables outlined above, plus a range of behavioural questions, the following eight factors were developed for use in the path analysis (again, see Appendix 4 for detailed description of the process followed):

- *Green consumption behaviours* reflected the frequency with which respondents engaged in activities including recycling, composting and the use of eco-friendly cleaning products.
- *Willingness to pay a premium* reflected respondents' level of agreement that farmers should be paid more to protect environmental values.

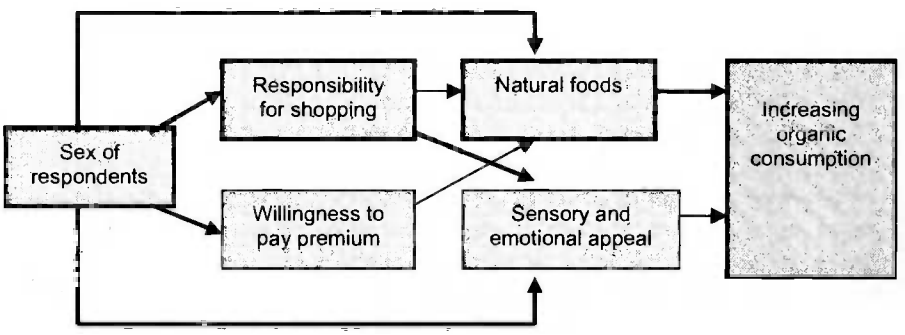
- *Convenience* referred to the ease with which food could be both purchased and prepared.
- *Sensory and emotional appeal* concerned the look, taste and texture of food, as well as its positive emotional effects and familiarity.
- *Natural foods* related to respondents' level of concern that food be produced in a manner that was free of artificial ingredients, genetically-modified organisms, pesticides, irradiation, hormones, antibiotics and unnecessary processing.
- *Political and ecological values* included protection of the environment, animal rights and human rights, as well as interest in the country of origin of foodstuffs.
- *Healthy food values* incorporated the contribution of food to respondents' physical fitness as well as their general health and nutrition.
- *Acceptance of biotechnology* referred to a generally positive disposition towards biotechnologies such as genetic engineering and cloning and disagreement that these were necessarily risky or morally wrong.

Together with the demographic variables age, sex, income and education level—and a further behaviour variable, responsibility for shopping—these factors were used to conduct a path analysis predicting increasing rates of organic food consumption among those consumers who had consumed at least some organic food. A simplified version of the resultant path can be seen in Figure 7.3 and the full model in Appendix 5. The path coefficients underlying these models also are shown in Appendix 5. For ease of interpretation, Figure 7.3 shows only those variables and relationships that had medium or strong impacts, although it is important to note that most of the other variables did play statistically significant, if small, roles in the complete model. Indeed, the only variables that did not figure at all in the full path model were *healthy food values* and *acceptance of biotechnology*. The reasons and implications of their omission are discussed further below.

The most important direct determinant of increasing rates of organic food consumption was consumers' level of commitment to the consumption of foods they perceived to be *natural*. Naturalness was seen in opposition to a range of contemporary food technologies including genetic engineering, irradiation, pesticides, preservatives, animal growth hormones and antibiotics, but as more-or-less synonymous with organic techniques. This is not to say that consumers were not aware of controversy surrounding the claims and counterclaims of the organic and conventional food industries as reported in Chapter 3. Some participants clearly believed neither that the health and safety claims of organics were justified nor that natural foods were necessarily better in their own right—as one stated:

*I heard a lot from the food Nazi's telling me how good it is for me, but they haven't actually been able to demonstrate to my satisfaction that it would be better for me.*

However, while focus group discussions revealed high levels of both awareness and confusion regarding the health and environmental attributes of organic, conventional and genetically-modified foods, it remained the case that the more consumers were committed to eating what they perceived to be natural foods, the greater the likelihood that they would incorporate a significant amount of organic food in their diet.




Key:
Major effect (>0.20 in magnitude)
Medium effect (0.10 – 0.19 in magnitude)

Note: All relationships are positive. Further, a positive relationship in relation to sex indicates higher scores among women than men.

Figure 7.3. Simplified path model for increasing consumption of organic foods among those who had consumed at least some organic food over preceding 12 months

Commitment to the consumption of *natural foods* was itself determined primarily by gender. Women were far more likely than men to be motivated to consume foods they considered to be natural.

The next most important determinant of commitment to consuming *natural foods* was *responsibility for shopping*, a responsibility, not surprisingly, dominated by women. These relationships have been noted in a number of other studies (Cunningham 2001) and stem, it is believed, from women's primary responsibility for work within the home including food provision and childcare. Sachs (1996) and others have argued that women's experiences as family food

providers and health carers expose them most immediately to both the potential and actual impacts of food consumption practices on family health and the environment. In other words, even where the long-term implications of particular food consumption practices are unclear, it is women who predominantly take responsibility for assessing and acting on such risks. As highlighted in the following quote, many people consider the potential impacts of food consumption practices on others—particularly children—far more seriously than they consider the potential impacts on themselves. But, as the following quote also shows, taking this responsibility does not lead in all cases to the equation of organic foods and natural farming methods with food safety.

> *Whilst I don't like genetic engineering, I personally feel a lot safer that way because I don't know what they are doing with the organic stuff. I mean I don't know what fertilizers, manure or human excretion or anything is used on it, and I personally wouldn't like to feed my child a tomato that has been peed on.*

This link between responsibility for others—and commitment to natural foods—is consistent with many arguments in the feminist and environmental sociology literatures that women's stronger environmental attitudes stem not from innate differences between women and men but from their different life experiences in a world where women usually are the main carers and food providers (Agarwal 1992). However, it cannot be overlooked that the direct influence of gender on commitment to *natural foods* was roughly twice as strong as the influence of *responsibility for shopping*. Understanding fully women's stronger preference for *natural foods* requires us, therefore, to look beyond their experience in the home which may lead, as shown below, to some contradictory effects.

Of similar importance to *responsibility for shopping* in shaping commitment to *natural foods* was *willingness to pay a premium* for environmental values. That the importance of *willingness to pay a premium* was not higher may seem counter-intuitive given the increasing impact price premiums could be expected to have on the food budgets of committed organic consumers. However, examination of the individual items comprising the *willingness to pay* scale shows there was considerable agreement among all respondents—including those who did not consume any organic food—that the prices received by farmers were not high enough for them to address environmental problems and that it was fair to pay them more for farming in an environmentally responsible manner.

*Responsibility for shopping* and *gender* were also the major determinants of the second most important factor directly influencing rates of organic consumption, the level of motivation towards *sensory and emotional appeal*. Drawing these themes of naturalness and sensory and emotional appeal together, one focus group participant stated that:

*When I go into an organic shop, I feel a sense of safety. Like my food isn't saturated in pesticides, and I instantly associate it with a greater respect for food, and I feel a more creative process in using the more basic ingredients you buy. And the whole act of creating a dish out of that food is a more creative and respectful thing.*

While the factors discussed above played the most important roles in increasing rates of organic food consumption, others played a variety of minor roles. Concern with *convenience* in the purchase and preparation of foods, for example, had an (albeit limited) negative impact on the likelihood of consuming more organic food. This provides a small, but important clue, as to why taking *responsibility for shopping* did not contribute more to commitment to *natural foods* as *responsibility for shopping* was also a major determinant of *convenience.* Thus, while taking responsibility for food provisioning could lead to potentially contradictory effects on consumption of natural and organic foods, large numbers of women affirmed a commitment to natural foods irrespective of any domestic roles they may take and the competing imperatives with which they may be confronted.

Rather than describing in detail how each of the other variables fitted into the path model, it is more relevant to consider why they did not play more substantial roles in determining increasing rates of organic food consumption. The first point to make in this regard is that education and income did increase significantly the likelihood that respondents had consumed at least some organic food during the 12 months preceding the National Food Choice Survey. Given the extremely minor and, in places, contradictory roles they played in shaping increasing rates of organic food consumption it would appear—as suggested already for income—that very low levels of education and very low levels of income present barriers to entry into the organic marketplace. For those who have entered the marketplace, however, these factors appear to make very little difference in relation to increasing the uptake of organics.

Perhaps the most counter-intuitive result here is that *healthy food values* had no significant impact on increasing rates of organic consumption. Nevertheless, there are a number of plausible explanations for this outcome. First, concern with health is very much a universal value that few people are likely to claim is unimportant to their decisions regarding food. Consequently, health was the most highly rated food choice motive for both organic and non-organic consumers and does not serve to differentiate between either group, or between committed and occasional organic consumers. Second, a gap is likely between many people's professed levels of motivation towards health and their actual food consumption practices. Third, considerable controversy surrounds the health benefits of eating organic foods: indeed, consumers are exposed to a number of alternative perspectives on how best to eat in the pursuit of good health. The confusion and uncertainty generated by these competing discourses is exacerbated by the long-term and largely intangible relationship between diet and health.

The relatively minor role of *political and ecological values* can potentially be explained in similar ways, although a number of counter-arguments also present themselves. First, the values underpinning organic foods (that is, that foods should be produced in a manner that enhances the natural environment, respects human rights and protects animal welfare) may be held widely enough not to differentiate between different groups of consumers. The data do not support this interpretation, however, with significant differences between the importance attributed to political and ecological values by those who had consumed at least some organic food and those who had not consumed any, and considerable variation within each group. It would appear, therefore, that while those who are not at all concerned about *political and ecological values* are considerably less likely to consider organic foods, holding these values does not necessarily translate into high levels of organic food consumption. Second, environmental and other altruistic values may be secondary for many people to concerns for individual and family well-being. However, as we have already seen, almost everyone professes concern about health and well-being, with the implication that this should not nullify any potential impact of variable *political and ecological values* on food choice. Third, it is possible there exists a gap between the values many consumers profess and their actual behaviour when confronted with concrete purchasing decisions. It may well be, however, that not all consumers accept that purchasing certified organic foods offers the only, or even best, means through which to express their political and ecological values. It is noteworthy, in this regard, that *political and ecological values* did have a medium effect on uptake of other *green consumption* practices, but that this did not, in turn, have a major effect on increasing levels of organic consumption. Practices such as recycling and composting are considerably less controversial than organics, impose fewer costs on consumers, and offer more tangible short-term impacts (such as reduced waste and the production of fertilizer). Altogether, while it does appear that commitment to *political and ecological values* is a genuinely important motive in making food choices for a large number of people, an almost equally large group does not share this commitment and, further, this commitment does not lead necessarily to the consumption of organic foods.

In sum, a small number of characteristics—most notably commitment to the consumption of natural foods, gender and responsibility for food provisioning—clearly differentiate those who consume a good deal of organic food from those who consume only a little. Many of the other motivations, beliefs and demographic variables that are widely assumed to be characteristic of organic consumers simply do not—when considered in relation to each other—have a significant impact on how much organic food people are likely to eat. Very low incomes, very low education and very low levels of concern for political and ecological values certainly appear to present a major barrier to entry into the organic marketplace but cease, thereafter, to influence how much organic food people buy. This leads to the next question to be addressed in this chapter: just how much of a premium are people prepared to pay for organic food?

## How much are people prepared to pay for organic food?

As we saw in the previous chapter, despite considerable variation across states, product categories and retail outlets, it appears that the average retail price premium for organic food products in Australia is something in the order of 80 per cent over otherwise equivalent conventional products (Halpin and Brueckner 2004a). This is several orders of magnitude higher than most studies suggest would be considered an acceptable level by most food consumers. The National Food Choice Survey asked people how much of a premium they would be prepared to pay for food that was guaranteed to have been produced without synthetic chemicals and fertilizers and to meet stringent safety standards. Some 80.3 per cent of those who had consumed at least some organic food, and 92.1 per cent of those who had not, nominated premiums of below 20 per cent. This is consistent with studies by Pearson (2001) and QDPI (2003), and with a belief among Australian retailers that most consumers are unwilling to pay price premiums of more than 15 per cent for organic foods. Taking a slightly different perspective, Donaghy *et al.* (2003) suggest that while the majority of consumers may be prepared only to pay very modest premiums for organic produce, the absolute price increase may be more important to them than the percentage increase. In other words, they may be willing to pay a proportionally more substantial premium for less expensive goods than for more expensive ones. Either way, many consumers clearly believed that the responsibility to pay for environmental and food safety benefits was not theirs alone.

All this would suggest, again, that the only people likely to purchase substantial quantities of certified organic foods are the very wealthy or the ideologically motivated. Yet, we have seen from the preceding section of this chapter that *willingness to pay a premium* to protect environmental values played a relatively small and indirect role in increasing people's level of organic food consumption, while income played even less. The National Food Choice Survey also found that among organic consumers, the more organic food people consumed the lower the premium they said they were prepared to pay for it (rho=-0.149, p=0.001).

The most obvious explanation for the apparent discrepancy between what consumers say they are willing to pay for organic foods and what, it seems, they do pay is that current levels of supply remain considerably lower than demand. Taking the so-called law of supply and demand at face value, we might expect prices for organic foods to fall to levels more consistent with what people say they are willing to pay as supply increases. The problem with this hypothesis, however, is that it fails to take into account issues such as what types of organic foods are made available, where they are made available, and the types of consumers to whom they are targeted. Neither does it take account of the multitudinous ways in which consumers might construct the notion of value. In

the following section of this chapter we examine, therefore, people's experience of organic food consumption and the retail strategies that were described in Chapter 6.

## Negotiating choice: the organic consumption experience

As was seen in Chapter 6, there has been, until recently, very little overt promotion of organic food in Australia. While this situation obviously contrasts quite dramatically with the UK—where almost all leading supermarket chains have used organic products as a highly visible part of their corporate imaging—in Australia, food consumers are exposed to multiple claims and counterclaims about organic and other foods. This section examines the ways in which people negotiate the competing imperatives, values and beliefs that are implicated in food choice. In doing so, it looks at how people understand and express power, or agency, as consumers; that is, at their ability to take control of their own consumption experience. It is not difficult to identify a number of practical factors that either limit or enhance people's ability to act as consumers—income, proximity to points of sale, product availability, access to transport, and so on. Less obvious, but no less important, are less tangible factors including:

- the expertise, skills and knowledge consumers hold in relation to particular commodities; and
- the multiple ways in which consumers may assess the cultural, or symbolic, meaning and significance of particular commodities and practices (Abercrombie 1994).

It would seem that the more options and capacity people have to define for themselves the uses, quality and significance of a product, the less they are forced to rely on manufacturers, retailers and others to tell them how they should behave as consumers. The flip side to this, however, is that the proliferation of products, knowledge claims and commodity subcultures also can become overwhelming and, thereby, disempowering. Dixon (2002) argues that this is exactly what has happened in relation to the retailing of chickenmeat in Australia—a food product that has been transformed from an occasional luxury item to everyday fare surrounded by competing claims of healthfulness, sophistication and quality, on the one hand, and animal cruelty and food safety risks, on the other. Confused and/or ambivalent about what to believe, Dixon (2002) finds many consumers are prepared to allow retailers, nutritionists and others to assume responsibility for mediating conflicting claims and discourses on their behalf. Few participants in our research expressed such a high level of trust in retailers. However, they did agree that food choice was increasingly complicated and they stressed that this complexity rested on the moral as well as the physical characteristics of food. According to one participant:

> *One of the things that's interesting for me is that food has become so much more complex and ... value-laden. I think when I was younger it was a lot more straightforward. There wasn't so much you had to worry about—like is it organic? or GE-free? or what country it came from? I mean there wasn't so much a moral dilemma about the food you eat.*

As we saw above, the majority of people believe organic foods have positive health attributes and that they would consume more if these foods were more widely available. When asked why they do not consume more organic foods the most frequent responses were those of cost and convenience. Significant numbers also mention issues related to authenticity and confusion over competing knowledge claims. While the meaning of these themes and the limitations they might place on the expression of consumer agency may seem self-evident, each theme presented numerous avenues for variation and contestation.

In relation to cost, for example, we already have seen that the relationship between increasing income and consumption of organic foods is not as strong as common-sense suggests should be the case. One of the reasons for this is because the cost of food is a function of several attributes—including storage-life, purchasing practices, family acceptance, use and quality—not solely of price. One research participant argued that she spent no more money on food since shifting to organics despite price premiums: '*When I used to buy from the supermarket I'd buy more cause it was cheaper, and I'd let half of it go off in the bottom of my fridge, now I make sure I use every little bit cause it's cost me the earth*'. Another argued that '*at the end of [the day] it's more economical, organic food, because it lasts longer in your fridge. You're not throwing out what you were throwing out before because it was going off*'.

Convenience, similarly, embodies a range of interrelated attributes including availability, variety and time that may be interpreted and contested in a number of ways. Interestingly, while supermarkets seem largely to have captured the notion of convenience—and many research participants believed consequently that the organic market would not expand without the support of major supermarket chains—it was clear that the increasing dominance of large supermarket chains in the retail sector was a process with which many focus group participants were uncomfortable. One explained that they persisted with the supermarket due to the:

> *time factor, I mean I like going to a fruit shop rather than [the supermarket] but I just don't have time to go to [the supermarket] and go down there ... I haven't got the time to be running around. I'd love to ... support the local butcher, but I usually get it from [the supermarket] because I'm there.*

Conversely, a number of participants challenged the extent to which supermarkets were as convenient as they represented themselves to be, one arguing that:

> *they waste the consumer's time ... even if you're there at three in the morning you'll still stand in a line and I hate the fact that they think our time is something that they can waste ... they trade on convenience, but I think it's just a joke.*

And a number of participants problematized the very notion of convenience by contrasting it with other desirable attributes of food such as seasonality and thoughtfulness. One participant summed up the premium placed on availability, variety and time as a *'convenience culture'* that had replaced the notion of the seasons and the foods that were special due to their association with particular times and events (such as mangos at Christmas). Another argued in light of the concern expressed by other participants in safe, sustainably produced food that the '*act of actually being conscious of what we eat is an act that presumes time. It presumes that we care enough that we actually give a shit what we buy and thus, we spend time deciding*'.

The theme of authenticity points again to the knowledge that people have of food and their ability to mediate the competing knowledge claims that accompany food-related controversies and imperatives. While there is almost universal consensus among potential consumers regarding the need for strict labelling of certified organic foods and for foods containing genetically modified ingredients, there is considerable mistrust and confusion about existing labelling schemes; awareness that food-related issues are more complex than a straightforward dichotomy between organic and conventional or genetically modified foods; and, a belief that the information needed to consider all the ethical and other issues implicated in consumption of a single foodstuff is not available. All these contributed to a sense of powerlessness among some focus group participants. As one stated in relation to genetically modified foods:

> *I just think it's wrong, wrong, wrong, but I feel really ... powerless ... It's like it's beyond my control to really know. While additives and all those other things ... there's at least a sense that okay I can actually see sugar, salt, you know ... But it's just really what choice have we got as a consumer? If you are shopping in [the supermarket] not very much ... I suppose I'd be dodgy about canola oil and all that, but really you just don't have the information to make a decision.*

While this appears to resonate with the sense of powerlessness noted by Dixon (2002) in relation to chickenmeat consumption, it is important to note that public opposition to minimalist food labelling regimes has resulted in the provision of more comprehensive information of genetically-modified organisms,

nutrition and other food attributes in Australia, Europe and elsewhere (Hindmarsh and Lawrence 2001; Lockie and Salem 2005).

The fatalism that may be discerned among some research participants is also counterbalanced by an awareness among many of: first, the strategies used by retailers and other actors to influence consumption behavior; and second, of their own complicity in this process to the extent that particular values such as animal welfare and environmental protection often were traded off against values such as cost and convenience. Focus group participants frequently discussed advertising, product placement and pricing strategies, generally believing these to be highly influential of others, if not themselves, and a major barrier to increased sales of organic foods. The complex relationship between retailer influence and consumer choice was attributed a class dimension by one focus group participant who argued that while *'we've all got a choice'*, beyond the predominantly middle-class Melbourne suburb in which she lived—with its organic food shops and school permaculture garden:

> *you don't have to go far ... to find people whose shopping bags are full of white bread, Coco Pops and Coco-Cola, and stuff like that. They are the ... highest selling things in the supermarket and I imagine [they] will get cheaper.*

Several participants also discussed the role of the retail sector in protecting corporate interests in existing production methods:

> *the reason [organics] isn't taking off, in my opinion, is not interest but lack of information that is being held back by corporations ... they don't want you to have that because it could be money out of investors' pockets ... [and] the packaging companies and the corporations that produce chemicals ... no-one wants to change because it will effect people's money.*

## Consuming passion

The emphasis we have placed in this chapter on the mainstream nature of organic food consumption is not intended to understate the influential role played by highly committed groups and individuals—those derided often as fanatics, food fascists, scaremongers and so on—in shaping the politics and practice of organic consumption. Consumer cooperatives, environmental groups and other activists have challenged existing consumption practices, established alternative supply chains and retail outlets, campaigned against public policies unsupportive of the organic sector, and otherwise worked to increase both the demand and supply of environmentally and, in cases, socially friendly foods. According to Belasco (1993), non-profit food cooperatives, buying groups and speciality healthfood

stores provided, in the early 1970s, some of the few outlets for organic food. The early organic consumer movement represented by these groups sought not just to make healthy food more widely available but to challenge dominant food distribution and retailing networks characterized by labour exploitation, centralization, long distance transportation, over-processing and lengthy storage of foods. It sought, in other words, to politicize food and the social and environmental conditions under which it was produced. So, while it is difficult to imagine the blossoming of organic food and agriculture into the primary alternative to conventional food networks during the 1990s without the distribution and consumption base provided by these radicalized groups, it also is difficult to imagine the blossoming of organic food and agriculture in the absence of their critique of conventional food networks.

Even as the organic industry has grown and attracted the interest of large corporate retailers, processors, distributors and farmers, there remain many commentators who believe the future of the industry depends on maintaining its critical edge—demystifying the social and environmental consequences of global trade in foodstuffs and challenging notions of value based solely on price competitiveness (Raynolds 2000). Indeed, in the absence of critique there is little to differentiate organic foods from other quality-assured products on any basis other than brand recognition and loyalty. Many participants in the focus group research were sceptical about whether some of the highly processed and packaged certified organic foods becoming available were consistent with an organic philosophy simply because they may have been less likely to contain chemical residues. One participant noted that:

> *one of the things that I've been seeing going to the supermarket is that you've suddenly got 'organic everything' coming out. People are producing, you know, organic biscuits, organic breakfast cereals, organic toilet rolls and you know, organic drain cleaner and stuff. And you look and go, well hang on, isn't this going just a little bit too far?*

Other participants were highly critical of the individualistic manner in which debates around organics, genetic engineering and so on were framed (see Chapter 3). One participant argued that:

> *for me, the biggie has very little to do with health. That's a side of it. But it's got more to do with the way the whole GM stuff and agro-businesses are totally [destroying] the world economy and peasant societies. And, in fact, what pisses me off about the GM debate is precisely that those in the West are just obsessed with their diet. It's all incredibly individualistic and no-one is bothering to look at the insidious farming practices that are being pushed in India and parts of Africa and South America. ... I have contempt for the debate, in the way it is framed.*

Irrespective, it seems, of how committed food consumers are to values of social and environmental justice they have some expectation that the organic food and agriculture industries will embody, and express, a vision of a more natural and just food system.

## Conclusion

Common beliefs about who consumes organic foods appear to be partly, if not completely, wrong. Very low levels of income (at both a national and household level), very low levels of education and very low levels of ideological commitment to political and ecological values certainly do present barriers to consuming even a small amount of organic food. However, beyond the barriers presented by poverty and so on to entry into the organic marketplace, income, education and ideological commitments have very little impact on how much organic food people are likely to eat. The reality is that very few food consumers think that the price premiums they currently must pay for organic foods are reasonable and affordable—irrespective of their incomes. Those who consume a lot of organic food manage the increased expense not because they have particularly high disposable income but by considering other aspects of value and reducing wastage. The central issue here is not that the organic industry may be marketing itself to the wrong people—indeed, it is hardly marketing itself at all. Rather, the issue is that basing product development and availability on stereotypical assumptions and categorizations may result, in the longer term, in mobilization of a considerably narrower band of organic food consumers than may otherwise have been possible. Obviously enough, if 'health-crazed yuppies' were the only people to whom organic food were made available, they would become the only people who bought it.

At the present time, about half the organic food eaten by Australians appears to be consumed by committed organic consumers who can be distinguished from the considerably larger cohort of occasional organic consumers by their level of commitment to the consumption of natural foods; that is, foods that are largely unprocessed, free of artificial additives and genetically-modified organisms, and have been produced with a minimum of synthetic inputs. Further, in the face of considerable conflict and confusion over the attributes of organic, conventional and GM foods, it is women and those responsible for household food provision who display the greatest commitment to natural and organic foods.

Mobilization of more people as organic consumers and, indeed, as committed organic consumers seems to rest—at the present time—on building supply and enhancing organic food's image of 'naturalness'. Although the apparently substantial gap between supply and demand for organic foods seems to provide a ready market for processed and imported organic foods, the long-term credibility of the industry with food consumers may be dependent upon being able to show: first, that the bulk of certified organic foods are not characterized by unnecessary

processing, packaging and transport; and second, that organic foods have not been supplied at a cost of environmental or social exploitation. Opportunities exist also to capitalize not only on the negative publicity surrounding industrialized foods but on the heightened importance of eating as a meaningful cultural activity in contemporary society as illustrated in other food-based movements such as Slow Food, community gardens and Fair Trade initiatives.

# 8

# Organic Futures: Competition for the 'Green Market'

As we argued in the first chapter of this book, organic farming is not the only means through which farmers might pursue sustainable production. Similarly, organic foods are not the only products on retailer shelves claiming to be safe, nutritious, or to have been grown and processed in an environmentally responsible manner. There is a plethora of agri-environmental programs, codes of conduct, standards, and quality assurance schemes seeking to reassure both farmers and consumers that they are doing, or buying, the best they can for themselves and for the planet. Some of these alternatives, such as Fair Trade and Slow Food, readily complement certified organic production and processing by emphasizing the social and cultural attributes of foods that organic certification systems have struggled to come to terms with. Other alternatives, however, such as Integrated Production, may be seen as something of a threat. By offering environmental or safety 'guarantees' that are not based on the holistic or certified application of organic farming principles, such schemes offer conventional farmers the opportunity to enter into direct competition with organic producers for the 'green' consumer dollar. This raises some important questions. Given that conventional food and agriculture industries continue to dwarf the certified organic sector, are the 'greening' tendencies evident in the growth of organics likely to lead to sustained and profound change in the way food is produced, processed and distributed more generally? And to what extent can we expect to see 'green markets' captured by alternatives to certified organic products? This chapter will explore the so-called 'greening' of the West, indicate why this changing orientation is increasingly incompatible with conventional agriculture, and outline the potential for organics to take a central role in sustainable development. Food trends will also be examined before outlining some of the continuing challenges that face the organics industry.

## Greening and Organics

In contemporary language, the term 'green' is widely used as an adjective to associate some sort of environmental value to all manner of activities, political groups and ideologies, consumer products, and so on. According to the theory of ecological modernization, this is not a matter of pure semantics, but relates to fundamental changes in the ways in which goods and services are produced and sold in, largely, the developed economies (Mol 1996). Instead of environmental concerns being seen as antagonistic to production and development they are embraced as opportunities for sustainable profit making and the exploitation of new markets. This view does, of course, have its critics, with concerns typically focusing on: (1) the extent to which green production practices extend beyond a small number of highly publicized examples; and (2) the diversion of resources saved through green practices into other exploitative production processes. Burch *et al.* (2001) and Lyons *et al.* (2004) summarize the various types of 'greening' that might thus eventuate:

- *Green production*—that which reduces pollution to very low levels, uses resources efficiently allowing for little waste, embraces recycling, requires less energy and is consistent with principles of sustainable development;
- *Green consumerism*—the choice of products that exhibit the characteristics listed above, and which are more 'natural', biodegradable and simply packaged;
- *Corporate greening*—the adoption of the elements of 'green production' by large firms which seek to foster legitimacy among the public by improving their environmental credentials;
- *Green marketing*—labelling, advertising, and promoting products on the basis of their environmental benefits and/or capacity to at least avoid environmental harm. Animal welfare issues are also prominent here;
- *Greenwashing*—the use, by firms which continue to harm the environment, of various promotional tactics to convince the public that their activities are environmentally acceptable when, in fact, they are not.

The question here is how 'real' is greening, and are we likely to see the rise of green consumerism, green production and green marketing? If yes, what will this mean for organics?

Jamison (2001) claims that the 1960s was the time during which an environmental consciousness emerged in the West. It was—against a backdrop of women's liberation, anti-war demonstrations, sexual freedoms, protest music and the growing evidence of waste and pollution—one component of the questioning of corporate power, technology, and the values of consumer culture. The emerging discipline of ecology, as a subset of biology, provided insights into

connections between organisms and gained status through its ability to explain the importance of 'systems' and the need for biological 'balance'. But greening has been more than just a call for the protection of biological systems. For Jamison (2001), an ecological consciousness is being 'internalized' in cultures and personalities, with environmental concerns now becoming integrated into social and economic life. And as part of this integration, environmentalism has been reinvented as 'sustainable development'; promising to reconcile the new ecological consciousness with the need for economic development and poverty alleviation. Francis Bacon's Seventeenth Century view that nature was to be exploited for human gain—something at the heart of Western science—is being seen to be usurped by an approach that views humans as being in partnership with nature. The advent of 'green speak' (most usually in the form of discussions on sustainable development) is now noticeable in policy discourse; 'eco-efficiency' is adopted by industry; new forms of politics are emerging in the name of environmental justice; and, we are witnessing the emergence of networks of green commerce (Jamison 2001) which, of course, includes organics. At the same time, the militant environmentalism associated with the 1960s and 70s (based on deep green philosophies) has been supplemented by a variety of additional forms of activism including community environmentalism (building on democratic traditions), professional environmentalism (represented by groups such as Greenpeace and WWF) and personal environmentalism (the adoption of ideologies and practices that can reduce one's ecological footprint—'eating green' being one example) (Jamison 2001). But have these made a difference?

The answer would seem to be a guarded 'yes'. According to Burch *et al.* (2001) there can be observed a discernable change in the agri-food sector as it seeks to incorporate elements of greening. The stocking of organic foods on supermarket shelves, the rejection by many supermarket chains of GM foods, and the reduction in the use of plastic bags, are some examples. Yet, when the origin of organic foods is considered, along with its packaging and processing, it could be concluded that the food miles travelled and the extent of processing and wrapping is little different from that of conventionally-produced foods. This is 'partial' greening, at best: what is not occurring is the adoption, along the food chain, of 'whole of life cycle' concerns that would eliminate waste, reduce packaging, and favour local sourcing over cheapness of supply in the purchase, by retailers, of products for sale to consumers. Nevertheless, what is occurring in the UK with stores such as Sainsbury, Tesco and Iceland is not merely window dressing (greenwashing). It appears that there are genuine attempts being made to develop, and for farmers to adhere to, environmental management programs that demonstrate that agricultural production is in line with principles of sustainable development (Burch *et al.* 2001). Similarly, consumers are becoming empowered to challenge the basis of modern foods and food production regimes. As Roberta Sassatelli (2004: 183) has argued:

> Consumers are said to be 'raising consciousness' and 'becoming aware'.... As free trade and globalization are said to have removed the protecting influence of the nation states and the local communities, it is only consumers themselves who are seen as having the potential—and the duty—to safeguard both fair distribution and the environment. Indeed, the realization that what the western world consumes is 'subsidized by the poor' in the form of unsafe and underpaid labour, and the exploitation of natural resources means that consumers can and must pressurize retailers, producers and governments to change their practices and bring about an equitable world trading system.

Importantly, the claim that organic foods are more nutritious or intrinsically 'healthier' is, at the present time, one that cannot conclusively be demonstrated (see Chapter 1). What is known, though, is that the public is concerned about health, suspicious of the effects of agrichemicals on health, and will avoid purchasing foods that are deemed to be harmful. And, agrichemicals have been implicated in numerous poisoning incidents throughout the world. An organic label does not contain claims that a product is safer than other foods. In fact, no claims can be made on the label that the product has superior taste, additional nutritional benefits or will be better for health (Chang *et al.* 2003). Why then might consumers come to identify organics with 'healthy' eating?

Rightly or wrongly, consumers of organic products conceive of them to be more 'natural' than the products of conventional agricultural systems, and less likely to be contaminated by agri-chemicals, GMOs, and artificial flavourings, colours and preservatives (see Chapter 7). They equate them with environmental safety and community revival. As Nygård and Storstad (1998) have argued, consumers appear to regard it as 'common sense' that products containing fewer chemicals, or which are not genetically modified, are more healthy and acceptable than those that have been tampered with and contain what are considered to be 'undesirable' characteristics. As we showed in Chapter 3, in our survey of the print media, 'organic' was the only signifier that was consistently linked to environment, healthiness and quality. Holt (2006) confirmed this for the UK, while Sirieix *et al.* (2006: 85) have reported in the case of France:

> French consumers pay particular attention to a healthy and balanced diet; they choose organic products because they perceive that a lack of pesticides, hormones and ... GMOs used in production, and of chemical food additives in processing, are better for health. [T]he wholeness of organic foods [that is, their lack of processing] is considered to be a defining element of organic-ness.

Finally, organic products are viewed as arising from 'ethical' production systems where animal welfare and biodiversity are high on the political and moral agenda (Chang *et al.* 2003).

## Supermarkets as saviours?

Retailers are certainly responding to this green consumer challenge. As we saw in Chapter 6, British and European supermarkets sought to demonstrate their commitment to consumer and environmental well-being in the 1990s through active promotion of organic production and sales. This can help to overcome one of the main problems identified by those consumers who would like to purchase organic foods, that of availability. If supermarkets have helped to facilitate the quite extraordinary growth in organic sales, might we not look to the supermarkets to lead the industry to further sale increases via greater product exposure and availability? Wal-Mart's recent expansion of organic offerings will certainly do much to boost the availability and affordability of organic food in the US. While many will suspect that this has more to do with broadening the retailing behemoth's customer base than any genuine expression of corporate social and environmental responsibility, is such scepticism towards big business always justified? The case of Iceland, Britain's frozen food retail specialist, is interesting here. According to Reed (2006), the founder of Iceland, Malcolm Walker, has been a 'passionate convert' to organics. In seeking profits, but in a way that fitted with his personal commitments, he moved quickly to exploit the organic market opportunity. Ultimately, we would argue that what is important here is not that retailers may pursue a share of the organic market for a variety of reasons, but that selling organic foods is not the only option available to them as they seek to promote responsible corporate images.

As we have seen, mainstream Quality Assurance schemes have been utilized by retailers far more extensively around the globe to ensure their exposure to food safety and environmental liabilities is minimized while seeking, at the same time, to make headway in the area of corporate social responsibility (Burch and Lawrence 2005; Reardon *et al.* 2001). As indicated in Chapter 6, EurepGAP (the European standard for 'Good Agricultural Practices') is one such initiative by supermarkets to address environmental concerns in food production. EurepGAP (created via an alliance of supermarkets) is part of an emerging private standard for regulating food production and quality (Bain *et al.* 2005; Busch and Bain 2004; Campbell 2004). Supermarkets are responding to consumer concerns about food safety, animal welfare, environmental degradation, and the working conditions of agricultural employees by specifying production standards and establishing a rigorous auditing framework to accompany this. Through EurepGAP, participating supermarket chains can enhance their image among the public as the setters of high standards, protectors of consumer interests and authorities on healthy foods while, at the same time, passing the costs of compliance down the supply chain (Bain *et al.* 2005; Campbell *et al.* 2006a, 2006b; Dixon 2002; Lockie and Salem 2005). Supermarkets participating in EurepGAP are not the only ones to realize this potential. In Switzerland, for

example, the Coop supermarket chain carries its own 'Natura' brand which, through reliance on Integrated Pest Management, or Integrated Production (see Box 1.3), is likely to be interpreted by consumers as something of a 'semi-organic' standard (Richter and Hempfling 2003). The Swiss government has developed a certification system based on similar standards with which farmers must comply in order to qualify for farm subsidy payments. The French government is heading in the same direction.

In imposing increasingly rigid standards upon suppliers, the supermarkets claim that they are responding in an appropriate manner to consumer concerns for food safety. While it is the suppliers who are forced to accept the extra costs of auditing, these costs must be borne if they wish to continue to supply the supermarkets (Burch and Lawrence 2005). In fact, by reling on third party certification the supermarkets do not even need to embark upon large-scale 'policing' of suppliers themselves. Supermarkets act as gatekeepers, mediating the flow of commodities and information between suppliers and consumers within an increasingly concentrated retail sector (Burch and Lawrence 2005). This is expecially the case in Australia, where the top three chains control 80 per cent of grocery sales and some 60 per cent of the fresh food market (Dixon 2004). As Dixon (2004: 101) notes 'when retail capital is concentrated in so few firms, it confers purchasing power, and thus market power, on those who control it', and they exert such control within a business-friendly 'benign regulatory environment'.

What might supermarkets do with this level of influence? According to Blythman (2005: 154–168), the UK's Competition Commission revealed that supermarkets in the UK have been involved in over 40 discrete practices that have adversely affected the competitiveness of their suppliers and resulted in less choice and higher prices for consumers. Some of these practices have included:

- Requiring or requesting that suppliers pay the supermarkets as a condition of stocking and displaying the products of suppliers;
- Requiring or requesting that suppliers pay for better shelf positioning of products;
- Requiring or requesting that a financial contribution be made by suppliers to promote product lines;
- Demanding that suppliers reduce prices, under the threat of delisting;
- Selling a product on which the labelling indicated that the product was of UK/British origin, when it originated from overseas;
- Requiring or requesting compensation from a supplier when the profits were less than the supermarket expected;
- Requiring or requesting suppliers to buy back unsold items;
- Delisting any producers/growers who had failed to deliver agreed quantities due to unforeseen weather conditions;
- Delaying payments to suppliers outside contractual time-lines;

- Over-ordering goods at a discounted 'promotional price' from suppliers, with the supermarket subsequently selling at a higher retail price, without compensating the supplier;
- Delisting suppliers of brand products in favour of supermarkets' own label equivalent; and,
- Introducing changes to the supply chain which increased the costs for suppliers, but without compensation, or without sharing any savings gained.

The point here is not to question the integrity of mainstream supermarket chains but to consider how the level of influence they have achieved over their suppliers might impact on the producers and consumers of organic foods. Given the market concentration of the large supermarkets, the notion of 'requesting' (mentioned above) has been seen as the same as 'requiring'—at least in the eyes of the British Competition Commission (see Blythman 2005). As Blythman (2005) suggests, this is a situation where the suppliers have to 'pay to play'. For organic suppliers, as with others supplying conventionally-produced foods, the effect has been a requirement to meet exacting specifications that guarantee that products look good, and have a good shelf life:

> Flavour is of secondary importance and true freshness of the produce—that is, produce that is ripe, mature and perishable—is an impossibility .... Growers come up with produce that keeps the supermarket quality controller happy; the consumer is not their prime concern. Consequently most growing decisions—variety, method of cultivation, and time of harvesting—are taken so as to ensure produce [meets] cosmetic standards (Blythman 2005: 221).

Clearly, most organic growers would be appalled by the notion that the superficial characteristics of their products override considerations for flavour and 'naturalness'. They would interpret supermarket demands as an imposition on the cycles of nature that they so much respect. They might see this form of food provision as antithetical to organic beliefs about authenticity and closer grower/consumer relations. Yet, expanding organic supply to meet burgeoning demand would seem to depend on productive relations with the supermarket chains. There is also little doubt that supermarkets will continue to seek ways of cutting costs and of providing shareholders with maximum gains (Blythman 2005). Will the organics industry be prepared to be dictated to by the supermarkets? What will happen if (or, rather, when) the organic premium is competed away under widespread adoption of the principles and practices of organic farming? On the one hand, the reduction in the premium is likely to encourage more consumers to purchase organics. On the other, a reduced premium is likely to see many producers who had converted to organics return to conventional production (albeit with potentially enhanced 'clean and green' credentials).

Even where supermarkets have expanded their standards beyond the safety and cosmetic characteristics of products, the imposition of private auditing systems such as EurepGAP raises the possibility, as we have already suggested, that organics will come to be seen as just one green accreditation scheme among many. In a situation where new standards are arising alongside third party certification as part of the new institutional structure of food governance, many commentators are arguing that larger producers will be the ones who benefit while smaller producers struggle to comply (Bain *et al.* 2005). Unless organic certification is seen, by food consumers, to represent something unique and desirable it would seem quite possible for it to lose ground to other certification programs that can be adopted more readily by conventional farmers and which seem, on the surface, to offer similar food safety and environmental attributes. While the media analysis in Chapter 3 suggested that these alternative certification schemes may have some difficulty matching the discursive simplicity and appeal of 'organics', there is some evidence that they are already having an impact. According to Campbell *et al.* (2006a), for example, organic food and fibre exports from New Zealand have slowed dramatically since 2001 because of the need, among other things, to comply with EurepGAP and similar standards in order to access the high value European market. In contrast with the dramatic growth in exports that New Zealand organic producers enjoyed in the 1990s—as retailers in Europe began their search for foods that were evidently safe and environmentally friendly—conventional growers using Integrated Production systems (see Box 1.3) have been able to align their production far more readily with the retailer-imposed protocols now effectively governing European food imports. Smaller scale organic producers from New Zealand have been left in much the same position as that of organic producers in developing countries (as described in Chapter 4), unable to comply with certification requirements and, therefore, excluded from the market. The resultant scramble from both organic and conventional producers to comply with retailer-imposed protocols leads Campbell *et al.* (2006b) to conclude that the standards and procedures embedded in these protocols will come increasingly to define the meaning and practice of sustainable development in export zones all around the world.

As a final point here we should recall that mainstream supermarkets tend to carry a limited range of specific organic products: there will always be a role for direct sales from farms to a different clientele from those reliant on the supermarkets for organic food purchases (see Chapter 6). Indeed, the increasing visibility of organic products in supermarkets might be a stimulus for wider consumption of organics, with the smaller farmers and smaller retail outlets finding that they are being patronized because they can provide a different range of organic products to consumers (Lockie *et al.* 2006a). This would not mean that 'bifurcation' (artisanal-versus-commercial) is an inevitability. As we learnt in Chapter 6, the majority of Australian organic producers already engage in direct selling of produce to consumers. In a similar vein, while still very high, the

proportional share of the organic foods sold through supermarkets in Britain has dropped slightly as more is sold in re-emerging farmers' markets (Scholten 2006). Our view is that direct sales are likely to expand, in parallel to that of the supermarkets, as part of consumer 'greening'.

## Beyond Productivism

Despite the increasing importance of quality systems such as EurepGAP, industrial (or 'productivist') agriculture remains the dominant form in the Western world (see Box 2.2). Productivist agriculture embodies systems that constantly seek higher labour productivity and economies of scale; paralleling the aims of firms involved in areas of processing, distribution and sale (Green *et al.* 2003). It is a form of agricultural organization that relies on agri-chemical inputs, the use of large machinery, crop monocultures, and, in the case of farm animals, intensive production methods such as feedlotting, the caging of poultry, and the widespread applications of antibiotics and other veterinary chemicals. Its systems are dependent upon non-renewable and increasingly expensive fossil fuels and on the production and sale of mass-produced agricultural products that travel vast distances to satisfy consumer demand. Its 'dynamic' component is agricultural science that has moved from conventional breeding to genetic engineering as a means of generating productivity and efficiency gains. Its critics argue that it has produced food surpluses at the expense of the environment, rural communities, animal welfare, food security, and consumer health (see Gray and Lawrence 2001; Lang and Heasman 2004; Magdoff *et al.* 1998).

Such collateral damage from productivism has not gone unnoticed. According to Renting *et al.* (2003: 395–396), since the 1970s the public image of agriculture, particularly in Europe:

> has become dominated by an ongoing stream of 'food scandals' ranging from salmonella and bovine spongiform encephalopathy (BSE) to dioxin residues in milk. While governments and experts stress, time and again, that supposed health hazards lack any scientific basis, consumer distrust in modern food production has been firmly rooted ... New events—be it the introduction of genetically modified organisms (GMOs) or ... foot and mouth disease—are perceived in the subjective reality of many consumers as confirmation of their pre-established, negative image of modern food production.

Fuelled by media reports on both harmful chemical residues in plants and animal products, and the environmental consequences of large-scale industrial food production, the general public is becoming increasingly doubtful of the trustworthiness of the conventional agri-food system (Chang *et al.* 2003). Governments, which have allowed environmentally damaging, food polluting,

and harmful animal practices to continue have also been blamed for failing to provide safeguards to consumers. This is despite their attempts to impose bans on toxic agri-chemicals and to restrict the use of other substances implicated in public health scares.

Clearly, then, the productivist paradigm is under fire for its serious failures in many areas. Just how, we might ask, can such a system continue in an era of heightened concern about food safety and strong consumer demands for healthy products? The answer is that it is an entrenched system that has corporate and political backing and it is one that does, indeed, deliver cheaply-priced foods to the majority of consumers (albeit at prices that are a long way from reflecting the true social and environmental cost of food production and through distribution and retail networks that leave 'food deserts' in poorer communities) (Lang and Heasman 2004). Indeed, it is a system that even presents to consumers many of the same images and stories as those presented by so-called 'alternative' agriculture; images of clean environments, smiling farmers, contented animals, traditional food practices, quality certification, and so on. Nevertheless, according to Lang and Heasman (2004), productivism's 'dark side' of environmental pollution, land and water degradation, and so forth, are now clearly visible and two new paradigms are emerging to challenge its status and claims. In the so-called 'food wars' we are witnessing today, the main challenges to industrial agriculture as we have known it since the Second World War are coming from what Lang and Heasman (2004) have termed the Life Sciences Integrated paradigm and the Ecologically Integrated paradigm.

The Life Sciences Integrated paradigm represents a more sophisticated manifestation of the input-output model of agricultural sustainability (see Chapter 1). It is characterized by the application of the new biotechnologies to food and fibre production and includes the application of modern molecular biology (such as the genetic engineering of plants and animals) as well as new biological processes in the food manufacturing industry and applications (such as biopesticides) in agriculture. Nutrigenomics (an understanding of the ways gene functioning and nutrition are related) and the creation of so-called 'functional' foods are part of this paradigm. The potential of nutrigenomics and other 'life sciences' both to build upon the productivist ethos of efficiency and output gains, and to create new markets protected by strong intellectual property provisions, have made them very attractive to government and industry.

Box 8.1 The application of nano-technology to food and agriculture

Within the biosciences approach to food provision, a transition from 'genetically modified' to 'atomically modified' food appears underway. While GMOs have received global attention—resulting in national and international boycotts by producers, processors, retailers, and perhaps most powerfully, consumers—to date there has been little public debate regarding the future of nano-technology. This is arguably due to the lack of regulatory regimes for nano-particles resulting in no labelling requirements, corporate secrecy related to developments in the technology, and little or no media coverage.

Nano-technology refers to the manipulation of matter at the scale of atoms and molecules (under 100nm), thus reducing it to the realm of quantum mechanics. By doing nothing more than reducing the size of material, nano-technology changes the properties of that material, including its electrical conductivity, strength, colour, and perhaps of most concern, its toxicity. According to critics, recent scientific research demonstrates that reducing the size of materials can increase its level of toxicity. The nano-scale of such particles means they can more readily cross membranes (including skin and placentas) and enter human and other animal bodies, posing new and unpredictable health and environmental risks.

Nano-technology is currently being applied across a range of industries, including computers, medicine, defense and recently, food and agriculture. Many national governments, including Australia and the United States, are beginning to make considerable investment in this technology. Alongside governments, every major food corporation has developed—or is in the process of developing—a nano-technology program. The nano-technology market for food and food processing is currently in excess of $2 billion, and this is projected to grow to $20 billion by 2010. Most food containing nano-tech particles however, enters the food chain unlabelled.

There is a range of applications of nano-technology to the food and agriculture industries. These include:

- nano-tech seeds with in-built switches for specific traits that can be externally turned on or off (including fertility);
- packaging nano-scale active ingredients into an 'envelope' (a process called 'encapsulation') to control the conditions in which a pesticide will become active;
- 'smart fields' that are monitored via wireless nano-sensors that can detect when to apply water, pesticides and fertilizers. These inputs can then be supplied via 'encapsulated' seeds;
- 'particle farming'; that is, growing plants that are able to soak up nano-particles that can then be industrially harvested;
- food packaging that contains nano-scale properties designed to preserve food;
- 'encapsulating' nutrients for release in the stomach to maximize the potential of functional foods; and,

- perhaps most unbelievably, 'molecular manufacturing', where 'nanobots' are able to assemble foods (e.g. steak or flour) through carbon, hydrogen and oxygen atoms that are present in the air.

While some of the nano-technology applications outlined above may appear to be in the realm of science fiction, the reality is many of these techniques are being researched, patents are being applied for many nano-scale particles, and many food items are on sale (unlabelled) containing nano-scale particles. For example:

- BASF and Bayer Crop Science have both applied for patents on pesticides comprising nano-scale particles.
- Syngenta is already selling pesticides that are comprised of nano-scale particles (these include Primo MAXX Plant Growth Regulator which is designed to keep golf course turf from growing too fast, and Banner MAXX fungicide.
- Monsanto and Syngenta are also selling many micro-encapsulated particles in pesticides.
- In regard to packaging, 'active, controlled and smart' food and beverage packaging is worth around $38 billion. Bayer makes a packaging material containing nano-particles designed to preserve food. The transparent plastic film blocks oxygen, carbon dioxide and moisture from reaching meat (and other foods) and spoiling it. Meanwhile, Kraft and university scientists are working on 'electronic tongues'. This is nano-technology packaging that contains in-built sensors to detect food pathogens. When a pathogen is detected, a trigger is released that changes the colour of the packaging to alert consumers. Research into other forms of 'intelligent packaging' includes a wrapper that releases a preservative when the food is beginning to spoil.
- George Weston Foods (Australia) sells 'Tip Top Up' with tuna fish oil encapsulated to release in the stomach. Consumers won't taste this in their mouth, but will benefit from the high levels of Omega-3 fatty acids.
- Other examples of nano-tech functional foods not yet currently available on the market include: 'nanovehicles' for cholesterol reducing canola oil; nano-scale capsules to prevent flavour and aroma loss; nano-scale technologies to create on-demand functional foods through which consumers will be able to design when specific traits of food will be made available in their bodies.

Proponents of nano-technology argue that this technology will revolutionize the food and agriculture industries, by: alleviating world hunger; addressing agricultural environmental problems; and solving the obesity epidemic. These claims sound remarkably similar to those made by proponents of GMOs. Critics such as The Action Group on Erosion, Technology and Concentration (ETC Group), argue that nano-technology: erodes consumers rights to know what they are eating; further concentrates the power of the owners of such technologies; marginalizes small-scale farmers who are unable to access or benefit from nano-

technology; and increases the entry of toxins into food chains, thereby increasing both the health and environmental risks associated with agriculture and food provisioning. Furthermore, the application of nano-technology does little to challenge the problems of industrial agriculture. The invention of 'intelligent packaging', for example, further defers responsibility for regulation of the food industry from the corporate sector or government. Rather, it is consumers who play the role of food inspectors, deciding if meat is safe to eat by judging the colour of its packaging.

Source: 'Down on the Farm: The Impact of Nano-scale Technologies on Food and Agriculture' ETC Group, November 2004. www.etcgroup.org.

The most recent extension to the Life Sciences paradigm is being pursued through the development of nanotechnology (referring to the manipulation of matter at the scale of atoms and molecules) to agriculture (including pesticides and seeds) and to food (including food packaging, food additives and processed food products).

The Ecologically Integrated paradigm, by contrast, draws on the natural systems and bioregional models of sustainability. Here, farmers turn their backs on synthetic agri-chemicals, monocultures and other components of industrial agriculture. They seek 'natural' means of controlling pests, look to local knowledge to solve problems, and appreciate the biological importance of regional ecosystems. They attempt to reduce 'food miles' by growing for local markets. Incorporating nutrient recycling, natural bio-control of pests and weeds, biodiversity, and the preservation of natural resources, this paradigm includes organic farming and other low input systems (see Box 1.2 in Chapter 1) that have minimal negative impact on the environment and which aim to deliver more healthy foods to consumers. Such products have been termed 'environmental foods' (Holt 2006), clearly highlighting the 'green' credentials that consumers construe such foods to possess.

As the credibility of productivism is gradually being undermined, the battle for a replacement paradigm is being fought between the Life Sciences Integrated paradigm and the Ecologically Integrated paradigm. According to Lang and Heasman (2004) it is the latter—with an explicit commitment to sustainable development—that has the potential to deliver the best outcomes worldwide. Table 8.1 summarizes the key characteristics of each of these paradigms.

Table 8.1 Competing Approaches to Food Provision in the Western World (Sources: Burch and Lawrence 2005; Friedmann 2005; Gray and Lawrence 2001; Green *et al.* 2003; Lang and Heasman 2004; Marsden 2003)

| | Productivist | Life Sciences | Integrated Ecological |
|---|---|---|---|
| Key characteristics | Mass produced, standardized foods | Mass produced commodities; niche bio-engineered/nano scaled foods | Seasonal food production from natural systems & cycles |
| Drivers | Productivity, efficiency & cost reduction | Productivity, efficiency & cost reduction through bio-scientific innovation | Bio-regionalism; demand for 'natural' rather than cheap foods |
| Inputs to farming | Synthetic inputs; fossil fuels | Novel inputs including GMOs & nanotechnology | Closed nutrient cycles; avoidance of synthetic chemicals; no GMOs |
| Food production | Large industrial farms, high productivity, low labour input; disconnection between farming & rural community | Large industrial farms, high productivity, low labour input; disconnection between farming & rural community | Mix of farming sizes; more labour intensive; focus on sustainability of farm & community |
| Food processing | Factory processing of bulk raw materials; chemical preservation & packaging | Innovation in food characteristics; functional foods; bio-preservatives; new packaging options | Reduced processing; focus on quality & energy-saving packaging |
| Food sales | Global sourcing & sales; focus on cost | Traceability; global sourcing & sales; focus on cost | Seasonal & regional foods; reduced 'food miles'; focus on quality |
| Food distribution | National & global; consumers have little influence over the quality & presentation of foods | National & global; consumers have increasing influence over the quality & presentation of foods | Local/regional or national/global where energy/environment outcomes acceptable; consumers have strong influence over quality & presentation |
| Environmental outcomes | Reduced biodiversity, proliferation of pests, externalization of waste & pollution | Increased use of less toxic agri-chemicals; loss of biodiversity; uncertainty over other environmental & human impacts | Genetic diversity; soil & water health; potentially more sustainable production systems |

| | | | |
|---|---|---|---|
| Health assumptions | Assumes consumer health will improve as cheaper foods are delivered to the marketplace | Assumes that biotechnology will 'fit' foods to the human genome to maximize individual & community health | Assumes foods grown in 'healthy' ecosystems will be more nutritious & less likely to carry contaminants |
| Political support | Strong, but increasing concern over environmental consequences of productivist farming & the perceived health risks for producers & consumers from agri-chemical exposure | Strong, with a bio-future approved by many governments as the future for the food industry but, again, strong opposition due to perception of risky & unknown impacts on health & biodiversity | Limited: concern that the organic systems will increase food costs & reduce exports. |

In attempts to stylize and generalize the various competing approaches to food provision, there is the obvious danger of essentializing what are, in fact, quite complex and dynamic forms of agricultural and industrial food production and delivery. What can be readily seen from Table 8.1, however, is that the approach of the life sciences is not fundamentally different from that of productivism. That is, for the life science approach, bio-inputs substitute for agri-chemicals in an attempt to allow industrial farming systems to become more productive at the same time as they strive to become more sustainable. This is a promise or hope: to date, the bio-sciences have yet to deliver outcomes that would guarantee that their inputs to farming will move industrial agriculture onto a path of sustainable development (see Hindmarsh and Lawrence 2004). Indeed, there is a strong argument that GMOs—construed by some to be products of scientific arrogance and interference in things 'natural'—represent the antithesis of sustainability (Hindmarsh and Lawrence 2004; Schurman and Kelso 2003; Tokar 2001). Importantly, consumer resistance to GMOs is mounting in the West, leading some writers to predict a very limited future for the application of biotechnologies to agriculture and food (see discussion in Gray and Lawrence 2001; Hindmarsh and Lawrence 2004). Despite this, both genetic engineering and nanotechnology continue to slip under the regulatory radar, resulting in many food products being made available on the market that contain GMOs and nano-tech particles. In contrast, there is strong evidence that the 'recycling', closed-system, approach of organics can improve the condition of natural resources and so improve sustainability outcomes (Pretty 2002). If this is so, then there really is little choice for consumers but to 'back' organics/sustainability as the best way forward for world agricultural production and food supply.

Yet, the questions can, and have, been raised as to the potential for organics to 'prove' its environmental credentials. As Chang *et al.* (2003: 5) have noted, if the ultimate objective of organic agriculture is to achieve sustainability through:

- Production of food of high nutritional value;
- Promoting biological cycles in farming systems;
- Working, where possible, within 'closed' farming systems;
- Improving fertility of soils;
- Avoiding pollution resulting from agricultural production;
- Minimizing the use of resources deemed to be 'non-renewable'; and,
- Operating in concert with, and thereby protecting, the environment;

then these desirable characteristics need to be demonstrated, rather than simply claimed. As Chapter 1 argued, there is scientific evidence that organic farming methods can deliver significant beneficial outcomes. But this does not mean that all organic farms deliver these outcomes or that they are sufficient to claim the mantle of sustainability. Nor does it mean that there are not a lot of conventional farmers out there who, through a range of non-organic practices, have not also proven capable of improving their environmental performance. Through the application of minimum-tillage, precision farming, Integrated Pest Management, and so on, many conventional farmers have reduced soil erosion, minimized chemical applications, and achieved other positive outcomes. But again, achieving some environmental outcomes, no matter how important, does not mean we have achieved sustainability. As Chang *et al.* (2003: 5-6) forcibly argue:

> Agriculture is sustainable when it is ecologically sound, economically viable, socially just, culturally appropriate and based on a holistic scientific approach. Moreover, sustainable agriculture preserves biodiversity, maintains soil fertility and water purity, conserves and improves the chemical, physical and biological qualities of the soil, [and] recycles natural resources and conserves energy. Sustainable agriculture also means using locally available renewable resources and appropriate and affordable technologies, and minimizing the use of external and purchased inputs.

As we have seen, the organic sector has struggled to reconcile its increasing reliance on codified standards with such holistic visions of sustainability. Further, the emergence of a plethora of 'eco-labels' and the organic industry's failure to agree upon a worldwide standard for organic products, is seen to add to the confusion and mistrust in relation to organics (Burch *et al.* 2002; Lockie and Salem 2005). Are the new forms of retailer-controlled accreditation likely to assume the position currently occupied by organics as more-or-less synonymous

with sustainability in the public imagination and thus compete away the market for organic products?

## Where we Grow, Where we Eat: Closing the Gap Between Production and Consumption

According to Murdoch and Miele (2004), new conceptions of food quality are emerging within society and are beginning to influence what is occurring in agri-food chains. Food scares (see discussion in Chapter 3) have been linked to agri-industrialization, leading to questioning of the ways foods are produced, the ways they are processed and distributed, and the authenticity of the labelling they carry. Consumers are turning to 'alternatives' that include organics. A new 'aesthetic' is emerging. Here, organics, Slow Food, and Fair Trade (amongst others) are strategically positioning themselves as alternatives to standardized products that are seen as failing 'to carry environmental, cultural and social qualities into the consumption experience' (Murdoch and Miele 2004: 171).

But is there a real difference between alternative and conventional food chains? After all:

> on close inspection it is clear that there are many similarities between the two: on the one hand, supermarkets and other key players in the conventional chain point to increasing safety, nutrition, taste and so on, in the goods they produce and sell; on the other, the [Soil Association and Fair Trade] groups tailor their products so they can be sold through conventional outlets to conventional consumers. The result is that goods designated 'conventional' or 'alternative' begin to shade into one another so that their clear separation seems almost impossible (Murdoch and Miele 2004: 171).

It is important to note, however, that the lack of differentiation between conventional and alternative foods described in this quote refers not to a lack of differentiation in the ways they are produced and processed but a lack of differentiation in the ways in which these foods, and the claims that are made about them, are presented to consumers. Just about everything, it seems, is presented as safe, nutritious, good for the planet, and produced either by a proud family farmer, a happy cow, or a caring home cook—no matter how it was grown, or what happened to it on the way to the supermarket shelf. Obviously enough, appearances can be deceiving. Cook and Crang (1996) use the term 'geographical ignorance' to describe the ways in which the images of place found on product labelling and in advertising bear such little relation with the actual ways in which most foods are produced. Smith (1996), for example, highlights the yawning chasm between the romanticized images of a smiling tropical peasantry and sophisticated European café society that are used to sell coffee in

the West and the impoverished lives that the vast majority of coffee producers live as a result of depressed raw coffee prices. Simply put, many conventional foods produce a disconnection between production and consumption (hiding conventional foods' industrial heredity) that 'alternative' foods seek to repair—celebrating the linkages between foods and the social and natural environments from which they arise (see Chapter 4 and Table 8.1), and constructing the ingestion of food as pleasure (Murdoch and Miele 2004: 172). Sassatelli (2004: 182) has written:

> Certainly, alternative food consumption is an important locus for conceptualizing how certain materials are classified as good to eat, stressing that *goodness* is intimately associated with the attribution of a moral quality to food. This is so because the various alternative forms of food consumption and their discourses rarely deal with food alone: they rather place food practices in the context of broader issues and are implicated with notions of justice, propriety, nature, health etc which work as codes [as a new basis of food purchase].

What will be the foods for the future? Food markets are dynamic and respond to changing tastes. A very obvious example of this is what Lang and Heasman (2004) have termed the 'obesity response' of firms like Burger King and McDonalds. These restaurant chains are seeking to remake their image via the promotion and sales of salads and other 'healthy' choices for their customers. Food consumption is linked directly to lifestyles and it is no surprise that food products are being created to cater for those different lifestyles. Thus, as Renting *et al.* (2003: 396) assert:

> Where ease of preparation is expected, convenience food (pre-washed, pre-cut, and precooked) is constructed; where time pressure dominates, fast food emerges. The quality definitions are also contextual for health food, regional quality food, organic food, slow food, etc. Even between different spheres of activity within the daily life of one individual quality, expectations may diverge considerably, resulting in complex and sometimes internally contradictory 'hybrid' consumer demands.

While a number of writers have pointed to the oppositional developments of two culinary networks—fast foods and slow foods (see Miele and Murdoch 2003)—still others have commented upon the growth of functional foods, GM foods and a variety of new products such as home meal replacements, prepared fresh foods, snacks and other products that allow for 'flexi-eating' (Burch and Lawrence 2005). This flexi-eating is not only about the nature of the food, but where it is consumed. Australian writer Jane Dixon, for example, has been writing about 'car foods'—those foods that can be consumed as individuals and families commute to work, school, and on weekend and long vacations. The

impacts that such eating habits will have upon diets and well-being have not at this time been determined, but Dixon believes that this form of eating is unlikely to tackle, and may indeed exacerbate, problems of obesity and associated health problems (pers. comm.).

There have been many recent attempts by consumers to influence the ways in which foods are produced, distributed, advertised, priced, packaged and sold; many of which have focused on fast food outlets such as McDonald's and which have emphasized what is perceived as the environmentally destructive nature of beef production (see Rifkin 1992). Environmental and humanitarian issues have also been part of campaigns—such as those against Nestle in relation to dried milk for babies in Africa, the exporting of bananas from the Third World, and those pointing to the potentially environmentally-damaging effects of GMOs in agriculture (Sassatelli 2004). A 'healthy lifestyle' discourse—which links personal health, with health of the planet, and with sustainable development—is evident that denounces productivism, over-consumption, as well as the practices of firms that are believed to manipulate food markets and hide the 'truth' about food production and food content from consumers (see Blythman 2005; Sassatelli 2004).

In many of the alternative approaches, there is an implicit or explicit critique of the separation of production and consumption. There is also an attempt to re-embed consumers in processes of food production, to have consumers understand the connections between what is eaten and environmental health, and to recognize that food production systems are social in character. More local and community-based decisions about food purchase and consumption are seen to empower consumers (see Blythman 2005; Sassatelli 2004) at the same time that they deliver better humanitarian, social and environmental outcomes. For Sassatelli (2004: 188) the main 'shift' that has happened in relation to foods in the last decade—something that has been at the heart of alternative consumption—has been the 'emphasis on the consumer as a political and moral actor'. Other authors discuss this shift in terms of the transformation of people from passive food consumers (with the right to make choices, as individuals, within 'the market') into active food citizens (with rights to contribute to public policy and debate (see Barling *et al.* 2002; Lang *et al.* 2001). The consumer, or food citizen, is increasingly 'active' and increasingly 'public', with people taking action in the belief that their choices can make a difference. That is, rather than food purchase being a private, self-interested, 'amoral' act, food choice is viewed as a public expression of acceptance/rejection of various systems of production and, thus, a moral decision that goes beyond price, convenience and other considerations (Sassatelli 2004). Perhaps, for some groups of consumers, it was always so. But what we have revealed in this book is that there is now a widely held and deep concern that the current system of food provision is outmoded, damaging, or, at least, in need of a major overhaul. If, as many writers have argued, there is an urgent need to move to a strategy for sustainable regional development (see summary in Gray and Lawrence 2001), what characteristics might such a system

possess? Schermer (2006: 235) argues for proliferation of a system of 'eco-regionalism' based upon the principles of:

- Closed cycles of production and consumption
- An economy built from local resources
- The use of clean technologies
- Quality, not quantity, as the overall aim of food production
- Short supply chains
- Renewable energy, and energy saving technologies
- Appropriate and fair living and working conditions for farmers and their employees
- Enterprises embracing long term sustainability not short term profit
- Preservation of heritage and the cultural landscape
- Strategies to enhance local biodiversity.

What might this mean, then, for organics? As we have stated throughout, organics competes with other so-called short food supply chains that make claims about quality premiums that arise from the reduction of the symbolic or physical distance between producer and consumer (Marsden 2003; Renting *et al.* 2003). Purchase from the farmer's gate, at farmers' markets, and via box schemes leads consumers to associate quality with such characteristics as place of origin, artisanal production and environmental protection. While oppositional to the high output, standardized, production systems of industrial agriculture, such production is not necessarily organic. As we have constantly acknowledged, organics is simply one more alternative available to consumers, an approach with its own particular notions of quality and claims to ecological integrity. If, however, organics were to look 'beyond' food production to ensure that it embraced, and was viewed by the consuming public as embracing, the broader principles of sustainable regional development outlined above, would this not provide the industry with a new legitimacy, and perhaps a new dynamic? After all, organic principles are—even if informally stated—very close to those listed by Schermer (2006) for eco-regional development. And it is eco-regional development that lies at the heart of future agricultural sustainability.

## Continuing Challenges

So far this chapter has discussed what we believe to be some of the key processes likely to impact on the future of organic food and agriculture. At the same time that organics faces competition for the green image it currently enjoys from other approaches to food production (particularly those within the Life Sciences paradigm), it also faces the challenge of dealing with competing approaches to food regulation controlled by powerful new coalitions of food retailers. But as significant as these processes are, they are not the only challenges facing the

sector. Drawing on a range of authors (see Chang *et al.* 2003; Lang and Heasman 2004: 178; Lockie and Halpin 2005; Lockie *et al.* 2006a; Sligh and Christman 2003; Willer and Yussefi 2002), we would summarize some of the remaining challenges as working towards sustainability; protecting and enhancing organic standards; growing the market for organic food; improving the livelihoods of organic farmers and other organic businesspeople; supply chain coordination; supporting diversity; and co-existing with conventional agriculture.

### *Working towards sustainability*

For those who are critical or sceptical of organics, the question will always be whether organic farmers can prove that their farms are more sustainable, and their produce more healthy to eat, than those of conventional farmers. However, trying to 'prove' sustainability is as dangerous as it is problematic, because all production systems need to adapt and change over time if they are to cope with changing circumstances (such as climate change, consumer preferences etc) and new information. By enhancing biodiversity and other aspects of ecological health, organic farmers should be better able to develop the ability of their farms to regenerate and adapt in the face of external stressors without recourse to synthetic 'fixes'. Nevertheless, the real question for the organic sector is not whether they are sustainable 'now' but how to ensure that the research capacity, information systems and inter-farm networks are in place to support constant improvement in organic production systems.

### *Protecting and enhancing standards*

Certification is crucial to the organics industry, allowing it to protect itself against false or unsubstantiated product claims, demonstrating to consumers that the various stages of production, processing, transportation, storage and sale are subject to inspection and meet the standards set by the accreditors, and providing a clear standard that producers (as well as processors and retailers) must meet if they are to enter the industry (Chang *et al.* 2003; Organic Produce Export Committee 2002; Michelsen 2001b). It is in no-one's long-term interests to relax standards. Organic foods must retain their integrity and authenticity if they are to maintain any economic value (Lockie *et al.* 2006a). But it is in the interests of the organic sector to review and adapt standards to better reflect the goals and values of the movement. Particular issues that warrant attention include:

- Evolving broadly-based (harmonized) international standards while allowing retention of regional variation.
- Perceived fraudulence in the claims of some organic producers and certifiers.
- Incorporating social criteria and building upon principles such as Fair Trade.
- Reducing the confusion experienced by consumers in the face of multiple certifiers and labels of organic status.

- Building on attempts to make certification more available and relevant to smallholder producers, particularly those in the developing world.
- Differentiating certified organic foods from other 'green' label foods in a meaningful and appealing way.

### *Growing the market*

Focusing on 'the market' is anathema to some organic sector participants and common sense to others. The key point here is that—if one accepts the premise that organic food is better for people and/or for the environment—one must also accept the desirability of more farmers growing it and more consumers eating it. From this perspective, deliberate maintenance of organic food as a niche market becomes a morally indefensible act. As such, it becomes apparent that the organic sector needs to confront what appears to be a slowing of demand growth in some of the major markets for certified organic foods while considering how to sustain or kickstart growth elsewhere. Several challenges that present themselves in doing so include:

- Improving the relative affordability of organic products.
- Developing supply chains for prepared organic foods, alongside that of fresh foods.
- Improving the visibility, availability and labelling of organic foods.
- Working simultaneously on supply and demand so as to avoid over- and under-production, both of which send the wrong economic signals to existing and would-be growers and consumers.

These points are considered in more detail in some of the additional challenges discussed below.

### *Improving livelihoods*

How will it be possible to improve the affordability of organics for consumers in a situation where premiums need to remain as an incentive for further organic production by farmers? To reduce premiums is likely to see many producers revert to conventional farming practices, eschewing organics because of the extra work it takes to generate products that fail to bring additional income. This is most clearly an issue for resource-poor smallholder farmers in developing countries who often have few alternative livelihood options. But it is also an issue in the West. In recent years, new entrants have slowed and at least 10 per cent of existing organic producers in the UK have abandoned organics as a response to the erosion of the premium (Scholten 2006). The Danish organic sector is also in recession as farmers revert to conventional production because of: contraction of the price premium; the expense of organic feed inputs in animal production

systems; changing regulations; frustration with the frequency of inspections; and, an increasing administrative burden associated with compliance (Kaltoft and Risgaard 2006). While we showed, in Chapter 5, that those most likely to leave organics were those who undertook certification for primarily financial reasons, it remains the case that organic producers must be able to sustain livelihoods reasonably comparable with their conventional peers if large numbers are going to convert. It also remains the case that farm-gate premiums are generally much lower than retail premiums, a situation that suggests scope to improve the affordability of organics for consumers at the same time that economic incentives for farmers are actually maintained or improved through increased supply chain efficiency.

### *Supply chain coordination*

Improving the visibility, availability and labelling of organic foods depends both on an expansion of production as well as on the organization of supply chains at a variety of scales to move organic foods from the field to the point of sale as clearly differentiated products (Lockie *et al.* 2006a). The issue of industry coordination is one that transverses many of the concerns raised above. If organic products are available infrequently, and when they appear are of variable quality, it is difficult to foster consumer 'brand' loyalty. Product consistency and consistency of supply continue to hamper industry growth. As Chang *et al.* (2003: 23) argue:

> On the one hand, the marketing sector ... will not support organic production without assured supply. On the other hand, there is too much risk for farmers to expand, or to convert to, organic production without the guarantee of market outlets for their outputs. Unless this paradox can be resolved, limited and inconsistent supply would remain the major barrier to further development of organic markets in Australia.

And doubtlessly elsewhere. One only need look at the sales of organic products to note the failure of the industry to coordinate its activities. A number of studies have found that around a third of Australia's current organic production is not sold as organic (Chang *et al.* 2003; Lockie and Halpin 2005; Wynen 2003). This may be because of the lack of a distinct certified organic market for some produce, because there is no price advantage in attempting to sell some produce as organic, and/or because there is no processing market available for cosmetically damaged produce.

### *Supporting diversity*

The organic sector has participated in considerable debate over the potential for conventionalization, should large farms and food companies come to dominate

the sector. We do not wish to dismiss this concern. However, there is an alternative argument that the relationship between large and small businesses in the organic sector does not have to be an antagonistic one (Lockie *et al.* 2006a). In relation to retail sales, for example, it is certainly the case that many of the people involved in direct sales, either as buyers or sellers, do so out of a belief that buying organic food at a chain store is inconsistent with the principles of organics. But it is also the case that many people who prefer to buy direct when possible still value the convenience and accessibility of major retail chains when it is not (Lockie 2002); that many consumers buying direct from farmers came to an awareness of organics through the appearance of organic foods in conventional retailers; and that many small to medium size farms engage in both direct and indirect sales in order to spread their marketing options and risk (Halpin 2004c). At the same time, a vibrant network of farmers' markets, CSA schemes, and farm-gate sales help to maintain the sense of authenticity around organic food that all retailers capitalize on. While it would be foolhardy to abandon scrutiny of corporate involvement in organics, it is likely that access to a diversity of organic supply chains will be fundamental to continued growth across the entire sector.

### *Co-existing with conventional agriculture*

A final challenge is that of the growing tensions between organic and conventional growers in particular geographic regions over such things as landscape management (including weed control, the use of shelterbelts and, in places where they exist, hedgerows) (Perkins 2006). Tensions arise also in regard to what some opponents consider the aesthetically-questionable 'messy' look of organic farms, the desire for enhanced biodiversity protection on the part of organic producers, the continuing escape of herbicides and pesticides—from conventional farming systems—into a landscape shared with organic producers, and, of course, the use of GMOs in conventional farming systems (Perkins 2006). Here, we are witnessing the 'clash' of practices, discourses and idealized futures, as industrialized production landscapes come into contact both with alternative forms of production and with so-called 'post-productivist' land uses such as tourism, recreation, housing, and so on (Halfacree 2006; Lockie *et al.* 2006b).

## Conclusion

International demand for organic products is increasing and is foreseen to expand—even if at a slower rate—for decades to come. While there are many other production options available to farmers who wish to improve their environmental performance, organic food and agriculture have come to signify a loosely defined bundle of desirable attributes related to quality, safety, ecology, tradition and provenance that the media and consumers alike appear to find considerably more straightforward, recognizable and trustworthy than the

complicated systems of quality assurance administered by regulatory agencies and conventional industry groups. However, at the same time that transparent regulatory systems to oversee the development of standards and inspection systems for organic production, processing and labelling have underwritten the expansion of the organic market, new regulatory systems imposed by others represent a significant new challenge.

The supermarket sector, Australia and worldwide, is initiating private standards that enable them to compete on quality rather than price (Bain *et al.* 2005; Reardon *et al.* 2001). And, while it is not unreasonable to consider that the growth in private standards will benefit those in the organics industry, it has been recognized that private standards that come close to, but do not necessarily emulate, organics might be viewed by consumers as a sufficient guarantee of quality. Even if they are not, the requirement that organic producers comply with supermarket imposed standards—on top of organic standards—may act as a significant barrier to market access. It will be intriguing, in this regard, to see the impacts of EurepGAP on the domestic organic industries of those countries in which major supermarket chains have joined the EurepGAP consortium, relative to the impacts on organic farmers in exporting countries such as New Zealand and Australia. Indeed, it will be just as interesting to see the impacts of EurepGAP compliance on the structure of the conventional agricultural production sector!

As we have sought to demonstrate in this chapter, organics is well positioned to build its claims in relation to sustainability and healthy eating. The extent to which this occurs will be determined by many factors including: the capacity of the industry to integrate its ideals and practices in a manner that convinces consumers of its beneficial qualities; the way supermarkets deal with organics; government policies as they relate to support for the industry; and, a changing consumer ethos that associates sustainable food production with environmental and consumer health. For the industry, we have argued, some of the main issues that require attention include: setting in place the research, information systems and inter-farm networks that will enable constant progress towards social, environmental and economic sustainability; strengthening and adapting organic standards and certification procedures to meet the divergent and changing needs to the industry without compromizing authenticity; expanding the market for organic food for the benefit of both consumers and producers; improving the livelihoods of organic farmers and other organic businesspeople such that they are commensurate with, or better than, the livelihoods of conventional farmers involved in similar production sectors; improving coordination of the supply chain to avoid situations of short-term under- and over-demand, and the price fluctuations that result from them; supporting a diverse range of production and marketing options; and, co-existing with conventional agriculture and other non-organic land uses.

# 9

# Conclusion

The demand for foods that are seen as natural—those containing a minimal amount of, or preferably no, artificial chemicals—is viewed as one of the key drivers in the growth in sales of organic products worldwide. This demand reflects the personal health driver often identified as responsible for rapid expansion of the organic market, but it also reflects concerns about family health, the environment, animal welfare, tradition and food traceability. It is associated with the perceived desirability of community building and keeping a small farming sector in place. According to Renting *et al.* (2003: 395) such concerns result:

> in the emergence of a potential market for food products that are distinguished in credible ways on one or more of the contested quality aspects of food. Most of all, however, changing consumer perceptions have been fed by a growing distrust in the quality of food stemming from conventional agriculture.

This is certainly the picture of organic foods found in the mass media, for while a variety of products claim, in some way or other, to be safe, environmentally friendly, sensitive to the needs of animals, and so on, organics has captured a unique place in public discourse as a concept that neatly sums up and resolves a complex variety of problems, processes, debates and ideas. Organic food and agriculture may not always be well understood, but they are media-friendly and instantly recognizable. Organic foods are seen as newsworthy, fashionable, safe, nutritious, tasty, natural, untainted, traditional, and the solution to a host of social and environmental issues. Of course, to their critics, organic foods are unproven, over-hyped and potentially dangerous, but these criticisms have gained little traction in the battle to define safe and sustainable foods. For dedicated organic consumers, the desirability of not treating food with poisons and genetic modification techniques is self-evident. For many others, the claim that foods produced without agri-chemicals, GMOs, irradiation and/or other

'modern' production and preservation methods carry their own health and safety risks is implausible. Thus, while there may be many ways to increase the sustainability of agriculture and the safety and nutritional value of foods, these alternatives are largely invisible outside the networks of professional agriculturalists.

As discussed at the beginning of this book, the central problematic we have attempted to explore is that of mobilization. How can the organic industry encourage greater consumer interest? How can it foster trust? Are there ways of making organic foods more 'convenient' for purchase? And, finally, how can the industry grow? Before discussing these questions directly, this chapter will summarize some of the popular beliefs about who is involved in organic food networks, and why, that have been discussed throughout this book, and which we have found *not* to be the case.

## Popular Misconceptions About Organic Food and Agriculture

There are good reasons to expect the organic sector to attract a certain number of mistaken beliefs. Organics has grown rapidly while other food industries have been stagnant. It has been critical of other food industries and campaigned actively against some of the steps they have taken (such as genetic engineering) to promote economic growth. And it has attracted a media and public profile that is completely at odds with the dearth of advertising and other coordinated marketing strategies associated with the conventional food sector. Some misconceptions about organics arise simply from peoples' attempts to make sense of a rapidly growing social phenomenon which looks something like an industry and something like an ideologically driven social movement. Others arise from the deliberate attempts of opponents to undermine the positive public image that organic food enjoys as a signifier of health, wholesomeness, safety, tradition, care and environmental protection. Our purpose here is not to debate each and every claim about organic food and agriculture that we believe to be questionable but, rather, to concentrate on those that relate specifically to the issue of mobilization; that is, to why people are involved in the production, consumption—and everything in-between—of certified organic foods.

### *Misconception 1. Organic consumers are either rich health nuts or environment-obsessed hippies*

Of all the unsubstantiated beliefs about organics, by far the most popular is the common-sense notion that since organic foods are generally more expensive to purchase than conventional foods it is obviously only the wealthy who can really afford to buy them. While a few deep green environmental activists, it is believed, may be prepared to make a significant financial sacrifice in order to eat certified

organic foods, by far the majority of consumers are not. Contrary to this belief, large numbers of consumers in the West eat at least some organic foods while those most committed to an 'organic lifestyle' tend to be women and those responsible for feeding others. Wealth and ideological orientation are not, in fact, very good predictors of how much organic food people are likely to consume. This is not to say that the pricing of organic foods is not a barrier to their consumption. However, the only demographic group in the West that seems to have little, or no, interest in organic foods and other forms of green consumption is the very poor; the underclass of the unemployed, underemployed and underpaid who struggle for economic survival (Hartman and Wright 1999). Not only do these groups of people have limited access to organic food, they often struggle to obtain regular access to any food at all (Riches 1997). Once this group is taken out of consideration, the only consistently meaningful demographic difference between those who do and don't buy certified organic foods is gender.

Dedicated organic consumers do not necessarily discount the importance of retail prices; many look to enhance the 'value-for-money' of organic foods by minimizing waste, joining consumer cooperatives or community supported agriculture schemes, and so on. Further, the non-monetary values that underpin organic food production are widely accepted among food consumers. Even if they fail to act on them, the vast majority of people accept that foods should be healthy, safe, and produced in such a manner that animal welfare, workers rights, and the environment have been protected. Nevertheless, this misconception has the potential to develop into a self-fulfilling prophecy. In other words, the more farmers, processors and retailers of organic food structure their production, distribution, marketing and sales around supplying wealthier neighbourhoods and individuals (whether through the location of retail outlets, product range or pricing strategies), the more these neighbourhoods and individuals will come to dominate the profile of the 'typical' organic consumer, while the majority of people continue to find organic foods too expensive and too inaccessible to become major items of consumption.

### *Misconception 2. They're all in it for the money*

The next most popular misconception is the belief that since the organic market has experienced strong growth over the last decade and organic foods cost more to purchase, the majority of farmers and other businesses involved in the industry are most likely in it for the money. Some critics even assert that organic farmers and processors turn their backs on practices that protect the environment and consumer safety in order to propagate irrational fear about agricultural chemicals and biotechnologies and, in doing so, boost their own profitability.

Look hard enough in any industry and you'll find people who seem to be in it for 'all the wrong reasons'. For some organic advocates, the motivations of organic farmers, processors, distributors, and retailers are insignificant. What matters is that the principles of organic farming are being applied and consumers

are getting access to safe and nutritious foods. For other organic advocates, motivations are all important. They believe that unless participants in the sector understand and endorse the principles of organics they are likely to undermine everything it stands for. We do not doubt that there are a number of farmers and companies who indeed have jumped on the organic bandwagon in search of profits (and some who have jumped right back off again when better profit-making opportunities presented themselves elsewhere). However, the evidence suggests that in the majority of production regions and markets for certified organic foods the profit making opportunities are not all that different from those in conventional food and agriculture.

On the farm, lower cost structures, farm-gate price premiums and (in some places) conversion subsidies appear to help farmers to offset the costs of conversion and often slightly lower levels of productivity. These generally modest economic incentives also help maintain the viability of organic farmers working at smaller economies of scale (particularly in developing countries) and for organic farmers, more generally, to maintain lifestyles that are at least commensurate with those of their conventional farming peers. Just as importantly, organic farming offers farmers of all sizes opportunities to reduce their exposure to financial risks associated with the cost of synthetic inputs.

Off the farm, it appears that much of the investment in certified organic product lines and labels by food processors and retailers is inspired by the activism of internal 'champions' whose belief in the principles and/or potential of organics motivates them to maintain support for this investment even when it is less profitable than conventional food sales. There is no doubt that many companies have seen these investments as opportunities to enhance their corporate images and, thereby, all food sales. However, as the comparative lack of interest in organics among mainstream Australian supermarkets shows, there is more than one way to maintain public confidence in the quality and safety of food. Organics is not the only option food companies have to protect their corporate image. Further, taking the organic option more seriously can come at considerable cost. In contrast with the Australian counterparts, British supermarkets have been reported to sell organic food at a loss, appoint senior managers to handle the organic side of their business, develop their own processed organic products, and sponsor farm conversions. It is telling that all these activities address directly the two major reasons cited by Australian supermarkets for their relative lack of interest in organics; excessive costs and inadequate supply.

Both on and off the farm, it seems that those who have signed up for organic certification in the belief that it would make a dramatic positive difference to their profitability have also been those most likely to fall by the wayside. For most, making money out of organics requires a long-term commitment and a realistic assessment of the profit potential.

### *Misconception 3. Organic farms are too unproductive to be profitable without premiums and subsidies. Without them, there would be very few organic farmers*

This misconception represents a less cynical development of Misconception 2. It suggests that even though the majority of certified organic farmers may not be in the industry simply to exploit price premiums, the commercial reality is that without those premiums they could not afford to farm organically. The declines in productivity are simply too great. Public assistance to the organic sector is often based on this type of argument. The continuation of assistance—particularly in the European context of ongoing CAP reforms—is, in part, related to sustaining the idea that the market alone will not ensure the growth and stabilization of the organic sector. Ironically, opposition to organics is also often based on the same kind of argument. According to this logic, growth in the number of organic farms will lead to declines in global food production that will leave agriculture unable to meet the food requirements of a burgeoning global population.

In general terms, organic farms are moderately less productive than conventional farms operating similar enterprises in similar production environments. Also, in general terms, the less intensive the farming operations characterizing particular production environments, the smaller the productivity gap between conventional and organic farms tends to be. But among intensive and extensive farming operations alike, there are numerous examples of certified organic farms that buck the trend and match or exceed the productivity of even the best-run conventional farms. This is particularly the case in developing countries where issues of food security are most acute, and where improvements to farm management associated with the switch to certified organic production can lead—especially among resource-poor farmers—to substantial productivity gains. Low productivity and food shortages are a long way from the inevitable consequences of the decision to farm organically.

There is no doubt that positive economic incentives have made a big difference to the willingness of farmers either to convert existing farms to organic production or to start up new organic farms. Consequently, it is not unreasonable to speculate that should the supply of organic food and fibres start to outstrip demand these incentives will very likely decline and farmers will begin to reconsider the value of their organic certification, particularly where they are operating at lower levels of productivity than neighbouring conventional farms. There is some evidence to support this. The relinquishment of organic certification reported in Denmark and the UK once access to conversion subsidies was lost certainly appeared dramatic (see Chapters 5 and 8). Some 14 per cent and 10 per cent respectively of certified organic farmers relinquished their certification in one year due to a failure either to secure distinctly organic markets or price premiums, to solve production problems in a cost-effective manner, or establish a viable business. However, many more farmers did not relinquish their certification and organic farm numbers continue to grow in countries like

Australia where there have never been widely available subsidies to support the financially difficult process of conversion. Further, farm-gate price premiums tend to be nowhere near as high as those premiums paid by consumers to retailers. Thus, for the vast majority of certified organic farmers, economic incentives are modest and, as Misconception 2 pointed out, it is those farmers who moved into organics for primarily financial reasons who have consequently proven those most likely to leave.

### *Misconception 4. There is no future for small organic farms*

Experience in conventional agriculture tells us that the competitive nature of the market for primary produce means that farmers must constantly increase their productivity and economies of scale if they are to remain viable. Will the same scenario extend to organic farming systems? For some, the emergence of very large organic farms over the last decade suggest it will. There are at least three problems with this argument. The first is that it takes no account of the ways in which markets and supply chains are organized and the opportunities that have very clearly emerged to organize these in a fundamentally different way. Certainly, the fear that the mainstream supermarkets and other large retailers that now dominate the organic retail market in some countries will look to source their produce from a relatively small number of large suppliers able to guarantee quantity, quality and continuity of supply is not irrational. However, at the same time that the relative market share of large retailers in the organic sector has been increasing, so too has the absolute market share of alternative retail options and supply chains. While it will not necessarily be easy or possible for all existing small farms to participate in a community supported agriculture scheme, farmers' market, or similar supply chain arrangement—due to location or the types of commodities that the farm produces—many will. Others will participate in grower alliances that enable them to coordinate their production and marketing in ways that replicate the advantages, for distributors, processors and retailers, of dealing with larger farmers. This is already happening to a considerable extent in the majority world, where cooperatives of thousands of farmers are working together to harness a powerful voice in the international marketplace. The challenge for small organic farms will be one of how best to look 'beyond the farm-gate' to develop beneficial relationships with other farmers, processors, consumers and, even, retailers.

The second problem with the argument that farmers must necessarily increase their productivity and economies of scale is its assumption that, in all circumstances, larger farms are more competitive than smaller farms. This assumption fails to take account either of technology barriers facing all farming operations or of the values and needs of organic consumers. In other words, there are likely to be situations in which small farms are more, not less, efficient and competitive than their larger counterparts. This may be because they are better able to cope with the threat to production posed by particular pests, diseases, and

so on. It may be because they are able to deal more effectively with the peaks and troughs in labour demand associated with particular enterprises. Or they may be better able to target particular market niches.

The third problem with the economy of scale argument is its failure to take account of government policies and programs that actively discriminate in favour of small farms. In Europe, this has been undertaken through application of the concept of multifunctionality and the view that farms produce a range of public goods—such as environmental care, heritage preservation and rural development—for which they should be compensated. To the extent that organic farming systems, short supply chains and small scale value-added processing are seen to contribute more to these goals than do conventional systems, the more likelihood that assistance to overcome issues of scale will be continued.

### *Misconception 5. There is no future for small organic processors and retailers*

In most countries, the entry of mainstream retailers into organic product development and sales has led to significant expansion of the total organic market. At the same time, other businesses have largely maintained their absolute organic sales even though their relative market share has fallen. The most important exception to this pattern is found in the US where small grocery and health food stores that stock only a limited range of organic products have lost significant sales to large chains of 'natural foods' stores that operate on a similar scale to mainstream supermarkets. The largest of these chains, Whole Foods Market, has taken steps to enter the British market while the Whole Foods model has been emulated by Australian entrepreneurs looking to mimic their US success. We would argue that while this development constitutes a clear threat to small businesses that may suddenly find themselves competing with a natural foods 'mega-store' stocking own-brand organic products just round the corner, it will not mean the death of small processors and retail channels altogether.

Misconception 4 highlighted the importance of market and supply chain organization to organic farmers. This is just as important, of course, to other organic businesses. As we suggested in the last chapter, the relationship between mainstream and alternative retail channels does not have to be an altogether antagonistic one. The first offers organic consumers accessibility and convenience. The second offers opportunities for community building, direct interaction with food producers, and a greater sense of authenticity. All of these characteristics, we would suggest, are necessary if organics is to continue its pattern of growth.

The reality facing consumers when making food purchases is one of conflicting imperatives. Just as we have shown that those people who are most committed to the consumption of organic foods are those who take the responsibility in their households for feeding others, we have also shown that these are the same people for whom the need for convenience is most important.

Simply put, the most dedicated organic consumers are already run off their feet looking after the other members of their families. No matter how much they would prefer to shop at small retailers and direct farm-consumer outlets, there are times when they feel they need to just go to the supermarket. And, if this is one of the new breed of natural foods supermarkets, then so much the better. Among less committed organic consumers it is likely that unless certified organic foods are available through mainstream retailers they will not be consumed at all. This, however, increases the exposure of organic foods and may lead to interest both in increasing organic consumption and in accessing alternative retail channels.

### *Misconception 6. Organic farms, eventually, will look like any other farm*

The other thing that experience in conventional agriculture tells us is that in order to achieve the economies of scale necessary to stay competitive farmers must specialize in a limited number of crops. Even if direct marketing techniques allow a certain number of small organic farmers to survive by 'cutting out the middleman' and pocketing the higher retail price premium, the vast bulk of organic food is now sold through large processors and retailers who would still prefer to deal with a small number of large growers. To fit these requirements, it is believed, organic growers will need to expand and specialize in just the same way that conventional farms have. As the conventionalization thesis suggests, this creates pressure to abandon management practices that enhance diversity and instead rely on the substitution of synthetic fertilizers and pesticides with naturally derived alternatives and farm in what is, to all intents and purposes, the same way as conventional farmers.

Specialization and input substitution, however, run counter to the principles of organic certification and the intent that farmers will rely on management practices that increase the diversity of crops and other ecosystem elements rather than limit them. Diversity on organic farms serves two main purposes. First, businesses that sell a diverse range of products are less exposed to the 'boom and bust' cycle of most commodity markets. This results in a more even cash flow and increases opportunities to accommodate the needs of relatively local markets. Second, biodiverse ecosystems tend to be more resilient in the face of climatic and pest pressures. When, as inevitably happens, farmers are confronted by an unusually dry season, or an outbreak of plant-eating insects, or other problems, the chances are better on a biodiverse farm that crops adapted to different weather conditions are already in the ground, that predator insects are present in sufficient numbers to help control pest insects, and that the naturally healthy condition of soils, plants and animals has boosted natural resistance to disease and stress.

We have already argued in relation to Misconceptions 4 and 5 that none of the changes that can be observed in conventional food and agriculture are inevitable in either the organic or conventional sectors, but reflect the particular ways in which supply chains are organized to move food and fibre from farms to tables. The other issue here is that of what motivates organic farmers to farm in the first

place? Among Australian organic farmers it was found that chemical safety, food quality, environmental health, and animal health were all rated as significantly more important motivations for farming than were the maintenance of profits and productivity. It was also found that almost all organic farms intended to expand their production over the next few years; a move that will change our notion of what a 'small' organic farm is rather than lead necessarily to specialization or substitutionism. While pressures to increase economies of scale or to specialize in particular crops may be something that lies outside the control of many farmers, the response to such pressures is not.

### *Misconception 7. The organic 'movement', and its principles, have been marginalized by the organic 'industry'*

This misconception relates to the belief that, in the early days of organics, organic 'movement' participants were motivated by a common set of values that guided their desire to challenge the view that the key to agricultural productivity lay in the scientific application of synthetic inputs. As there were few distinct markets for organic foods, there were also few economic incentives to follow the organic path. All that changed, however, following the rash of food scares in the 1990s and the emergence of strong consumer demand and significant price premiums, resulting in rapid organic 'industry' growth. This growth was based less, according to this misconception, on a critique of conventional agriculture and more on commercial opportunities to exploit consumer demand.

The most obvious shortcoming in these propositions is the notion that there actually were enough organic farmers and advocates prior to industry expansion in the 1990s to constitute a social movement. While there is considerable scholarly debate over what exactly a social movement is, there is agreement that most movements are relatively informal networks based on shared beliefs and values that mobilize around contentious social issues and engage in a variety of forms of protest (Della Porta and Diani 1999). It certainly is the case that, in the early days, organics was based less on certified compliance with formal standards and more on interpersonal networks between farmers and scientists who thought the key to agricultural productivity lay in the biological health of the soil. It is also the case that early organic farmers and scientists sought to challenge the growing agri-industrial orthodoxy not only by farming differently, but through the establishment of demonstration farms and trials to prove the superiority of organic practices. Even if early organic activists weren't protesting in the streets, these are very movement-like characteristics. But again, how many people were involved? The UK Soil Association had 60 members when it was established in 1945. While we can only speculate as to how many organic 'sympathizers' did not join the Soil Association, as the only representative group available at the time for organic proponents to join it is unlikely that they numbered in their thousands. So at what point did this grow into a social movement? We will come back to this question.

Nominating a date for the formation of the 'organic industry' is more straightforward as it was in the 1970s that groups like the Soil Association began developing standards that turned the philosophical idea of organic food into a commodity that certified growers and others could label and sell. Since then, certification has become increasingly complex and more and more governments around the world have become involved. These are certainly not movement-like characteristics. However, the idealized picture of small-scale organic farms selling direct to consumers on the basis of interpersonal knowledge and trust that some commentators argue characterized the 'organic movement' ignores the likelihood that the vast bulk of organic produce has never been sold via face-to-face interaction between farmers and consumers and that prior to the development of a market for 'certified organic' food there were often few options available to organic farmers other than to sell on the conventional market. Perhaps more importantly, recent years have seen standards-setting groups like the Soil Association and IFOAM: first, become considerably more active in political campaigning over issues such as genetically modified organisms (Reed 2001); second, forge closer and more cooperative relationships with groups representative of the environment and social justice movements; and third, devolve the auditing of compliance with standards to independent third-party organizations. This latter move has both increased transparency and allowed organic standards-setting groups to focus on campaigning and promoting organic values.

We would suggest that the question of whether the 'organic industry' has killed the 'organic movement' rests on a flawed assumption that organics must be one or the other. Contrary to this, the evidence suggests to us that the expansion of the organic industry has provided the platform on which the transformation of organics from a small group of activists into a bona fide social movement has rested. This is not to say that there have not been compromises or challenges, or that more will not emerge. The controversy over the USDA's National Organic Program is ample evidence of that. However, we have been able to find no significant ideological differences between those farmers who have spent years farming organically and those who have undertaken certification more recently (nor between smaller and larger organic farms). With less than 500 certified organic farmers in the whole of Australia a little more than a decade ago, the certification of these newer growers has been fundamental to the rising visibility of organics, the promotion of consumer demand, and the ability of organic groups to campaign against GMOs and other developments that threaten the interests of organic growers. This story is repeated in other countries and at other links in the organic supply chain. As Misconception 2 pointed out, the profits to be made out of organics are generally not as dramatic as commonly believed and those who enter into organic production or sales in the expectation of large profits tend to be those that leave. Even the largest corporate participants in the organic market often rely on internal champions with a commitment to the values of organics, and a long-term perspective, to convince them that organics is worth the effort.

The dual identity of organics as both an industry and a social movement is recognized by key actors and organizations. Looking, again, at the Soil Association, we find a member-based organization operating as:

> a campaign group, as a certification body, as a research organization and as a consumer information service .... Currently the [Soil Association] has around 20,000 members ... and is involved in food qualification at all stages of the food chain—production, processing, retail and consumption. In short, the [Soil Association] is a key regulator of organic quality in the UK (Murdoch and Miele 2004: 165, 164).

Clearly, the Soil Association envisages for itself an influence over the future course of organics in Britain that includes, but extends beyond, expansion of the organic market to include a strong social and environmental agenda.

### *Misconception 8. Organic food will never be more than a niche market*

In the popular imagination, the spur to increased demand for organic foods in the 1990s was the spate of food scares and resulting crisis of confidence in conventional foods and the institutions that regulate them. It follows from this that should the conventional food sector reform its production practices and regulatory institutions and processes, it should be able to stem the tide of organic food sales and perhaps even regain lost market share. At the same time, high retail price premiums will continue to discourage the majority of consumers from buying significant quantities of organic food. After all, should these premiums decline, the economic incentive to grow and/or sell organic foods will disappear and the major processors and retailers will, most likely, rationalize their cost structure by abandoning organic product lines. As the next misconception will show, it is entirely possible that certified organic foods sales will retain a relatively small share of the total food market. If this transpires, however, it will not simply be because food scares have disappeared from the evening news or because retail prices have declined.

The prevalence of food scares in the UK through the 1990s means that any change in any food industry will appear to be correlated with a crisis of faith in British food and regulators. While it would be foolhardy to suggest that food scares did not play a role in stimulating demand for organic food, it would be just as foolhardy to ignore the role played by major retailers in developing robust organic supply chains, or the general dissatisfaction many people feel with industrially-produced foods and their desire for a 'real' alternative. After all, other countries such as Australia and the US experienced very few food scares over the same period but still recorded dramatic growth in organic food sales. The perceived attributes of organic foods may be ill-defined in the minds of many consumers, but they are almost wholly positive and appealing. Quality Assurance schemes based on the Hazard Analysis Critical Control Point methodology may

be effective (or not), but they will never be 'good to think' in quite the same way as organics.

In relation to retail price premiums it is important to recognize that, according to retailers, such premiums are more a reflection of supply chain inefficiencies than of bloated profit margins. While there is evidence that this is not always true, it remains the case that there is considerable scope to reduce retail premiums without necessarily making it so unprofitable to stock organic foods that mainstream retailers withdraw from the organic market. With the majority of studies indicating that retail premiums are still substantially higher than what the majority of consumers is willing to pay, it appears that significant reductions in retail premiums are likely to have a major, demand-boosting, effect. Demand may also be affected by currently unforeseen events such as further food scares, changing economic circumstances, and so on.

### *Misconception 9. Exponential growth in the market for organic food will continue forever*

It simply cannot be assumed that just because growth rates of 20–40 per cent in the market for organic food have been reported for so long now that they will continue until organics has a major share of the total food market. Signs are already emerging that demand in some of the most developed markets (such as Switzerland, Denmark, Austria and Sweden, see Willer and Richter 2004) for certified organic food is starting to plateau, leading some commentators to describe these markets as 'mature'. The implication is that this is the level of market penetration that can be expected for the foreseeable future.

As was suggested in relation to Misconception 8, a variety of factors may intervene to shift demand for certified organic foods, even in these more developed markets. While reductions in retail premiums would be likely to stimulate demand, food scares involving organic foods would, most likely, have the opposite effect. But demand is a more complex phenomenon than a factor of price and fear. Even if retail premiums are reduced—increasing the number of consumers likely to at least consider more regular purchase of organic foods—other supply side issues need to be considered such as quality and availability. In Australia, for example, organic foods have largely failed to secure a sound distribution, processing and retail base because producers have not been able to supply produce of sufficient consistency in quantity and quality. One of the results has been, ironically, that a third of the certified organic food grown in Australia is still sold as conventional due to a lack of marketing options. While the Australian market has continued to expand in recent years—and a significant number of producers will enter into organic certification over the next few years—it is obvious that continued expansion will depend on sorting out these supply issues and paying more attention to the coordination of supply chains.

## Mobilization: Strategies for Growth

The values that underpin the principles of organic food and agriculture are no longer radical. Biologically healthy soil, environmental protection, safe and nutritious foods, animal welfare, farm viability, and so on, are all widely accepted as desirable features of the food system. Few people—whether consumers, farmers, retailers, processors, distributors or regulators—will admit that these are not important. At issue are the particular ways in which these values are prioritized and beliefs about how best they might be pursued. Among consumers, for example, we find more similarities than differences in the motivations, beliefs and attitudes towards food of organic and non-organic purchasers. We do find that organic consumers have slightly stronger views on issues like animal welfare and the sensory experience of eating—while committed organic consumers prioritize foods they believe 'natural'—but, importantly, the average non-organic consumer also identifies these issues as important and believes organic foods to be of high quality. We will explore below how to increase the likelihood that more members of this group will purchase organic foods. Among farmers, by contrast, there are more marked differences to be found in the motivations, beliefs and attitudes they express towards food and farming. Although most Australian farmers agree that animal welfare, environmental protection, food quality and chemical safety are important, conventional farmers find them no more important than the economic viability of their farms. Certified organic farmers think them substantially more important. Again, the viewpoints are mainstream, but the relative prioritization is very different. Conventional and organic farmers also disagree on issues such as the dangers of industrialized production practices and the quality of organic foods. While many conventional farmers think that reductions in chemical use are desirable, they do not see organic practices as a viable way to do this.

For those who believe that organic farming principles provide part of the answer to the question of how to improve the food system it is hard to argue against the need to support strategies that assist more farmers to farm organically and more consumers to eat their produce. In the previous chapter, we identified this as one of the major challenges facing the organic sector if it is to continue building its impact on the sustainability and healthfulness of food and agriculture. Other challenges that were also identified, in support of this, included:

- Accepting that organic production systems will always need to adapt and change in the pursuit of sustainability, and developing the research, information systems and inter-farm networks necessary to support this change;
- Strengthening and adapting organic standards and certification procedures to maintain the principles of organic agriculture while increasing their relevance

to the increasing variety of production and social environments in which organic agriculture is pursued;
- Continuing to improve the livelihoods of organic farmers and other organic businesspeople such that they are commensurate with, or better than, the livelihoods of conventional farmers involved in similar production sectors;
- Improving coordination of the supply chain in order to avoid the situations of short-term under- and over-supply and the negative impacts these have on both demand and price stability;
- Catering for the diverse, and often competing, needs of consumers by supporting a diverse range of production and marketing options; and
- Finding ways to co-exist with conventional agriculture and other non-organic land uses.

We will not discuss all of these points in detail in this chapter as we have already done so in Chapter 8. Instead, we will look at how mobilization might be encouraged by addressing those issues that are raised most frequently as barriers to increased participation in organic food networks.

Among those farmers who are genuinely interested in organic farming practices, the major barriers to conversion lie in the complexity of organic farming practices and the general lack of information and institutional support available relative to conventional agriculture. This makes converting a farm to organic production—or starting up a new organic enterprise—a seemingly risky proposition. The fact that organic farm numbers have mushroomed over the last decade seems to provide a clear indication that if there is market demand for certified organic foods, there are plenty of farmers willing to meet that demand. The widening availability of farm-gate price premiums along with, in some places, conversion subsidies and other forms of assistance would seem to bear this out.

For those market intermediaries who stand between farmers and consumers, inadequate quantity and quality of supply have been identified as the major barriers to increased involvement in the processing, distribution and retailing of certified organic foods. Although this sector attracts considerable scepticism regarding the motivations of very large corporations taking steps into certified organic markets, it is a sector with considerable capacity to extend the mainstreaming of organic foods should they perceive this to be the best way to accommodate consumer needs and preferences.

Virtually all consumers—whether regular organic purchasers or not—want to ensure that the foods they consume are nutritious, healthy and safe, and consumer surveys from around the world consistently demonstrate that the majority of Western consumers believe organic foods offer these attributes. While very low incomes are associated with a lack of interest, the bulk of consumers indicate that they are willing to pay a premium for certified organic products. If such claims are translated into concrete expressions of demand (for example, regular purchasing decisions) there is little doubt that more producers and intermediaries

will be encouraged to either move into organics or expand their existing organic operations. However, consumer surveys also indicate consistently that the major barriers to the increased consumption of certified organic foods are their price and availability. The perceived credibility of organic product claims, poor appearance, low awareness and understanding of organic foods, and satisfaction with existing products are also significant, if somewhat less important, barriers (see Beharrell and MacFie 1991; Davies *et al.* 1995; Klonsky and Tourte 1998; Latacz-Lohmann and Foster 1997; Lockie *et al.* 2002; Makatouni 2001; Magnusson *et al.* 2001; Pearson 2001, 2002). We will consider each of these barriers below.

### *Strategy 1. Retail pricing*

Some people will argue that the price of organic food should not be reduced. They will insist that the price of food, in general, is too low and does not reflect the full environmental cost of food production and distribution. The problem with this argument is that—as we have pointed out several times—most of the premium consumers pay for organic food is absorbed by market intermediaries; it does not return to the farm to help pay for the implementation of environmentally-sustainable practices.

Reducing, or eliminating altogether, the premium paid for certified organic products over otherwise similar conventional products is perhaps the most obvious way to stimulate consumer demand since, in most countries, retail price premiums remain considerably higher than what most consumers say they are willing to pay. At the same time, however, reducing premiums has the potential to create disincentives for others involved in the organic supply chain. Farm-gate premiums play important roles in encouraging farmers to commence the financially difficult period of conversion and in helping them to maintain their livelihoods, while retail premiums encourage retailers and others to persist with the smaller (and, therefore, less efficient) economies of scale characterizing most organic supply chains. So, are we left with a Catch-22 in which seeking to appeal to consumers by dropping prices will lead either to a drying up of supply or to the conventionalization of organic production? Or, conversely, might it be that seeking to support organic farmers and other businesses through reasonable price margins leads to a levelling of demand?

The answer to these questions is 'not necessarily'. The relationships between supply, demand and pricing at various points in the supply chain are rather more complex than implied in the expression of this Catch-22. We have already seen in Australia, for example, a situation in which demand for organic foods appears to exceed supply—as evidenced by average retail premiums in the order of 80 per cent—at the same time that a substantial portion of certified organic production is being sold as conventional due to a lack of markets and/or premiums. A simplistic understanding of the so-called 'laws of supply and demand' would suggest that this situation is desirable. That is, it sends appropriate economic signals to producers about what to produce and when to sell it, with the market being left to

sort itself out and set appropriate prices. The problem with this strategy, however, is that the situation we have described acts both to discourage the production and sale of organic foods (through market instability) and to depress demand for those foods (through reduced accessibility and affordability). A more constructive, and demand-stimulating, strategy is to consider ways to improve the coordination and efficiency of organic supply chains. We will consider this in more detail below.

A final issue related to the retail pricing of organic foods concerns the relative pricing of different kinds of organic product. Some research has suggested that absolute price premium paid on each organic item may be more important to consumers than the percentage increase (Donaghy *et al.* 2003). In other words, the majority of consumers may be willing to pay a proportionally higher premium for less expensive goods on the assumption that this will make little difference to their overall food bill. This suggests, in turn, that the priority for retail price reduction should be the more expensive value-added items. Improving the quality and supply of less expensive items may provide better short- to medium-term results than price reductions alone.

### *Strategy 2. Supply chain coordination*

Broadly speaking, there are two ways in which supply chain coordination may contribute to a reduction in retail prices for organic foods. The first is through economies of scale that reduce processing and handling costs. The second is through the shortening of supply chains to reduce transport and the number of intermediate steps between producers and consumers. Thus, we find that countries with comparatively more mainstream retailer involvement in the organic sector are also those that tend to have lower retail premiums—due to the economies of scale large retailers bring to the supply chain—and consequently higher per capita levels of organic food consumption. And we find that much of the success of direct farm-to-consumer marketing strategies such as community supported agriculture and farmers' markets is attributable to supply chain arrangements that bring producers and consumers together in an efficient and coordinated manner. These direct sales strategies do not abandon the promises of convenience, product diversity and value-for-money on which mainstream retailers trade—they simply align them more overtly with values such as community building and the reduction of food miles. Unfettered market forces can only do so much to expand the organic market. After that, it is the responsibility of those who would like to see that market grow to get themselves organized.

### *Strategy 3. Positioning and availability of organic foods*

The first step in increasing the availability of certified organic foods is very obviously to increase their production. But, as Strategies 1 and 2 suggested, this is

not enough. For the sake of our discussion here it is worth identifying three broad groups of potential organic food consumer:

- *Committed organic consumers*—this group places considerable value on the perceived naturalness of their food. They are more likely to be women than men, and more likely than not to take major responsibility for food shopping and preparation within their household. Committed organic consumers do not need to be convinced of the merits of organic foods and will adapt their shopping behaviour in order to buy them. They will challenge the idea that supermarkets have a monopoly on convenience and look to other outlets such as farmers' markets and consumer cooperatives. However, the responsibility that this group takes for looking after others means that convenience is still very important to them. Together, this means that increasing the availability of certified organic foods will lead to increased sales among committed consumers, even if that increase in availability is achieved through the development of new retail options.
- *Occasional organic consumers*—the majority of food consumers do not change their shopping habits all that readily and will simply substitute conventional for organic foods if the latter are not available or affordable at their regular shopping outlets (Pearson 2000). Occasional organic consumers do not need to be convinced that organic foods have positive attributes, but they do need to be convinced that they should buy more of them. We will discuss promotional strategies in more detail below. In terms, however, of addressing concerns among occasional organic consumers about the price and availability of organic foods, it is important to ensure not only that organic products are available through a wide range of relatively mainstream retail channels, but that there is consistency in quality and supply, that organic products are easily visible, and that they are clearly and consistently labelled.
- *Non-organic consumers*—those Western consumers who do not buy any organic food are likely either to be very poor, to see little intrinsic value in organic production methods and labelling, or to be confident in the safety of conventional food. In the absence of promotional strategies that successfully challenge some of these perceptions, this group is unlikely to purchase any organic food that is either not available through conventional retail outlets or which does not possess the same visible quality attributes as conventional competitors (such as visual appearance and smell) even if it is no more expensive.

It is evident from these profiles that availability is not just about the total supply of organic food in the market; it is about the diversity of retail outlets that stock it, the visibility of organic foods within each retail outlet, the labelling of those foods, the variety of items within the organic product range, and the consistency of their supply. As a consequence, European retailers that report the

most corporate benefit from organic sales are those that offer a comprehensive choice of easily identifiable organic product lines (Richter *et al.* 2001). Trading on convenience and choice, the issue therefore is to secure supplies of consistent quality and quantity across a diverse variety of products. Strategies to achieve this range from supporting the conversion of conventional enterprises to organic production and processing, to encouraging the pooling of produce from smaller farms into larger consignments, and importing supplies from elsewhere. Even alternative retail outlets—such as farmers' markets, community supported agriculture and box schemes—that trade on seasonality, locality and community are popular with consumers, as we have pointed out, because they offer convenience and choice. Not only do they make it easier for consumers to access a wider range of produce quickly and easily (without going to the supermarket), they also actively help consumers cope with 'inconveniences' (such as seasonal gluts and shortages, unfamiliar produce and so on) by suppling information and recipes.

### *Strategy 4. Certification and labelling*

There can be little doubt that the organic sector's pioneering work in the development, auditing and certification of production standards has been absolutely fundamental to its growth. This is most obviously about trust, but it is also about authenticity and the emotional connections between people and food. While undertaking scientific appraisals of organic products has considerable potential to enhance the credibility of the industry, it must be remembered that for many consumers the desirability of what they see as genuinely organic foods is self-evident (spraying food with poison just doesn't seem to make much sense). For such consumers, it is probably more important to know that organic certification bodies take research seriously, and revise their standards in the light of new research results, than it is to receive 'proof' that organic food is better for them.

The importance of credible certification and uniform labelling is stressed time and again in consumer surveys. Consumers demand appropriate, strict, and reliable labelling of organic products. Yet, many are confused over the proliferation of organic certification and labelling schemes found in many countries; and associate this diversity with the wider proliferation of green labels and what they see as the dubious claims some of these labels make to environmental or health benefits. Whether this is an accurate reflection of the level of compliance with organic standards and principles, or not, is immaterial. Proliferation leads to confusion and, in many people's minds, multiple logos, slogans and product claims are indicators of 'salesmanship' and a lack of regulation. This suggests that the rationalization of organic labels is imperative. This is not to say that certification bodies should be rationalized—or that they should be subjected to centralized control—but it is to say that, at the very least,

there needs to be a higher level of cooperation as a first step in reducing confusion among consumers.

The other issue that needs to be confronted is that of what kinds of products are certified as organic. As they have developed, organic standards are production standards. In other words, they govern the ways in which foods and fibres have been produced and processed but make no explicit claims about the products themselves. But for consumers, organics is fundamentally about the product, and many are uncomfortable with the idea of highly processed organic foods. For committed organic consumers, this discomfort relates to long distance transportation and the perceived loss of nutritional value. These consumers would rather know where they can buy fresh local produce and minimally processed dry goods. Among occasional organic and non-organic consumers the presence of highly processed certified organic products can promote cynicism over whether organics offers a genuine alternative. The fact that processed organic foods have found a place in the market—and that people pay often substantial premiums for them—should not be seen to demonstrate hypocrisy on the part of consumers. As we have argued elsewhere in this book, people are faced with all sorts of competing demands and desires when making choices about what to buy and what to eat, and many people who prefer fresh and unprocessed foods probably rely also on the convenience of preserved foods, ready-cooked meals, breakfast cereals, take-aways, and other 'quick and easy' food choices. The issue here is whether, and to what extent, organic certification bodies will confront issues associated with food processing and seek to develop appropriate standards, in much the same way as they have tried to develop standards for agricultural production that go beyond merely the avoidance of synthetic chemicals to include the principles of agro-ecology and sustainability.

### *Strategy 5. Promotion and education*

While the organic sector as a whole has engaged in a level of product promotion that is virtually invisible compared to the promotional efforts of conventional food growers and retailers, the experience of those European retailers that have coupled a diverse and visible product range with serious promotional efforts are also those that report the most positive corporate benefits from their involvement in organics (Richter *et al.* 2001). In Australia, it seems that around 60 per cent of organic foods (and almost all organic fresh fruits and vegetables) are accompanied by no promotional/educational material or other information suggesting to consumers why they should purchase them (Halpin and Brueckner 2004a). Those products that are accompanied by some sort of sales argument almost always carry the claims that organic foods are free from, or avoid the use of, chemicals, pesticides and antibiotics and/or that organic farming is environmentally friendly. Are these the right messages to promote increased consumption of organic foods? Returning to our simple typology of organic food consumers suggests:

- *Committed organic consumers* do not need convincing that organic foods offer nutritional or environmental benefits and gain little from broad statements about the avoidance of synthetic chemical use in organic farming systems. Because they are uncomfortable with high levels of processing and transport, this group is likely to be most interested in information relating to where products have come from, their 'naturalness' (i.e. level of processing, additives etc) and authenticity (certification).
- *Occasional organic consumers* perceive organic food to offer positive attributes, but are not motivated to go looking for them. Promotion to this group is, therefore, highly related to the positioning and visibility of organic foods. Attractive and prominent displays featuring simple messages are likely to have some impact and may help in the development of more habitual organic buying.
- *Non-organic consumers* are a more difficult proposition. While they may be attracted to organic products that feature outwardly similar or superior quality attributes to conventional foods, they are not attracted simply by the organic label. They need to be convinced that organic foods carry intrinsic qualities that are worth seeking out.

The increasing availability of organic foods has contributed considerably to increases in consumption which has, in turn, stimulated production and further increased availability. But we cannot expect this positive feedback cycle to continue forever. At some point (a point that has already been reached in some markets), continued growth will become dependent on shifting people into a different category—motivating occasional organic consumers to actively seek organic products out and encouraging non-organic consumers to give organic products a try. In the absence of some unforeseen and catastrophic food scare that disrupts the satisfaction of occasional organic and non-organic consumers with the conventional products they habitually buy, stimulating this demand will depend on:

- Widely promoting the idea that organic production does not leave traces of such 'pollutants' as synthetic agri-chemicals and antibiotics on foods and that, as a consequence, they have a legitimate claim to a more 'healthy' status than foods produced via industrial agricultural processes.
- Informing consumers of the additional benefits of organics: its contribution to environmental health, and its basis in promoting rural community development.
- Promoting the view that food consumption is cultural in nature, and that consuming organics is an 'experience' and is incompatible with food habits such as 'grazing' or chowing down.

# Conclusion

The findings presented throughout this book indicate that the organic agriculture and food sector has a significant role to play in the development of food systems that are just, fair and ecologically beneficial. As such, it is vital to identify the strategies required to more effectively mobilize people at all stages of the organic food chain, from the paddock to the plate, and everywhere in-between. This task is spread between a variety of agents including:

- Organic standards and certification groups—in relation to accreditation, certification and labelling;
- Government—to provide encouragement to organics as part of its fostering of environmental sustainability, including 'incentives' for the industry to provide a host of ecosystem services, and a coherent regulatory environment;
- Research agencies—to undertake research aimed at understanding and improving organic practices;
- Industry members (growers, processors, packagers, and sellers)—to make products available, in greater volumes, for cheaper prices, and in a manner that facilitates ease of purchase; and,
- Consumer advocates—in actively promoting those foods associated with a healthy lifestyle.

Throughout this book we have been consistently critical of the idea that the organic sector has been transformed from a small-scale values-based social movement promoting a radically different approach to farming into an industry that, for all intents and purposes, farms in an essentially conventional manner in the pursuit of maximum productivity and profitability. We have questioned the evidence for the so-called conventionalization thesis and argued that many of the newer and larger businesses involved in certified organic production, distribution, processing and retailing have demonstrated considerable commitment to the principles of organic food and agriculture. However, in making these arguments we are well aware of tensions and concerns among participants in the organic sector over the future of organics, the implications of 'big business' and government involvement, and so on. It is not our intent to be dismissive of these concerns. But it is our intent to pose the question as to whether the processes that have given rise to these concerns are bad for organics, or whether they will encourage continued growth in demand and sales. What if continued growth does bring into organics a host of producers and intermediaries who are there for profit and who have little commitment to the philosophies and ethos underpinning organics? What would this mean for the credibility of the organic industry? But what would be the implications of attempting to police the values and motivations of those seeking to enter into certified organic production or sales? What would

this mean for diversity and debate within the sector? Would opportunities be lost to promote organic principles to a wider array of potential industry members? Does the diversity of organic sector participants and the need to expand inevitably mean compromise? According to Noe (2006: 226), the involvement of previously non-organic farmers and food companies in organics offers opportunities for creative conflict and growth, but also constitutes a real and significant threat to preservation of the industry's values:

> The more non-organic actors are enrolled in the organic food network, the stronger will be the need for organic actors to reproduce the ideas of the organic movement, of an alternative pathway for food production and consumption. Otherwise, organic farming will be not only diffused but also dissolved into the mainstream industrialized and globalized food industry.

In order to maintain its values, the organic marketplace can no longer operate as an 'on-trust' system of food provision (Campbell and Stuart 2005). The certification systems that were pioneered within the organic sector must evolve, not just to ensure compliance with the accepted principles of organic production such as polyculture and nutrient cycling. Certification must enable cross-compliance with other standards systems and the growing culture of audit within food systems. It must incorporate the goals of social justice and regional community development. It must support food systems and cultures that celebrate diversity, localism, food-making knowledge, pleasure, and a willingness to invest time in food procurement, preparation and eating. And it must do so while acknowledging the social and economic contexts in which contemporary food consumption is located—contexts of dual income families, long working hours, changing expectations of domestic work, and so on—and support the development of supply chains that offer new models of convenience and value.

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# Appendix 1

# National Organic Farm Survey Methodology

The National Organic Farm Survey was a telephone-based stratified random sample survey of certified organic and conventional farms in Australia conducted in July 2004. The survey of organic producers was divided into two main sections. Section 1 dealt with the collection of detailed production and marketing detail on behalf of the Commonwealth Department of Agriculture, Fisheries and Forestry. Section 2 dealt with the collection of data on motivations for farming, attitudes to key agricultural policy issues, implementation of basic environmental management practices and group membership. This organic sample for the survey was drawn randomly from a list of certified organic producers (excluding in-conversion and pre-certified farms) compiled using lists publicly available from the National Association for Sustainable Agriculture Australia, Australian Certified Organic, Tasmanian Organic-Dynamic Producers and Organic Growers of Australia together with the Organic Federation of Australia 2002 directory and the Western Australia Organic Farmers' Association 2003 directory. Some 400 certified organic producers were interviewed generating 397 usable responses. This represented a response rate of 42 per cent constituting approximately 26 per cent of the estimated certified organic farm population of 1511 producers (see Halpin 2004 for more detail on the basis for these estimates). This provided a relative standard error of 4.32 per cent at a confidence level of 95 per cent.

Conventional farmers participating in the survey were only administered Section 2 as detailed production and marketing data is routinely collected for conventional farming through the Australian Bureau of Statistics and Australian Bureau of Agricultural and Resource Economics. The conventional farm sample was drawn from farmers and graziers listed in the Marketing Pro-Business April 2004 Edition (Copyright © 2004 Desktop Marketing Systems Pty Ltd) comprehensive collection of electronic telephone directories. Four hundred and thirty four conventional farmers were surveyed with a similar response rate as for organic growers.

Questions on motivations for farming were based on a format developed to measure motivations behind food choice developed by Steptoe *et al.* (1995) and applied elsewhere in this book (see Chapter 7 and Appendix 4). Based on the review of research into conversion to organic farming by Padel (2001), scales were developed for 10 potential motivations including environmental health,

animal health, farm productivity, farm profitability, risk aversion, cost saving, premium marketing, food quality, chemical safety and rural development. Each scale took the form of several questions that asked: *"On a typical day, how important is it to you to farm in a manner that [for example] allows animals to act out natural patterns of behaviour?"* Each scale was tested for validity following the survey and several items deleted. The final motivational scale items and reliability are shown in Table A1.1.

Attitudinal scales were developed to address six key issues related to agriculture and organic foods including the seriousness of land degradation, farmers' responsibility to address land degradation, the appropriateness of compensation for restrictions placed on private property rights to protect environmental values, the quality and safety of organic foods, the potential benefits of genetic engineering and risks to consumers from consumption of industrially-produced foods. Items comprising these scales were taken from a number of sources including Reeve's (2001b) national survey of farmers' attitudes to environmental issues. Questions took the form of five point Likert scale items to which respondents were asked to agree or disagree. Again, each scale was tested for validity after the survey and several items deleted. The final attitudinal scale items and reliability are shown in Table A1.2.

Table A1.1. Scale items and reliability—motivations for farming

| Scale | Items | Reliability (Cronbach's alpha) |
|---|---|---|
| Animal health | Ensuring animals can act out normal patterns of behaviour | 0.56 |
| | Reducing use of chemicals to maintain animal health | |
| Environmental health | Maximizing biological diversity | 0.75 |
| | Conserving native flora and fauna | |
| | Minimizing soil erosion | |
| | Improving the biological health of the soil | |
| | Maintaining processes of nutrient and energy recycling | |
| Productivity | Increasing production | 0.81 |
| | Maximizing outputs | |
| | Maximizing profits | |
| | Ensuring a healthy return on investment | |
| Cost saving | Reducing farm costs | 0.62 |
| | Reducing use of expensive farm inputs | |
| Premium marketing | Producing products that can attract a price premium | 0.63 |
| | Targeting a lucrative niche market | |
| Risk aversion | Avoiding any sort of financial risk | 0.53 |
| | Implementing practices that are reasonably certain to turn a profit | |
| | Avoiding farm debt | |
| Chemical safety | Reducing your exposure to farm chemicals | 0.88 |
| | Reducing your family's exposure to farm chemicals | |
| Food quality | Producing food that is nutritious | 0.67 |
| | Producing food that is free of traces of hormones or chemicals | |
| Rural development | Contributing to the regional economy | 0.70 |
| | Contributing to the generation of local employment | |

Table A1.2. Scale items and reliability—attitudes to issues facing Australian agriculture

| Scale | Items | Reliability (Cronbach's alpha) |
|---|---|---|
| Seriousness of land degradation | Most rural properties have some form of land degradation<br>Some marginal types of country in Australia will never be able to be farmed or grazed without badly damaging the land<br>Compared to what happened in the past, the amount of land degradation occurring now in Australia is relatively minor (reversed)<br>Land used for agriculture in Australia is in better condition than it has ever been (reversed) | 0.64 |
| Responsibility to address land degradation | People who knowingly pollute the countryside are just as criminal as people who steal<br>All necessary soil conservation methods should be used, whatever the costs<br>It is worth putting up with a small decrease in profits to protect the environment | 0.54 |
| Compensation | It is only fair that managers of rural land should be fully compensated for any changes they have to make to their management for environmental reasons<br>If restrictions on clearing or irrigation water mean any loss of income for farmers, they have every right to be fully compensated<br>If governments have decided that the rivers need more water for environmental purposes, it is unfair to expect irrigators to give up their water without being compensated for their losses<br>Environmental laws have imposed uncompensated restrictions on businesses in the city, so farm businesses should not expect compensation either (reversed)<br>Farmers have gained benefits from clearing much of their country, so they should not expect to be compensated for leaving remaining bush untouched (reversed) | 0.67 |

| | | |
|---|---|---|
| Genetic engineering | Environmental benefits of genetic engineering outweigh possible risks to the environment<br>Release of genetically modified organisms for use in agriculture poses a threat to agricultural export markets (reversed)<br>Genetic modification in agriculture will enable us to better meet consumer needs<br>Access to genetic engineering technologies will assist agricultural producers to maintain international competitiveness<br>Use of genetically engineered crops will not make farming systems more sustainable (reversed)<br>Genetic engineering will allow agricultural producers to better feed the worlds growing population<br>Use of genetically modified plants and animals should be allowed in organic agriculture | 0.91 |
| Organic food quality | Organic foods have lower chemical residues than conventional foods<br>Organic foods have no more vitamins and minerals than conventional foods (reversed)<br>Organic foods are safer to eat than conventional foods<br>Organic food is healthier to eat than conventionally grown food<br>Organic food tastes better than conventional food<br>Organic food has a shortened shelf life (reversed) | 0.80 |
| Industrialized food risks | How high do you consider the risk posed to consumers by the ingestion of foods produced using pesticides and other chemicals?<br>How high do you consider the risk posed to consumers by the ingestion of foods produced using genetically modified organisms?<br>How high do you consider the risk posed to consumers by the ingestion of foods produced using preservatives and artificial colouring?<br>How high do you consider the risk posed to consumers by the ingestion of foods produced using hormones and antibiotics in meat? | 0.83 |

# Appendix 2

# National Farm Survey Results

Table A2.1. Mean scores and t-values among organic and conventional farmers—motivations for farming

| | Are you a certified organic producer? | N | Mean | Std. Deviation | Std. Error Mean | t-value | Sig |
|---|---|---|---|---|---|---|---|
| Animal health | YES | 281 | 4.5480 | 0.6127 | 3.655E-02 | 12.970 | p<0.001 |
| | NO | 360 | 3.8222 | 0.8041 | 4.238E-02 | | |
| Environmental health | YES | 357 | 4.6095 | 0.4419 | 2.339E-02 | 14.599 | p<0.001 |
| | NO | 330 | 4.0236 | 0.5924 | 3.261E-02 | | |
| Productivity orientation | YES | 376 | 3.9003 | 0.8664 | 4.468E-02 | -5.094 | p<0.001 |
| | NO | 414 | 4.2029 | 0.8032 | 3.948E-02 | | |
| Profit orientation | YES | 375 | 4.1422 | 0.7708 | 3.980E-02 | -4.408 | p<0.001 |
| | NO | 418 | 4.3604 | 0.6018 | 2.944E-02 | | |
| Minimizing costs | YES | 344 | 3.9409 | 0.7218 | 3.892E-02 | -.230 | p<0.001 |
| | NO | 397 | 3.9530 | 0.7035 | 3.531E-02 | | |
| Marketing premium | YES | 377 | 4.1684 | 0.7267 | 3.743E-02 | 8.821 | p<0.001 |
| | NO | 381 | 3.6181 | 0.9743 | 4.991E-02 | | |
| Risk aversion | YES | 367 | 3.8919 | 0.6740 | 3.518E-02 | -.764 | ns |
| | NO | 409 | 3.9283 | 0.6503 | 3.216E-02 | | |
| Chemical safety | YES | 344 | 4.8328 | 0.3880 | 2.092E-02 | 11.172 | p<.001 |
| | NO | 405 | 4.3333 | 0.7953 | 3.952E-02 | | |
| Food quality | YES | 374 | 4.7861 | 0.4057 | 2.098E-02 | 13.274 | p<.001 |
| | NO | 392 | 4.2207 | 0.7340 | 3.707E-02 | | |
| Rural development | YES | 366 | 3.8620 | 0.8747 | 4.572E-02 | 1.736 | ns |
| | NO | 387 | 3.7545 | 0.8241 | 4.189E-02 | | |

Note: t-value calculated on unequal variance where Levene's Test for Equality of Variances p<0.05. Otherwise equal variance assumed

Table A2.2. Mean scores and t values for organic and conventional farmers—attitudes to key issues facing agriculture

| | Are you a certified organic producer? | N | Mean | Std. Deviation | Std. Error Mean | t-value | Sig |
|---|---|---|---|---|---|---|---|
| Seriousness of land degradation | YES | 311 | 3.8505 | 0.7126 | 4.041E-02 | 11.234 | p<.001 |
| | NO | 354 | 3.2571 | 0.6387 | 3.394E-02 | | |
| Responsibility to address land degradation | YES | 355 | 3.8667 | 0.6191 | 3.286E-02 | 7.428 | p<.001 |
| | NO | 391 | 3.5277 | 0.6254 | 3.163E-02 | | |
| Compensation for restrictions on property rights | YES | 317 | 3.2921 | 0.7799 | 4.380E-02 | -6.692 | p<.001 |
| | NO | 357 | 3.6555 | 0.6061 | 3.208E-02 | | |
| Benefits of genetic engineering | YES | 334 | 2.3636 | 0.3968 | 3.315E-02 | - | p<.001 |
| | NO | 247 | 2.9323 | 0.5661 | 5.591E-02 | 13.523 | |
| Quality & safety of organic foods | YES | 319 | 4.1808 | 0.4916 | 2.752E-02 | 19.035 | p<.001 |
| | NO | 162 | 3.1574 | 0.5878 | 4.618E-02 | | |
| Risks of consuming industrially-produced food | YES | 300 | 4.1573 | 0.6560 | 3.787E-02 | 14.315 | p<.001 |
| | NO | 254 | 3.2579 | 0.7990 | 5.014E-02 | | |

Note: t-value calculated on unequal variance where Levene's Test for Equality of Variances $p<0.05$. Otherwise equal variance assumed

Table A2.3. Factor analysis of motivation for farming items

| Scale | Item | Reliability (Cronbach's alpha) |
|---|---|---|
| Chemical and food safety | Reducing family exposure<br>Reducing personal exposure<br>Food free of residues<br>Maximizing nutrition | 0.804 |
| Profit and productivity | Maximizing profit<br>Maximizing output<br>Healthy return on investment<br>Increasing production<br>Financial viability<br>Practices certain to make profit | 0.846 |
| Soil health | Nutrient and energy recycling<br>Improving biological health<br>Minimizing erosion | 0.728 |
| Premiums | Targeting niche market<br>Attracting premium | 0.609 |
| Thrift | Reducing inputs<br>Reducing labour<br>Reducing costs | 0.616 |
| Community | Local employment<br>Regional economy | 0.682 |
| Natural farming | Natural animal behaviour<br>Biodiversity<br>Animal health<br>Native flora and fauna | 0.752 |

Extraction method: Principal Component Analysis
Rotation method: Oblimin with Kaiser Normalization

Table A2.4. Factor analysis of attitude to food and farming related issues items

| Scale | Item | Reliability (Cronbach's alpha) |
|---|---|---|
| Genetic engineering | Threat to markets | 0.908 |
| | Not make farms sustainable | |
| | International competitiveness | |
| | Feed growing population | |
| | Better meet consumer needs | |
| | Should not be allowed in organic agriculture | |
| | Environmental benefits outweigh risks | |
| | Will not enhance animal health and welfare | |
| Compensation | Restrictions on water | 0.810 |
| | Changes to management | |
| | Environmental flows | |
| | Environmental laws | |
| | Benefit gained from clearing | |
| Quality | Lower chemical residues | 0.869 |
| | Safer to eat | |
| | Healthier | |
| | Taste better | |
| | More vitamins and minerals | |
| Seriousness of land degradation | Relatively minor | 0.660 |
| | Better condition than ever | |
| | Some country too marginal | |
| | Most properties have degradation | |
| Risks to consumers | Pesticides and chemicals | 0.862 |
| | Preservatives and additives | |
| | Irradiation | |
| | GMOs | |
| | Hormones and antibiotics | |
| Responsibility to address land deg | Pollutants criminal | 0.534 |
| | All soil con methods should be used | |
| | Worth decreasing profits | |

Extraction method: Principal Component Analysis
Rotation method: Oblimin with Kaiser Normalization

Table A2.5. Hierarchical regression tables predicting likelihood of being organic or conventional farmer

Model summary

| Model | R | R Square | Adjusted R Square | Std Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig F Change |
| 1 | 0.341[a] | 0.116 | 0.111 | 0.472 | 0.116 | 22.310 | 3 | 510 | p<.001 |
| 2 | 0.701[b] | 0.492 | 0.471 | 0.364 | 0.376 | 21.442 | 17 | 493 | p<.001 |
| 3 | 0.833[c] | 0.694 | 0.673 | 0.286 | 0.202 | 24.443 | 13 | 480 | p<.001 |

a. Predictors: (Constant) Group membership variables
b. Predictors: (Constant) Group membership variables, farm structural variables
c. Predictors: (Constant) Group membership variables, farm structural variables, attitudinal and motivational variables

Coefficients for Model 3

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| Constant | 2.259 | 0.576 | | 3.923 | p<.001 |
| M'ship farmers ass | 0.061 | 0.015 | 0.112 | 3.958 | p<.001 |
| M'ship Landcare/ catchment group | -0.004 | 0.016 | -0.007 | -0.245 | ns |
| M'ship enviro group | -0.017 | 0.019 | -0.024 | -0.873 | ns |
| Farm main occupation | -0.069 | 0.038 | -0.048 | -1.804 | ns |
| Average gross receipts | 4.42E-009 | 0.000 | 0.005 | 0.173 | ns |
| Equity | 0.000 | 0.001 | 0.009 | 0.350 | ns |
| Beef | -0.150 | 0.030 | -0.147 | -4.926 | p<.001 |
| Sheep | -0.110 | 0.044 | -0.097 | -2.501 | p=.013 |
| Pigs | 0.113 | 0.112 | 0.026 | 1.002 | ns |
| Poultry | 0.011 | 0.132 | 0.002 | 0.081 | ns |
| Eggs | 0.077 | 0.089 | 0.025 | 0.869 | ns |
| Milk | -0.141 | 0.065 | -0.060 | -2.167 | p=.031 |
| Grains | -0.002 | 0.035 | -0.002 | -0.060 | ns |
| Vegetables | 0.102 | 0.039 | 0.077 | 2.618 | p=.009 |
| Fruit | 0.154 | 0.038 | 0.124 | 4.054 | p<.001 |
| Wool | -0.113 | 0.046 | -0.097 | -2.468 | p=0.014 |
| Cotton | 0.014 | 0.139 | 0.003 | 0.098 | ns |
| Sugar | -0.141 | 0.075 | -0.055 | -1.884 | ns |
| Coffee | 0.084 | 0.167 | 0.017 | 0.506 | ns |
| Tea | 0.003 | 0.134 | 0.001 | 0.023 | ns |
| Chemical safety | -0.068 | 0.029 | -0.080 | -2.376 | p=.018 |
| Premium | -0.056 | 0.016 | -0.103 | -3.561 | p<.001 |
| Thrift | 0.027 | 0.021 | 0.039 | 1.306 | ns |
| Community | 0.027 | 0.017 | 0.047 | 1.598 | ns |
| Environment | -0.066 | 0.023 | -0.105 | -2.853 | p=.005 |

| | | | | | |
|---|---|---|---|---|---|
| Profit | 0.039 | 0.026 | 0.051 | 1.535 | ns |
| Soil health | -0.022 | 0.026 | -0.026 | -0.841 | ns |
| Genetic engineering | -0.075 | 0.020 | -0.141 | -3.762 | p<.001 |
| Compensation | -0.003 | 0.019 | -0.005 | -0.166 | ns |
| Quality | 0.146 | 0.020 | 0.250 | 7.158 | p<.001 |
| Land deg | -0.006 | 0.021 | -0.009 | -0.283 | ns |
| Risk | -0.046 | 0.025 | -0.063 | -1.808 | ns |
| Responsibility | -0.020 | 0.022 | -0.027 | -0.915 | ns |

Table A2.6. Hierarchical regression tables predicting likelihood of being converting or start-up organic farmer

Model summary

| Model | R | R Square | Adjusted R Square | Std Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df 1 | df2 | Sig F Change |
| 1 | 0.328[a] | 0.108 | 0.045 | 0.477 | 0.108 | 1.725 | 13 | 186 | ns |
| 2 | 0.532[b] | 0.283 | 0.145 | 0.451 | 0.175 | 2.147 | 19 | 167 | p=.005 |
| 3 | 0.626[c] | 0.392 | 0.234 | 0.427 | 0.109 | 3.141 | 9 | 158 | p=.002 |

a. Predictors: (Constant) attitudinal and motivational variables
b. Predictors: (Constant) attitudinal and motivational variables, farm structural variables
c. Predictors: (Constant) attitudinal and motivational variables, farm structural variables, Membership of environmental groups etc

Coefficients for Model 2

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| Constant | 0.464 | 2.121 | | 0.219 | ns |
| Chemical safety | -0.028 | 0.131 | -0.016 | -0.216 | ns |
| Premium | 0.017 | 0.050 | 0.025 | 0.349 | ns |
| Thrift | -0.079 | 0.058 | -0.110 | -1.364 | ns |
| Community | 0.057 | 0.041 | 0.106 | 1.392 | ns |
| Environment | 0.185 | 0.075 | 0.216 | 2.449 | p=.015 |
| Profit | 0.005 | 0.062 | 0.008 | 0.085 | ns |
| Soil health | -0.093 | 0.095 | -0.080 | -0.974 | ns |
| Genetic engineering | -0.031 | 0.062 | -0.040 | -0.504 | ns |
| Compensation | -0.089 | 0.045 | -0.152 | -1.971 | p=.050 |
| Quality | -0.113 | 0.072 | -0.114 | -1.557 | ns |
| Land deg | -0.020 | 0.054 | -0.030 | -0.368 | ns |
| Risk | 0.025 | 0.074 | 0.029 | 0.335 | ns |
| Responsibility | 0.047 | 0.057 | 0.064 | 0.827 | ns |
| Farm main occupation | -0.007 | 0.082 | -0.006 | -0.083 | ns |
| Average gross receipts | -7.80E-008 | 0.000 | -0.067 | -0.880 | ns |
| Proportion receipts from organic | 0.001 | 0.001 | 0.072 | 1.040 | ns |
| Equity | -0.001 | 0.001 | -0.050 | -0.699 | ns |
| Beef | 0.245 | 0.096 | 0.218 | 2.550 | p=.012 |
| Sheep | -0.019 | 0.149 | -0.012 | -0.128 | ns |
| Pigs | 0.410 | 0.262 | 0.118 | 1.566 | ns |
| Poultry | 0.080 | 0.228 | 0.026 | 0.351 | ns |
| Eggs | 0.166 | 0.148 | 0.081 | 1.123 | ns |
| Milk | 0.301 | 0.197 | 0.114 | 1.529 | ns |
| Grains | 0.197 | 0.116 | 0.145 | 1.695 | ns |

| | | | | | |
|---|---|---|---|---|---|
| Vegetables | -0.084 | 0.085 | -0.084 | -0.994 | ns |
| Fruit | 0.079 | 0.083 | 0.080 | 0.945 | ns |
| Wool | -0.114 | 0.168 | -0.060 | -0.679 | ns |
| Sugar | -0.029 | 0.463 | -0.004 | -0.063 | ns |
| Coffee | -0.471 | 0.456 | -0.068 | -1.032 | ns |
| Tea | -0.461 | 0.461 | -0.067 | -1.000 | ns |
| Proportion of farm organic | 0.000 | 0.001 | 0.021 | 0.301 | ns |
| Projected growth | -9.53E-005 | 0.000 | -0.024 | -0.325 | ns |
| M'ship farmers ass | -0.002 | 0.041 | -0.003 | -0.043 | ns |
| M'ship Landcare/ catchment group | 0.023 | 0.047 | 0.040 | 0.485 | ns |
| M'ship enviro group | 0.002 | 0.051 | 0.003 | 0.041 | ns |
| Years as certified producer | 0.012 | 0.008 | 0.113 | 1.483 | ns |
| Age | 0.005 | 0.004 | 0.095 | 1.162 | ns |
| Education | 0.016 | 0.039 | 0.030 | 0.410 | ns |
| Gender | 0.115 | 0.092 | 0.091 | 1.245 | ns |
| Experience running farms | -0.012 | 0.003 | -0.307 | -3.381 | p=.001 |
| Parents in farming | 0.181 | 0.073 | 0.184 | 2.499 | p=.013 |

# Appendix 3

# Australian Market Intermediary Study Methods

Unless otherwise cited, the data presented in Chapter 6 were collected through a series of over 20 semi-structured interviews with Australian processors, wholesalers and distributors of certified organic foods conducted from May to July 2004. These interviews were conducted as part of a national profile of the Australian organic industry complied by Darren Halpin on behalf of the Commonwealth Department of Agriculture, Fisheries and Forestry. Potential participants were identified from certifying organization websites and industry directories and then prioritized with assistance from the Organic Federation of Australia. Prioritization focused on identification of the major first-stage processors, distributors and wholesalers involved in the certified organic food sector. Some interviewees were also engaged in primary production operations. It was beyond the scope of the work to consider higher level manufacturers. The interviews were concentrated in the dairy, meat, and fruit and vegetable sectors, with some attention given to sugar.

Interview participants were questioned on their views of issues facing the organic industry in Australia, its development, and the roles they saw for processors, wholesalers and distributors in that development.

More detailed information from these interviews is available in Halpin (2004a).

# Appendix 4

# National Food Choice Survey Methodology

The National Food Choice Survey involved two key activities conducted in 2001. The first activity comprised a series of 13 focus groups conducted in regional and metropolitan regions of the states of Queensland and Victoria, Australia. Each group involved 8-10 participants and was structured to explore the issues that participants associated with food before moving specifically to questions regarding the production, retailing, certification and consumption of organic food. Each focus group was tape recorded and transcribed verbatim before analysis of key themes using N'Vivo qualitative data analysis software.

The second activity was a national telephone-based survey of 1,212 Australian consumers aged 18 years or older. A random selection approach was used to ensure that all potential participants had an equal chance of being contacted. The survey itself was designed to gather data on: actual organic food consumption and other relevant behaviours; motivational factors such as environmental and health concerns likely to influence food choice; attitudes towards contemporary food-related issues such as food safety and biotechnology; and demographic characteristics.

As Turrini (2000) argues, there are inherent problems involved in collecting accurate data on food consumption using population surveys. In order to avoid spurious suggestions of precision in relation to consumption levels, and to ensure ease of response, response categories for questions related to levels of food consumption were kept broad and descriptive.

Questions on the motivations behind food choice were based on the Food Choice Questionnaire (FCQ) developed by Steptoe *et al.* (1995) and the additional items related to ethical food choice motives developed by Lindeman and Väänänen (2000). The FCQ assesses nine food choice motives (health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity and ethical concern) while the additional items developed by Lindeman and Väänänen (2000) differentiate ethical concern into animal welfare, environmental protection, political values and religion. As both sets of scales had been previously validated only minor changes were made to eliminate duplication and ensure the language they used would be familiar to Australian respondents. The final set of scales consisted of 55 five-point items. Each item took the form: "*How important is it to you that the food you eat on a typical day contains a lot of*

*vitamins and minerals*" where 1=Not at all important and 5=extremely important. Each scale was tested for validity following the survey and several further items deleted. The final food choice scales are shown in Table A4.1.

A preliminary set of questions on attitudes to food-related issues was developed and pre-tested with 77 students from two Queensland universities. Scales were then developed for the issues of primary concern; namely, disposition towards biotechnologies; perceived risks from industrial food production and processing methods such as chemical use, irradiation, artificial additives and genetic engineering; beliefs regarding the quality characteristics of organic foods including shelf-life and taste; the perceived health benefits of organic foods; and willingness to purchase more organic food if it was available. The scale on risks from industrialized foods included five four-point items taking the form: "*How high would you consider the risk posed to food consumers by regular consumption of foods grown or treated with pesticides and other chemicals?*" where 1=very low risk and 4=very high risk. The remaining scales comprised 19 five-point items taking the form: "*How strongly do you agree or disagree with the statement, organic foods have lower chemical residues than conventional foods?*" where 1=strongly disagree and 5=strongly agree. Each scale was tested for validity following the survey and four items deleted. The final attitudinal scales are shown in Table A4.2.

Steptoe *et al.* (1995) note that while the scales developed in their food choice questionnaire have high internal reliability there are also strong enough correlations between a number of the scales to suggest that collapsing them into a smaller number of factors may be appropriate. Among those correlations, the most prominent was between health and natural content. This was followed by small correlations between health and mood, ethical concern and weight control, between mood, sensory appeal and familiarity, and between convenience and price. Steptoe *et al.* justify the maintenance of the full nine scales on the basis that: first, when assessing the utility of a higher order solution some individual scales did not load onto single factors; and second, they believe that the ability to investigate a wide range of specific motives of food choice is likely to be more useful than assessment of a small number of broad dimensions. While there are many instances in which this is likely to be true, the use in Chapter 8 of path analysis to describe the causal relationships between multiple variables necessitated assimilation of scale items into the smallest number of variables practicable.

Path analysis is a particular form of multi-variate analysis that allows the analysis of data, and presentation in the form of a path diagram that illustrates proposed causal relationships between multiple variables (de Vaus 1991). Path analysis is said to examine causality, but there has been debate about whether causality is relevant to modern research. Mueller (1996) prefers to refer to relationships as "structural" when they refer to relationships that are more than just correlational. While the idea of causality may not be necessarily acceptable, path analysis provides a way of determining the inter-relationships of multiple

variables in determining a particular outcome. The path diagram gives a pictorial representation of this relationship. Analysis of the path diagram produces the values of the path coefficients (the standardized partial regression coefficients). The path coefficients can then be interpreted as absolute measures of direct causal influence. All items included in Tables A4.1 and A4.2 were subjected to factor analysis to see if it was possible to reduce the number of scales prior to path analysis.

Factor analysis was conducted prior to undertaking the path analysis and a revised set of scales developed for use as variables in the path analysis (see Table A4.3). Examination of the items found within each scale reveals a problem identified by Steptoe *et al.* (1995) of items from individual scales loading onto multiple factors. However, in each case, secondary variables accounted for less than 15 per cent of the variance explained and had small coefficient values. There also appeared to be no sensible interpretation to place on these secondary factors. The factors used in the path analysis explained a large amount of the variance, had good reliability analysis and could be sensibly interpreted. Sensory appeal, familiarity and mood loaded into one factor labelled 'sensory and emotional appeal'. All items related to political values, other than religion, loaded onto one 'political and ecological values' factor. Motivations related to natural content, along with the perceived risks of industrially-produced and processed foods and the perceived benefits of organic foods, loaded onto a single 'natural foods' factor. The fitness items were assimilated within the 'health' scale. Lastly, those environmental behaviours related to environmental activism were deleted with those remaining forming a new 'green consumption' scale.

Table A4.1 Food choice items and scale reliability

| Scale | Item | Reliability (Cronbach's alpha) |
|---|---|---|
| Health | Contains a lot of vitamins and minerals | 0.82 |
| | Keeps me healthy | |
| | Is nutritious | |
| | Is high in protein | |
| | Is good for my skin/teeth/hair/nails etc | |
| | Is high in fibre and roughage | |
| Weight control | Is low in calories | 0.84 |
| | Helps me control my weight | |
| | Is low in fat | |
| Fitness | Provides enough energy to get through my physical exercise program | 0.54 |
| | Does not compromise my sporting and exercise goals | |
| Mood | Helps me cope with stress | 0.80 |
| | Helps me relax | |
| | Keeps me awake/alert | |
| | Cheers me up | |
| | Makes me feel good | |
| Convenience | Is quick and easy to prepare | 0.73 |
| | Can be cooked very simply | |
| | Can be bought in shops close to where I live | |
| | Is easily available in shops and supermarkets | |
| | Is not messy to eat | |
| Sensory appeal | Smells nice | 0.67 |
| | Looks nice | |
| | Has a pleasant texture | |
| Natural content | Contains no additives | 0.86 |
| | Contains natural ingredients | |
| | Contains no artificial ingredients | |
| | Certified free of chemical and hormone residues | |
| | Is as unprocessed as possible | |
| | Is prepared in a way that preserves its natural goodness | |
| Price | Is not expensive | 0.58 |
| | Is good value for money | |
| Familiarity | Is what I usually eat | 0.61 |
| | Is familiar | |
| | Is like the food I ate when I was a child | |
| Animal welfare | Has been produced in a ways that animals have not experienced pain | 0.86 |

| | | |
|---|---|---|
| | Has been produced in a way that animals' rights have been respected | |
| Environmental protection | Is prepared in an environmentally friendly way | 0.79 |
| | Is produced in a way that has not shaken the balance of nature | |
| | Is packaged in an environmentally friendly way | |
| | Is grown locally to reduce transportation | |
| Political values | Comes from a country that I approve of politically | 0.78 |
| | Comes from a country in which human rights are respected | |
| | Has the country of origin clearly marked | |
| | Has been prepared in a way that does not conflict with my political values | |
| Religion | Is not forbidden by my religion | 0.66 |
| | Is in harmony with my religious views | |

Table A4.2 Attitudinal items and scale reliability

| Scale | Item | Reliability (Cronbach's alpha) |
|---|---|---|
| Risks from industrialized foods | Pesticides and other chemicals<br>Genetically modified organisms<br>Food irradiation<br>Preservatives and artificial colouring<br>Hormones and antibiotics in meat | 0.74 |
| Healthiness of organic foods | Organic foods have lower chemical residues than conventional foods<br>Organic foods have no more vitamins and minerals than conventional foods<br>Organic foods are safer to eat than conventional foods<br>Organic food is healthier to eat than conventionally grown food | 0.72 |
| Quality of organic foods | Organic food tastes better than conventional food<br>Organic food looks inferior to conventional food<br>Organic food has a shortened shelf life | 0.56 |
| Disposition towards biotechnology | Scientists are going too far with cloning and other biotechnologies<br>Biotechnologies like cloning and genetic engineering are against the laws of nature<br>Releasing genetically modified organisms into the environment is too risky. We just don't know what will happen<br>All foods containing genetically modified ingredients should be labelled so that consumers can make their own choice | 0.63 |
| Fairness of premium for environment-friendly food | The prices received by Australian farmers are not high enough for them to address environmental problems<br>I think it is fair to pay farmers more for producing food in an environmentally friendly way | 0.70 |
| Willingness to buy more organic food if available | I would gladly buy more organic food if I could find it<br>I would buy more organic food if it was available as convenience, packaged and pre-prepared food | 0.64 |

Table A4.3 Revised scales—motives, attitudes, beliefs and behaviours affecting food choice

| Scale | Abbreviated questions | Reliability (Cronbach's alpha) |
|---|---|---|
| Green consumption | Recycling of paper etc.<br>Purchase of environmentally-friendly cleaning products<br>Composting food scraps | 0.26 |
| Willingness to pay premium | Prices received by farmers not high enough<br>Fair to pay farmers more | 0.54 |
| Convenience | Can be bought in shops close to where you live<br>Can be cooked very simply<br>Is easily available in shops and supermarkets<br>Is not messy to eat<br>Is quick and easy to prepare | 0.73 |
| Sensory & emotional appeal | Looks nice<br>Helps cope with stress<br>Keeps you awake/alert<br>Cheers you up<br>Has a pleasant texture<br>Helps relax<br>Is adventurous and varied<br>Is familiar<br>Tastes good<br>Is like the food eaten as a child<br>Smells nice<br>Makes you feel good<br>Is what you usually eat | 0.81 |
| Natural foods | Contains natural ingredients<br>Contains no additives<br>Is as unprocessed as possible<br>Certified free of chemical and hormone residues<br>Is prepared in a way that preserves its natural goodness<br>Contains no artificial ingredients<br>Risk from pesticides and other chemicals<br>Risk from genetically modified organisms<br>Risk from food irradiation<br>Risk from preservatives and artificial colouring<br>Risk from hormones and antibiotics in meat | 0.48 |

| | | |
|---|---|---|
| Political & ecological values | Is packaged in an environmentally friendly way<br>Comes from a country that you approve of<br>Comes from a country in which human rights not violated<br>Is grown and manufactured in Australia<br>Animals' rights have been respected<br>Prepared in an environmentally friendly way<br>Is grown locally to reduce transportation<br>Animals have not experienced pain<br>Has the country of origin clearly marked<br>Has not shaken the balance of nature<br>Does not conflict with political values | 0.90 |
| Healthy Food Values | Is nutritious<br>Is low in calories<br>Helps control weight<br>Is low in fat<br>Sporting and exercise goals<br>Is high in protein<br>Keeps you healthy<br>Is high in fibre and roughage<br>Provides enough energy<br>Contains a lot of vitamins and minerals<br>Is good for skin etc | 0.85 |
| Acceptance of Biotechnology | Foods containing GMOs should be labelled<br>Release GMOs too risky<br>Scientists going too far<br>Cloning etc against laws of nature | 0.70 |

# Appendix 5

# National Food Choice Survey Results

Table A5.1 Motivating factors behind food choice

| Group Statistics | t-values | Sig | Organics consumed | N | Mean# | Standard Deviation |
|---|---|---|---|---|---|---|
| Health | t(1065)=4.93 | p<.001 | YES | 488 | 4.10 | 0.71 |
| | | | NO | 579 | 3.87 | 0.83 |
| Natural content | t(1055)=7.25 | p<.001 | YES | 485 | 4.08 | 0.78 |
| | | | NO | 572 | 3.68 | 0.95 |
| Price | t(1072)=-1.57 | ns | YES | 488 | 3.87 | 0.84 |
| | | | NO | 586 | 3.95 | 0.87 |
| Animal welfare | t(1040)=4.28 | p<.001 | YES | 474 | 3.83 | 1.19 |
| | | | NO | 568 | 3.49 | 1.37 |
| Sensory appeal | t(1070)=1.00 | ns | YES | 489 | 3.81 | 0.85 |
| | | | NO | 583 | 3.75 | 0.91 |
| Convenience | t(1067)=-1.15 | ns | YES | 487 | 3.73 | 0.89 |
| | | | NO | 582 | 3.79 | 0.78 |
| Environmental protection | t(1014)=6.00 | p<.001 | YES | 468 | 3.68 | 0.98 |
| | | | NO | 548 | 3.29 | 1.09 |
| Weight Control | t(1075)=3.27 | p=.001 | YES | 491 | 3.54 | 1.10 |
| | | | NO | 586 | 3.31 | 1.18 |
| Fitness | t(1036)=5.17 | p<.001 | YES | 475 | 3.32 | 1.12 |
| | | | NO | 563 | 2.96 | 1.14 |
| Political values | t(995)=5.08 | p<.001 | YES | 456 | 3.25 | 1.16 |
| | | | NO | 541 | 2.87 | 1.19 |
| Familiarity | t(1061)=-1.49 | ns | YES | 483 | 3.17 | 0.98 |
| | | | NO | 580 | 3.26 | 0.91 |
| Mood | t(1028)=3.07 | p=.002 | YES | 466 | 3.00 | 1.08 |
| | | | NO | 564 | 2.80 | 1.02 |
| Religion | t(994)=1.37 | ns | YES | 452 | 2.70 | 0.93 |
| | | | NO | 544 | 2.62 | 0.84 |

# Five-point scale where 1=Not at all important and 5=Extremely important.

Table A5.2 Attitudes to food-related issues

| Group Statistics | t-values | Sig | Organics consumed | N | Mean | Standard deviation | Standard error mean |
|---|---|---|---|---|---|---|---|
| Risks from industrialized foods[a] | t(1075)=-5.51 | p<.001 | YES | 490 | 3.89 | 0.76 | 0.03 |
| | | | NO | 587 | 3.48 | 0.78 | 0.03 |
| Healthiness of organic foods[b] | t(1073)=-8.81 | p<.001 | YES | 489 | 3.73 | 1.03 | 0.05 |
| | | | NO | 586 | 3.18 | 1.17 | 0.05 |
| Quality of organic food[b] | t(1073)=-7.69 | p<.001 | YES | 489 | 3.00 | 0.95 | 0.04 |
| | | | NO | 586 | 2.49 | 1.17 | 0.05 |
| Concern over biotechnology[b] | t(1073)=-3.31 | P=.001 | YES | 489 | 3.78 | 0.70 | 0.03 |
| | | | NO | 586 | 3.63 | 0.77 | 0.03 |
| Buy more organic food if it was available[b] | t(1073)=-7.55 | p<.001 | YES | 489 | 3.57 | 0.89 | 0.04 |
| | | | NO | 586 | 3.11 | 1.07 | 0.04 |

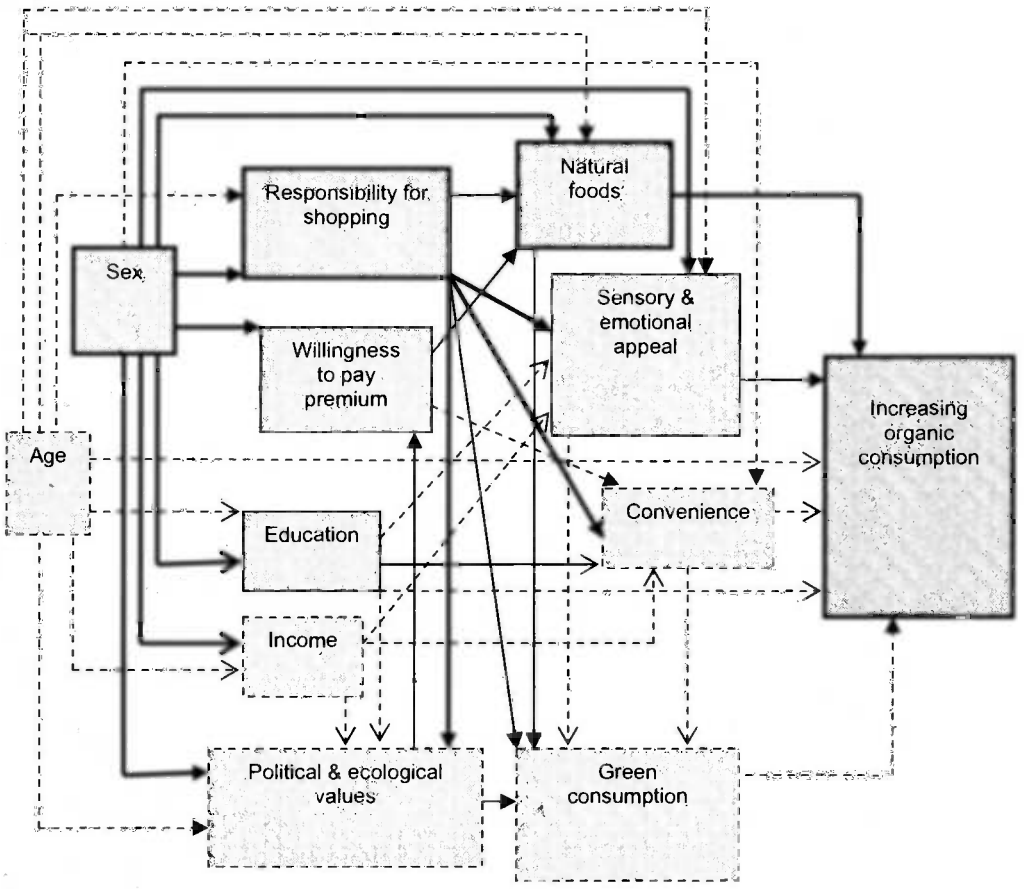
[a] 1=very low risk through 5=very high risk

[b] 1=strongly disagree through 5=strongly agree

Table A5.3: Path analysis—value of effects

| Variable 1 | Variable 2 | Value of Effect |
|---|---|---|
| Organic Use | Natural Foods | 0.220 |
| | Sensory & Emotional Appeal | 0.119 |
| | Convenience | -0.097 |
| | Green Consumption | 0.092 |
| | Education | -0.034 |
| | Age | -0.008 |
| Natural Foods | Sex | 0.409 |
| | Responsibility for Shopping | 0.196 |
| | Willingness to Pay Premium | 0.160 |
| | Age | 0.016 |
| Sensory & Emotional Appeal | Sex | 0.297 |
| | Responsibility for Shopping | 0.212 |
| | Education | -0.095 |
| | Income | -0.021 |
| | Age | 0.010 |
| Convenience | Responsibility for Shopping | 0.272 |
| | Education | -0.114 |
| | Sex | 0.076 |
| | Willingness to Pay Premium | 0.036 |
| | Income | -0.021 |
| Green Consumption | Political & Ecological Values | 0.187 |
| | Natural Foods | 0.121 |
| | Responsibility for Shopping | 0.112 |
| | Sensory & Emotional Appeal | -0.068 |
| | Convenience | -0.056 |
| Political & Ecological Values | Sex | 0.321 |
| | Responsibility for Shopping | 0.304 |
| | Education | -0.051 |
| | Income | -0.022 |
| | Age | 0.011 |
| Willingness to Pay Premium | Sex | 0.244 |
| | Political & Ecological Values | 0.170 |
| Responsibility for Shopping | Sex | 0.309 |
| | Age | 0.003 |
| Education | Sex | -0.295 |
| | Age | -0.020 |
| Income | Sex | -1.123 |
| | Age | -0.053 |

Figure A5.1 Path model for increasing consumption of organic foods among those who had consumed at least some organic food over preceding 12 months




**Key:**

Major effect (>0.20 in magnitude)

Medium effect (0.10 – 0.19 in magnitude)

Minor effect (<0.10 in magnitude)

Positive effect (closed arrow)

Negative effect (open arrow)

Note: a positive relationship in relation to sex indicates higher scores among women than men.

# Index