Industrial farming systems have been promoted by government departments and research centres as efficient ways to improve crop yields and to manage the agricultural environment. On this view, chemical, mechanical, and most recently genetic engineering ‘innovations’ are essential to the further development of sustainable agriculture and food production systems.

However, although promising increased rates of food production and improved financial returns for producers, opponents of industrial agriculture point to the social and environmental problems for farmers, rural communities and agricultural environments that result from the industrialisation of food and agriculture systems (see Lawrence et al 1992). Industrial farming also disconnects food consumers from farmers and rural landscapes, and produces an array of health risks. Farmers face exposure to harmful chemicals and unsafe farm machinery, and consumers express concern about food-related health risks associated with genetically modified foods, mad cow disease (BSE) and chemical residues in food (see Lawrence et al 2001, Lockie et al 2001). These health risks are stark evidence of the impacts of over-industrialisation of agriculture, and magnify the need to re-think systems of food production and distribution.

Organic farming seems an obvious alternative to industrial agriculture. The organic agriculture and food movement emerged in Australia and elsewhere during the early part of the twentieth century, as a critique of industrial farming methods and the fragmentation of consumers from sites of food production. In its place, movement members proposed organic farming methods—including the use of biological cycles, crop rotations and companion planting—and the distribution of food through local food networks (Belasco 1993, James 1993, Lyons 2001).

Because of its historical opposition to industrial farming, impetus for the organic farming movement occurred at the periphery of dominant agriculture and food systems. Despite this resistance, membership in the organic farming movement did not simply coalesce in the rejection of dominant approaches to agriculture. It also meant embracing a number of practices that evolved from practical work and research that took place in these margins (Belasco 1993, James 1993). During the 1920s and 1940s, for example, the research of some scientists and farmers became the basis of organic farming and biodynamic farming methods. At the same time, journal and book publications also began to emerge alongside national organic associations (Lyons 2001).

By the 1960s a range of alternative food distribution networks—including non-profit food co-operatives and communes—had also established, providing for the local distribution of organic food. Over the last three decades health food shops have also increased the variety and quantity of organic foods they sell, and specialty organic shops, supermarkets, cafés and restaurants have boomed, further expanding the availability of organic food to consumers (Clunies-Ross 1990, Belasco 1993).

While the organic agriculture and food movement maintained sustained growth throughout the mid-twentieth century, over the last two decades it has undergone unprecedented expansion. With this rapid growth, organics has evolved from a local food movement to an international industry. The organic industry is the world’s fastest growing food sector, with worldwide sales estimated to be worth US$20 billion and growth of between 20 and 50 percent per annum. In Australia, the value of organic production has expanded ten-fold between 1990 and 2000, and is currently valued at around A$250 million, of which about $80 million worth is exported (RIRDC, 1996; Palaszczuk, 2000). This increase in value reflects rapid growth in the amount of land under certified organic production, which now stands at 7.6 million hectares in Australia, an increase from 150 000 hectares in 1990 (RIRDC 1996). Despite this rapid expansion, organic food production remains less than one percent of the total value of agricultural production in Australia.

Profound changes to the structure and composition of the industry have accompanied the recent rapid expansion in the organic food market. Most important is entry of actors previously
associated with industrial food systems—including food processors, supermarkets, government departments and scientific organisations—into the organic industry. The resulting transformation of organics from ‘sandals to suits’ has incited much division and debate in the industry (Lyons 2001), and competing visions for the future of organics have emerged.

At the recent Inaugural National Organics Conference Sydney, Professor John Ikerd from the University of Missouri identified two opposing architectures for the organic industry. The first is characterised by an expansion in the number of small-scale organic farms that can sustain rural communities by providing employment and food to local people. This structure maintains relations between food producers, food eaters and the environment where food is grown. It presents a viable alternative to the distant relations between producers and consumers enabled by the over-packaging and processing of foods, and their distribution through supermarkets far removed from the environment where food is grown. The increasing popularity of farmers markets, food co-operatives and community supported agriculture projects illustrates food eaters’ desires to connect with the social and physical contexts where food is produced.

Membership in local food networks also highlights the importance of those social aspects of food gathering, preparation and eating. Participants in community gardens, for example, highly value the friendships and community that establish around the growing, harvesting and cooking of food (see Armstrong, 2000). A recent study with Queensland and Victorian residents also found food plays an important part in social gatherings and for bringing family and friends together (Lyons et al 2000).

In contrast, the competing architecture involves the replication of many aspects of industrial agricultural systems, including fragmentation, concentration, standardisation and specialisation of production within organic farming systems. Corporate capital, including food processors and supermarkets as well as government departments and regulatory bodies, comes to play a central role in shaping the trajectory of the organic industry.

The emergence of this structure has increased the scale of organic operations in Australia and elsewhere, and has enabled the international trade of organic produce. Indeed, much of Australia’s expansion in the organic market has resulted from the growing export sale of organic products to Japan, Europe and parts of the US. While appeasing the currently insatiable demands of organic consumers, this pattern of trade has disconnected food eaters from food production by increasing the distance organic food travels, thereby increasing the CO2 emissions associated with the distribution of organic food (see Pirog et al 2001). Processing, packaging and other value adding has also intensified the energy consumed in organic food production. The release of frozen organic TV dinners by US based company Cascadian Farms—with ingredients sourced and processed within the US and distributed worldwide—is an exemplary end-product of the emerging ‘organic industrial complex’ (Pollan 2001).

The entry of corporate capital has also resulted in the concentration of organic production to fewer, larger and more ‘efficient farm units’ and has, according to some, changed standards in the industry. The entry of Heinz Wattie into the organic market in New Zealand, for example, has resulted in an increase in the area committed to organic cultivation, but the number of farms has declined from 50 in 1991, to 14 by 1997 (Lyons 2000). Food processors and supermarkets continue to demand the standardised produce typical of industrial farming systems, denying the seasonal and other variations that organic farming systems traditionally embrace.

Many opponents of this industrial organic agriculture model argue that this architecture undermines the contributions of organic food systems to long term sustainable farming and community development. With this in mind, which architecture, if either, represents a viable future for the organic industry? Can these architectures exist side by side?

Proponents of the industrial organic architecture argue that ‘mainstreaming’ the organic food and agriculture industry will be required for long term viability of the industry. Similarly, a recent Australian consumer study found that many consumers stated the high cost of organic
food, alongside its inconvenience and lack of availability to purchase, were the main factors limiting their consumption (see Lyons et al, 2000). The economies of scale enabled by the entry of corporate actors may also reduce the cost of organic food production, increasing access to organic food. The production of organic foods by well-known food processing companies (such as Uncle Toby’s and Heinz Wattie) and its sale through supermarket chains can also increase access to organic food.

It seems that expansion in the area of land under organic cultivation and increased rates of organic food consumption offer both environmental and social benefits, by improving the livelihoods of farm families and rural communities, and public health. Certainly, many within the organic industry argue that the ‘mainstreaming’ of organics will increase consumer access to organic food, and provide producers with an assured market for their product.

However, Australians who eat organic food value a wide range of social and environmental attributes they associate with organic food—and many of these are compromised by the industrialisation of organic farming systems. For example, many organic food eaters value local food production and distribution systems that supply minimally processed and packaged foods. Such systems enable them to connect with the social and bio-physical landscapes where their food is produced. These consumers also believe organic food should be fairly traded, that is, that producers should receive the ‘real’ cost of growing food (Lyons et al 2000, Lyons et al 2001). For them, an industrial organic architecture represents the antithesis to local organic food networks, by increasing the distance between sites of production and consumption, and separating the producers of food from those who eat it.

The rapidly industrialising organic food industry also represents a significant departure from its historical opposition to industrial systems of agriculture. The contemporary organic industry must address a fundamental question: can an industrial organic architecture reflect the diverse values and beliefs of organic consumers? Or will the historical culture and politics of organic food be sanitised by corporate and regulatory agendas?

In the UK, the practices of leading retail chains, including Sainsbury, Iceland and Tesco, suggest it may be possible to meet these diverse organic consumer values within an industrial model. In recent years, for example, these supermarkets have begun to market a wide range of organically-produced fruit and vegetables, as well as other products such as milk, yoghurt, eggs, tea, coffee, baby foods, flour, bread and biscuits (Burch et al 2001). These chains have also developed policies that seek to minimise social and environmental impacts across the range of (food and non-food) activities they are involved in. For example, since the early 1990s, Sainsbury has adopted practices to assist in responsible product sourcing, waste minimisation and reduced transport and processing (Lyons et al, in press). These policies cover all of the group’s activities and apply to all operations, including management, store design and operation, waste management, and transport (Burch et al 2001).

Despite the formulation of these policies, the supply of organic food by supermarkets may remain unsatisfactory to some consumers. Continued consumer resistance may relate to the alienation of farmers and the agricultural environment from supermarket retailers and consumers, and the monopoly of large retail chains in the food supply network. Over the last decade in the UK, for example, increasing monopoly control of food distribution by retail chains has resulted in the closure of over 10,000 food co-operatives and local shops. The distribution of food via centralised retail chains has also increased the distance people travel for food, and exacerbated reliance on private motor vehicles (Caraher 2001).

The international success of the ‘slow food’ campaign and local food networks also illustrates the rejection—at least by some—of industrial food production and distribution systems, including supermarket retail chains. For these actors, re-thinking current food systems is not enough. Rather, they propose a radical re-organisation of the ways foods are produced and distributed, and how we conceptualise relations between food producers, food citizens, agricultural landscapes, and food itself.

The debates surrounding organic food and agriculture are poised between two competing architectures—or futures—for the industry. One model fosters relations of trust between food,
farmers, food citizens and the environment. The opposing model disconnects consumers from the physical and social context where food is produced. Some critics of the industrial organic model argue these competing architectures cannot exist side by side. They claim the industrial organic architecture will undermine the viability of sustainable organic local food networks, by eroding the social justice, environmental and philosophical values that the broad range of members of the organic movement hold.

The recently failed proposal by the United States Department of Agriculture to re-define organic agriculture to include genetically engineered seed, toxic sludge and food irradiation is illustrative of an attempt to marginalise such values. The organic farming community has expressed opposition to the release of genetically modified organisms (GMOs) on philosophical, ecological and social grounds. Despite raising these concerns, the widespread contamination of genetically modified seed and pollen has challenged the ability of farmers to ensure their produce is GMO free. Indeed, the organic industry faces the prospect of being unable to ensure organic food is free from genetic modification.

The future for the organic agriculture industry in Australia and worldwide, remains unclear. In order to ensure the long-term integrity of the organic industry, it will be imperative for debates to recognise and include the values and beliefs of all actors engaged in the industry. If the industry fails to do this, it may inadvertently destroy the future viability of diverse organic architectures.

REFERENCES


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