

Eating on the fringe: Influences on organic food consumption

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Abstract

Organic food is defined by the New Zealand Food Safety Authority (2009) as food grown and processed without chemicals, fertilisers or genetically modified organisms, using sustainable farming methods such as crop rotation and organic fertilising.

This working paper compares global data on organic food consumption as a prelude to understanding motives for organic food service and consumption. While New Zealand (NZ) markets itself as 100% pure, an overwhelming majority of New Zealanders eats food sprayed with or grown in chemicals, and only 1.16% of land is in organic production (FiBL and iFOAM, 2013).

The paper overviews studies undertaken in Auckland (NZ), the United Kingdom (UK) and the United States (US), to help understand motives for serving and eating organic food. Reasons include environmental concerns, health concerns, and the belief that some organic food tastes better than conventionally grown food. However, price and supply problems limit the organic market generally. Indications for future study are indicated.

This study is particularly relevant to health and wellness tourism because a commitment to organic food may provide a competitive advantage that cannot be developed quickly, as it typically takes three years to convert land to organic use (Department for Environment - Food and Rural Affairs, 2012). It also critically examines New Zealand's position in the global organic market in the context of the 100% Pure marketing campaign (New Zealand Tourism, 2013).

Introduction

New Zealand has fewer than 1400 organic farmers (Table 1), and website searches surrendered only a few organic supermarkets. Common products such as organic coffee are hard to source away from major centres, and in supermarkets, organic food prices are prohibitive. Site research in Auckland (September 2013) showed that organic milk cost a \$1.15 a litre more than conventional milk, apples \$1.00 more a kilogram, and organic eggs, \$3.30 more than free range eggs for a box of ten. New Zealand's marketing image as 100% pure appears pure rhetoric, given that most farmers use synthetic fertilisers and pesticides, and many rivers and lakes are polluted with nitrates and phosphates.

New Zealand's carbon print per capita is comparable with countries such as the United Kingdom (UK) and Switzerland (Norwegian University of Science and Technology, 2016), where population density is comparatively high, suggesting that NZ's low population (4 million) is a greater influence on pollution than environmental protection policies.

Global data show New Zealand's comparatively weak production and consumption of organic food. Given the small size of this country, the percentage of land in organic production is surprisingly low when compared to other small countries such as the UK, which has three times as much land in organic production.

Table 1. Comparative Global Markets for Organic Food*

Country	Hectares in organic production	Percent of agricultural land	Producers	Sales (Euros, millions)
Australia (2009)	12,001,724	2.93%	2,129	942
Canada	841,216	1.24%	3,718	1,904
Germany	1,015,626	6.08%	22,506	6,590
New Zealand	133,321	1.16%	1,365	205
United Kingdom	638,528	3.96%	4,650	1,882
US (2008)	1,948,946	0.60%	12,941	21,038

* (FiBL and iFOAM , 2013)

Indeed, being 100% pure is a pure myth, and somewhat analogous to New Zealand's interest in organics, which is also mythical – in fact one myth supports the other and consumers are the ultimately the losers. Supply is weak (Mason, 2008), and a lack of interest at government level is considered a major factor (Kedgley, 2006).

In NZ organic restaurants can register with the Organic Explorer (OE) website as having an organic theme, but there are still very few. However, number are increasing; in 2008, nine restaurants and 21 cafes were listed as organic (Organic Explorer, 2009) and by 2009 this had increased to 14 restaurants and 34 cafes, perhaps indicating a growing interest in organic dining.

Literature Review

Consumers do not necessarily understand what organic food is; one study found that participants perceived it as having fewer calories, more fibre and less fat (Lee, Shimizu, Kniffin, & Wansink, 2013). This confusion is likely to further confuse attitudes to organic food, which may be widely perceived as health food. The UK Soil and Health Association (2013) provides a list of benefits associated with eating organic food, ranging from better environmental protection through to higher nutrition levels of organic milk, and the obvious lack of pesticides – they point out that there are over 320 common pesticides found in conventionally grown food.

Reasons to consume organic food include the perceived health benefits, some of which are supported in the literature. For example, in a school project by Ria Chhabra (see Chhabra, Kolli, & Bauer, 2013) of Dallas, Texas, fruit flies fed on organic bananas and potatoes had better fertility, stress resistance and longevity, than those fed conventionally raised produce (Parker-Pope, 2013). There is more protein and Omega fatty acids in organic milk (Palupi, Jayanegara, Ploeger, & Kahl, 2012; Soil and Health Association, 2013), lower nitrates and higher levels of flavonoids and ascorbic acid (Koh, Charoenprasert, & Mitchell, 2012) and more antioxidant compounds such as carotenoids and vitamin C in sweet bell pepper (Hallmann & Rembialkowska, 2012). Despite this, a meta-analysis of 162 studies in 2009 (Dangour et al., 2010) claimed there was no nutritional advantage in eating organic food. However, a subsequent meta-analysis of 323 papers found consistently higher anti-oxidants and less pesticide residue in organically grown food (Baranski et al., 2014). The conflicting result is likely to arise from the tendency of research on organic food to focus on specific additives, confusing the outcomes, and generally hiding an important advantage – organic food does not contain potentially harmful chemicals.

Several studies have found that organic food tastes better (Radman, 2005), which has been considered a positive influence on consumption (Duffort, 2006). Organic apples have been found to be firmer and sweeter than conventionally grown apples (Reganold,

Glover, Andrews, & Hinman, 2001), and in one study, consumers rated conventionally grown tomatoes as sweeter and better tasting than organic tomatoes (Gilsenan, Burke, & Barry-Ryan, 2012). However, another study found that scores for sweetness, acidity and flavour were significantly higher than conventionally grown tomatoes, a difference attributed to reduced nitrogen content (Heeb, Lundegardh, Ericsson, & Savage, 2005).

Using trained sensory panellists Fillion and Arazi (2002), found that organic orange juice tasted better, but no difference was found between organic and conventionally produced milk. Fillion and Arazi therefore concluded that it is fallacious to claim that organic food tastes better than that produced by conventional means.

Environmental values are another influence on organic food consumption. Protection of the environment, animal welfare, reduced pollution, less greenhouse gases, and the development of crops with natural resistance to disease (Soil and Health Association, 2013) are amongst a plethora of benefits that appeal to those with green values.

Determining the influences of these and other motivators is the primary aim of this study.

Methodology

Two data sets are used in this working paper. The first examined restaurateur motives for serving organic food in Auckland (NZ), and the second, for consuming organic food in Scotland (UK) and San Diego (USA).

In the first study, data were collected in semi-structured interviews with five Auckland restaurateurs. The overall purpose was to identify common themes of interest to restaurateurs by discussing the concept of organic dining as a trend. Open-ended questions allowed participants the freedom to offer as much detail and information as they wanted and addressed the issues of interest (i.e. why do consumers eat organic foods?). Each participant responded to a standard series of questions, which ensured that common themes of the data could be developed and analysed.

Critical theory, which questions accepted beliefs and identifies unreasonable and irrational contradictions (Lor, 2014) underpinned the approach to the second study, which essentially questioned participants' beliefs around organic food. The purpose of the study was to determine the foundation of their beliefs, while examining the reason or lack thereof, that led to them.

Grounded theory was the methodological basis for recruitment, data collection and analysis for both studies, as there was no hypothesis to test, and theoretical work on green values is sparse (Pernecky & Johnston, 2006). Data were analysed using the constant comparative method; that is, data were coded and categorised around themes relating to the research questions.

Results

Interviews with restaurateurs found they were hampered by supply problems, and producers' inability to maintain a regular supply; one complained of multiple sourcing issues because one supplier alone could not meet demand. While four of the five restaurateurs were motivated by their own green values, one served organic menus because he considered it a better product:

I want a point of difference over other people's menus so I source some organic produce that gives us a difference ... I am not purchasing organic to save the world... I never thought about the environment until you said it. It is not my job to educate as a restaurateur, but to make a market for organic food.

Interviews in the UK and USA with organic consumers found that environmental concern was a major motive. Many used their spending power to exert influence in favour of organic producers, and were suspicious of large consortia such as Tesco (a supermarket chain in the UK), which was perceived as greedy and lacking in environmental concern. Similarly, UK and US participants cited Monsanto as a greedy and dangerous company, because their pesticides threatened flora and fauna, and stimulated agricultural production unnaturally.

UK data showed that some participants had sick friends who had been advised by their doctors to eat only organic products, and one (a teacher) thought many young children become sick because of the poor quality conventional food they ate. Conventionally produced foods were considered to avoid costs of ethical food production, such as fair trade policies, supporting small communities, and sustainable farming practices:

Crap food that is normally available actually has a lot of hidden costs in it that aren't represented in the price.

As one participant explained 'future generations will pick up the cost'. Although some participants mentioned taste, the primary motives were:

- Preserving the environment for future generations
- Using purchasing power as an influence
- Eating healthily
- Avoiding pesticides, toxins, hormones, and chemicals.

The discussion addresses implications for further research.

Conclusion and Discussion

Interviews with organic consumers showed that environmental concern was their major motive, although this was more evident in the UK than in the US, where health concerns may be marginally more influential. Many interviewees used their spending power to exert influence and were suspicious of large consortia such as Tesco (a supermarket chain in the UK), who were perceived as greedy and lacking in environmental concern. Both UK and US participants cited Monsanto as a greedy and dangerous company controlling agricultural production, because its pesticides were believed to threaten flora and fauna.

Data from interviews with NZ restaurateurs indicated that green values were the main influence on serving organic food, and supply problems are a major deterrent inhibiting organic product use. Both problems are linked to agricultural production, and could be eased with government intervention. However, in a country such as New Zealand, where primary production has long dominated exports and activities, it may be difficult to shift views on the importance of organic farming. Perhaps the 100% pure theme has lulled New Zealanders into a false sense of purity and green pride.

Further study is planned, with interviews in New Zealand, USA and Australia, with consumers of both conventional and organic foods, to determine further motivations for consumption, and reasons for not purchasing organic products. It is anticipated that final results will provide motivations for organic consumption that can be used to support consumption (and therefore production) elsewhere. Improving New Zealand's organic food production and consumption would not only support its image of 100% Pure, but also help establish New Zealand's place in the health and wellness tourism market.

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