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The limitations of market driven sustainability: The case of environmental management systems for food production in Australia.

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Abstract

Environmental Management Systems (EMSs) address environmental risks in supply chains and certification of environmental claims. Governments supporting EMSs have encouraged producers to respond to anticipated consumer environmental concerns. Attempts at implementing EMSs have rarely been in direct response to market demand but are usually farmer organisation driven – to forestall increased regulation. In Australia, consumer demand for foods produced to environmentally sustainable standards is minimal because consumers don't believe these products offer special benefits. EMS implementation is expensive and onerous; and the products require a market premium. Food consumers have difficulty differentiating the terms organic, environmentally-friendly, and sustainably-produced in food labelling.

Introduction

There has been a growing interest by Australian governments and rural industries in the potential for environmental management systems (EMS) to provide credible mechanisms for establishing and maintaining sustainable production systems. An EMS is a methodical approach to continuous improvement in planning, implementation and review of an organisation's efforts to manage its impacts on the environment.

As food consumers become better informed about the environment, it follows that the green image in the assertion of "clean and green" production will need to be backed up by sound evidence, particularly if it to be used as a marketing tool and if consumers are to pay a premium for clean and green produce (Chang and Kristiansen 2006). One way to authenticate a clean and green image is to implement environmental management systems – EMS; or ISO14001 accreditation systems. These are designed to encourage landholders and others in the supply chain to improve their environmental management through structured planning and monitoring processes. There is a range of formal systems in the food industry for monitoring of product and process attributes including ISO 9000 – for quality control, HACCP for specialised food safety, and ISO 14000 – for the environment.

EMS is a business management tool that assists people identify and address environmental risk associated with their business activities. An EMS gives a management framework based on a "plan, do, check, act" cycle that seeks to achieve continuous improvement. In Australia's National Framework for Environmental Management Systems, EMS is described as a voluntary, flexible "systems approach". The common process of EMS development by a business is development of an environmental policy, followed by an assessment of environmental risk and then

implementation of appropriate change to address the environmental risks (Fisher 2005; Carruthers 2005).

The management demands of an ISO140001 EMS can be onerous. Either a significant price premium reflecting consumer demand, the threat of strong government regulation, or refusal of access to major food retail supply chains are likely to be necessary conditions to warrant the effort involved. Additionally, there may be potential tensions between the use of EMS as a product differentiator in food marketing and the use of "market-driven" EMS to overcome catchment environmental problems. If all producers implement EMSs then there is no comparative market advantage differentiating individual producers

EMS National Pilot Programme

The Australian Government undertook a $8.5 million EMS National Pilot Program (EMSNPP) involving 15 pilot projects in Australia in 2003. The pilot program was initially characterised as a market based initiative in environmental management however the focus has largely been on the farm production sector of the supply chain. In contrast, in the northern hemisphere it has largely been food service companies (for example, Starbucks) and retailers in the United Kingdom that have used their market power to enforce environmental standards on suppliers (Bhaskaran, Polonsky, Cary and Fernandez 2006). The EMSNPP represented a diverse range of industries, regions, partnerships and natural resource management situations. A review of the program has recently been completed by URS (2006).

Environmental claims can be grouped according to their evaluation and certification, whether they are voluntary, whether they are audited and by whom they are audited (Chang and Kristiansen 2006). In its formal implementation an EMS is underpinned by the international standard ISO14001; and environmental claims are substantiated, ideally, by third party certification or audit. In assessing the recognition and certification of programs within the EMSNPP it was found that formal certification to the ISO 14001 standard was not an achievable nor the desired goal of every EMS. Some of the pilot projects felt that ISO 14001 accreditation was too onerous for their participants and were dissuaded by the high costs associated with audits (URS 2006 p.x).

Beneficial environmental outcomes associated with sustainable food production are often difficult to observe, extend in space and time beyond the farm, may be slow in their impact and involve externalities shared with others. The evaluation of the EMSNPP provided little evidence that environmental best management practices had been adopted or that the participants planned to adopt them. It appeared to be difficult to assess how desired environmental outcomes at the catchment scale translate to the farm scale. Significantly, it was concluded that it was unlikely an EMS would drive the desired change in management of catchments at a sufficient scale to produce significant catchment-wide improvement in the short to medium-term (URS 2006). Freckleton and Lockie (2006) found that private food quality standards (EurepGAP) for promoting environmentally and socially responsible production methods had limited impact on farming and food handling practices on an Australian citrus growers' cooperative.

While the URS (2006) review concluded that any voluntary, self-motivated system aimed at improving environmental performance to achieve catchment and environmental targets was unlikely to be effective at the catchment scale, it was observed that access

to markets and price premiums were not shown to be reasons for participants using an EMS. Aside from isolated niche marketing opportunities, there was no evidence that the majority of markets for agricultural products require environmental assurance. The URS report observed “Without market drivers, increased management efficiency or cost reduction, there will be no increased financial capacity for improved levels of environmental stewardship.” (URS 2006 p.xiii).

An assessment of consumer demand

In a project to investigate the likely demand for food produced according to codes of practice ensuring sustainable use of natural resources supply chain members and retailers were interviewed as informed surrogates to assess consumer demand. The study examined beliefs regarding the opportunities to develop foods produced under an “eco-friendly” label. In-depth semi-structured interviews were undertaken with 15 senior managers in 15 food enterprises (see Cary, Bhaskaran and Polonsky 2004; Bhaskaran, Polonsky, Cary and Fernandez 2006).

Maximum variation sampling, a purposeful sampling technique, was used in identifying the organisations and the persons to be interviewed in these organisations. The technique entails systematically identifying a wide range of variation across the sample on dimensions of interest and also organisations that demonstrate homogeneity that transgress these variations. In this study the variation that we attempted to capture was that the organizations must represent different elements of the value chain and should comprise both large companies and small to medium enterprises (SMEs). The common pattern that we attempted to capture was that the organisations were significant contributors in the food industry in Victoria. The interviewees comprised senior managers in the two major supermarket chains, eight food processors, three grocery wholesalers and two fruit and vegetable growers and packers. Each interview lasted about one hour. All interviews were tape recorded, the interview notes were transcribed and sent to the interviewees for review and confirmation that the notes accurately captured their comments at the interview.

Confusion in meanings

The interviews with the industry informants indicated that there was confusion, lack of understanding, and skepticism regarding the nature of food produced to environmentally sustainable standards. As a consequence, food industry informants indicated that, in general, it was not currently feasible to market food asserted as produced to environmentally sustainable standards. This situation is caused and confounded by the difficulty in identifying the “sustainably produced” properties of food products; the lack of appropriate labeling and branding strategies; the lack of veracity and certification of claimed production and processing practices; the lack of a credible EMS for food products; and by consumer confusion or indifference.

Respondents generally felt that there was clear understanding of the term organic and that there were protocols for accrediting organic products. Some respondents commented that the accreditation processes for organic products sometimes involved multiple bodies and they (i.e. respondents) were not sure whether the standards applied were rigorous. While consumers, were generally aware of organic foods, there was a perception that there was confusion regarding the value propositions of organic products.

There was less understanding of terms such as green, sustainable and environmentally responsible food products and it was suggested that these had "*fuzzier meanings*" for all supply chain members, including consumers. One respondent suggested *"I am not sure what environmentally friendly means"* and several others suggested that terms were interrelated, i.e. "*organic means sustainable*". Respondents were not aware of any standard definition of green or sustainable food products in Australia, although a few respondents were "*vaguely aware*" of such schemes elsewhere. Respondents believed that any potential "green" or "sustainable" food label would lack credence value for consumers and supply chain members and might be seen as greenwash and contribute to further clutter in an already complex market. Sustainability might have some meaning with regard to food products if there were some well defined accreditation criteria, although this was not seen as possible given the breadth of issues associated with sustainability.

A key finding was that the meanings of the labels "sustainably produced" and, to a lesser extent, "environmentally friendly" are confused and, in contrast to "organic", not widely agreed by the industry or consumers. This confusion, and the assessment that currently there is relatively insignificant demand for sustainably produced food, suggests there will be considerable delay in sustainability-labelling or eco-labelling of food products. Organic food products and naturally produced food are often perceived as surrogates for sustainably produced food.

From a retailing perspective, sustainably produced food is more than sustainably used natural resources at the farm level. It necessarily includes sustainable practices throughout all elements of the food supply chain to the point of retail. In addition, food eco-labelled as sustainably produced may need to assert animal welfare, biodiversity, energy and transport credentials to meet potential consumer concerns.

Marketing sustainably produced food

While producers and processors have the most impact on supply chain outcomes, past studies on eco-friendly production and marketing initiatives have concluded that stakeholders beyond channel members influence outcomes. To be effective eco-friendly production and marketing must be the outcome of collaborative initiatives of producers, processors, retailers, wholesalers, consumers, special interest groups and governments (Polonsky, Bhaskaran and Cary 2005).

Most respondents in the reported study felt that final consumers and supply chain members have difficulty in appreciating the utility of vague concepts such as sustainability or green. As such, these terms would provide limited, if any, competitive advantage. Respondents indicated that they were aware that niche eco-segments might exist but respondents believed that at present this segment was more concerned with organic attributes rather than eco-friendly attributes. Some respondents suggested that consumers' interest in healthier eating options might translate into future market demand.

The findings in this study confirm the findings of the larger consumer study by MacNamara and Pahl (2003) that motivations for purchasing both organic and environmentally friendly meat products were based largely on a desire to achieve personal health and wellbeing. MacNamara and Pahl (2003) found that, while

consumers associate the term “organic” with “chemical-free”; most consumers appear to have no clear understanding of the term “environmentally friendly” often nominating either organic or chemical-free as the best description of environmentally friendly.

Developing eco-products were seen to be constrained by competition from the existing organic market, higher production costs and possible shortages of eco-produced products. All the retailers interviewed suggested that consumers were unwilling to pay for additional costs associated with organic products and that this would most likely be the case for eco-food products as well, unless there was a perceived higher value to sustainable foodstuffs which, currently, did not appear to be the case.

The findings suggest that respondents have widely different beliefs regarding the meaning of environmentally-friendly and sustainably produced and believe that claims regarding “eco-friendly” characteristics are difficult to substantiate. They further suggested that “eco-friendly” considerations are not a major influencer of consumer food purchase decisions at present and thus “eco-friendly” production was not a strategic focus of their companies. Respondents felt that “eco-friendly” labelling would not be successful until consumers value “eco-friendly” food attributes.

Conclusions

The results of the study suggest that the branding of food as “eco-friendly” or “sustainable” will be unlikely to occur unless there are significant changes in demand as well as supply. Consumer demand for foods, produced under environmentally sustainable standards, has been slow to take-off because customers have not perceived these products as offering any special benefits. As well, the implementation of environmental standards is expensive and the products are more expensive than traditional products. More significantly, food purchasers were seen as confused in differentiating terms such as organic, green and environmentally friendly as food product labels.

Based on experience with organic foods, it seems that many food producers and marketers are not likely to switch to environmental standards. It is likely that initially a small number of food producers will adopt ISO14001 standards and EMS protocols and sell these products to the supermarkets. If demand increases, other suppliers will join the bandwagon and based on the success with these programs more comprehensive environmental management programs may be adopted.

Experience with organic foods suggest that, notwithstanding customer beliefs about product benefits, growth in demand for foods conforming to environmental standards will be slow and constrained by higher production costs. Thus, in the short-to-medium term, it is unlikely to be commercially viable to have widespread adoption of environmental standards in food production and marketing. Even in the longer-term, the market is unlikely to be substantial.

The reported study did not examine consumer attitudes directly. Given the importance of demand in driving change, more research would be valuable to better understand how consumers might react to environmentally sustainable (eco-food) labels and whether there are any factors that might result in shifts in their consumption. However, a reasonably firm conclusion can be drawn that, with current consumer preferences, government policy promoting improved resource management using EMSs, and

focusing nearly exclusively on the production sector of the supply chain, will need to depend on other incentives or "drivers" rather than market driven incentives.

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