Introduction

Sustainable development has become a priority worldwide, with governments from 178 countries, including the UK and France, agreeing to adapt an action plan for sustainable development ‘Agenda 21’ to the needs of their own country (United Nations, 1992). Consumers are also becoming implicated in eating in a more sustainable way and the food system is adapting to these concerns with different types of arrangement between consumers and producers that incorporate different degrees of ‘sustainability’. Local food systems are emerging as alternatives to models where producers and consumers are separated through a chain of manufacturers, distributors and retailers. One such initiative that is gaining in popularity is commercial fruit and vegetable box schemes. Boxes are ordered from the farm and seasonal produce is delivered to a customer’s home or convenient collection point. Most box schemes include organic produce in their range with the added benefit of improved land management and biodiversity conservation. Box schemes also supply local food, although the proportion varies between schemes. Local produce reduces transport and provides the opportunity to generate increased income in the local community (DEFRA, 2002). However, there is not a common understanding of what ‘local’ means in terms of the distance that food has travelled. ‘Local’ implies a certain proximity but consumers also associate it with other characteristics including small scale, greenness and quality (FSA, 2003).

Commercial box schemes therefore have elements that potentially satisfy all three criteria of sustainability, i.e. being economically, ecologically, and socially sustainable (Brundtland Commission, 1987). The first box scheme in the UK was set up in 1991 and in just over 15 years there are now 500 such schemes supplying 60,000 people. Recent figures suggest that £146 million was spent on box schemes in the UK between 2005 and 2006 (Soil Association, 2007). However with this growth it must be acknowledged that a wide range of types of commercial box schemes have emerged that place differing degrees of importance on whether produce is organic, local or has an economic ethos. For example, in the UK the market is now dominated by a few large companies that distribute nationally and include imported organic produce in their range, and inevitably they contribute less clearly to sustainability criteria.

The development of commercial box schemes (système de livraison de panier) in France is not so clear cut. The strong link that the French population have maintained with agriculture has meant...
that purchasing directly from farms and local markets has remained popular (Grimes, 1998; Pettinger, Holdsworth, & Gerber, 2008) and the image that the general public has of farmers is positive (Dury, 2008). French consumers have been familiar for a long time with a wide range of labelled local foods, such as ‘produits du terroir’ and they regularly frequent open markets in search of such produce (Dury, 2008). Between the 16th and 19th centuries, England and France took different directions concerning agriculture and food policies (Clément, 1999). While England decided to rely on imports and to privilege industrial development, France developed protectionist food policy (Mazoyer & Roudart, 1997). During the 20th century the two food economies started to converge, but differences still persist to this day. In terms of employment for instance, nearly 1 million people work in the agriculture sector in France and 1/4 million in the UK (UNECE, 2009). Beyond statistics, the old image of France as an ‘agricultural and food power’ versus England as an ‘Industrial power’ seems to persist (Fouilleux, 2003). Since 2000, partly in response to diverse crises of the modern food system in France, different forms of engagement between farmers and consumers have emerged, based on a closer relationship and a commitment of buyers towards forms of agriculture that respect both the environment, animals and humans (Lamine, 2005). Besides the growth of community supported agriculture (Cavard & Baros, 2005), France has also seen the development of non profit making Community Supported Agriculture based on that in the US (AMAP, Association pour le Maintien de l’Agriculture Paysanne).

Previous studies have failed to reach consensus on what type of consumers make sustainable food choices (Hughner, McDonagh, Prothero, Shultz, & Staton, 2007; McCachern & McClean, 2002; Vermeir & Verbeker, 2006) and the findings do not all concur with the stereotypical view of the ethical consumer being middle aged, rather affluent, with a high level of education and a prestigious occupation. The socio-demographic profile of consumers making sustainable food choices may be dependent on the country the research was conducted, as views and experiences of sustainable foods seem to be related to their cultural context (CONDOR, 2002; Sobal, 1998). Motivations of consumers for purchasing products produced by sustainable methods range from hedonistic (e.g. taste), ethical (e.g. animal welfare) or environmental reasons (e.g. food miles travelled) (CONDOR, 2002; Hill & Lynchaun, 2002; Onyang, Hallman, & Bellows, 2007; Soler, Gil, & Sanchez, 2002; Squires, Juric, & Cornwell, 2001). Individuals that regularly make sustainable food choices often do so for more altruistic reasons and seem to have developed complex beliefs about organic foods. They also perceive few barriers to making such purchases. Barriers frequently identified by the general population from a range of countries include price and convenience (Hughner et al., 2007; Magnusson, Arvola, Hursti, Aberg, & Sjoden, 2001; Vindigni, Janssen, & Jager, 2002; Zanoli & Naspetti, 2002). Although there is some evidence that consumers are willing to pay more for environmentally ‘added value’ products such as organic produced foods and local food purchased direct from farms (DEFRA, 2002; Gafsi, Legagneux, Nguyen, & Robin, 2006).

The general population seems to dip in and out of making more sustainable food choices, such as purchasing organic products when they are on special offer or for a particular occasion (Delpeuch, Maire, Monnier, & Holdsworth, 2009).

The aim of this paper is to identify the socio-demographic profile of consumers using commercial local box schemes in France and England; what motivates their participation in such a scheme and to identify barriers to making further sustainable food choices. France and England, although close in proximity have developed contrasting cultures and views on food (Holdsworth, 2008; Mennell, 1996). Differences in eating and shopping habits, as well as influences on food choice have previously been reported in France and England (Gibney et al., 1997; Mennell, 1996; Pettinger, Holdsworth, & Gerber, 2004; Pettinger, Holdsworth, & Gerber, 2006; Pettinger et al., 2008; Rozin, 1999). For example, the French place great value on the pleasurable aspects of eating and the quality of food, whereas convenience seems to be an important component of English food culture. These factors may also come into play when consumers make sustainable food decisions.

Methods

Box scheme selection

One commercial box scheme in each of the two countries was invited to participate in the study. The French arm of the study was completed first with a box scheme called ‘Terroir Direct’ (www.terroir-direct.com). Therefore to ensure comparability between the two schemes, an English box scheme ‘Red Earth Organics’ (www.redearthorganics.co.uk) was identified that had a similar ethos to the French scheme. Both promote the ethical principles of the company, as well as local, organic, quality produce. Each scheme states that almost all produce is locally sourced and the area defined as local is the administrative regions to which they belong, roughly equivalent to 100 km radius.

Questionnaire development

The questionnaire included sections on the socio-demographical profile of customers, the primary motivations and barriers to using the box scheme and the shopping habits of users as an indicator of their commitment. Respondents were asked to rank 10 possible barriers and 13 motivating factors. A list of 9 attitudinal questions (Fig. 1) assessed attitudes regarding people who buy food from sustainable sources. Respondents were asked to choose the answer that best suited how far they agreed or disagreed on a 5 point Likert scale of ‘strongly agree’, ‘agree’, ‘neither agree or disagree’, ‘disagree’, ‘strongly disagree’. The French questionnaire was translated into English and adapted to form a postal questionnaire suitable for Nottinghamshire residents. The questionnaire was then back translated to ensure no meaning had been lost and verified by two bilingual speakers.

Data collection in France

In France, customers of the box scheme ‘Terroir Direct’ were randomly selected from a list of all of the 1300 box scheme customers and completed the questionnaire by telephone. If the person refused to answer or was not available, the next person on the list was called; 182 customers completed the questionnaire in total. Data were collected between February and March 2006.

Data collection in England

The English customers of ‘Red Earth Organics’ were all delivered a questionnaire and freepost envelope in their fruit and vegetable delivery. A paragraph was included in the accompanying newsletter to encourage participation. Data were collected between October–November 2007. All of the 148 English box scheme customers were provided with questionnaires and 88 were returned, representing a response rate of 59.5%.

Statistical analysis

Data were inputted into Epidata Entry Version 2.1a (Lauritsen, Bruus, & Myatt, 2000), double entry was completed to identify any errors. All data were analysed using SPSS Version 15.0 (SPSS, 2006). Variables were regrouped to allow direct comparison. Univariate
analysis was conducted using cross-tabulation and the chi-squared test to identify any differences between the English and French samples. Differences were considered statistically significant at the 5% level.

Results

Socio-demographic profile

There was a significant difference in the age distribution of the population of box scheme customers in England and France (Table 1). A larger proportion of the French customers were aged over 45 years old or were retired. The English sample was younger and the majority of consumers were aged between 26–45 years.

Both of the populations were rather affluent compared with average earnings for their country (Table 1) and were more likely to have professional occupations when compared to the rest of the population in their respective cities. Over three-quarters (77.9%) of the English sample and nearly one-third of French box scheme users had a professional occupation, this compares with 31.3% and 6.0% professionals respectively in their regional populations. In England and France, approximately 60% of the box scheme users had medium or high incomes (Table 1).

Comparison of shopping habits

Supermarkets and mini-supermarkets were less frequently used in France than England in this study population (Table 2). Amongst French box scheme customers, supermarkets were more frequently used by professionals ($\chi^2 = 10.1, p = 0.006$). Box scheme customers reported rarely shopping at discount supermarkets in both countries. Local specialist shops (e.g. bakers, greengrocer, butcher) were used a similar amount in both countries, although in England, most customers using local shops were in the older age group (over 45 years). Markets were a frequently used outlet for sourcing local produce in France, whereas in England farm shops were more often frequented.

Motivations to use the box scheme

In England, the ranking of the statements used to assess motivations to use the box scheme revealed the top three

Table 1

<table>
<thead>
<tr>
<th>Box scheme users</th>
<th>Regional population demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nottingham, England (n = 88)</td>
<td>East Midlands, England</td>
</tr>
<tr>
<td>Montpellier, France (n = 182)</td>
<td>Languedoc, France</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
</tr>
<tr>
<td>18–35 years</td>
<td></td>
</tr>
<tr>
<td>35–45 years</td>
<td></td>
</tr>
<tr>
<td>Over 45 years</td>
<td></td>
</tr>
<tr>
<td>Incomec</td>
<td>National average monthly salaryd</td>
</tr>
<tr>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td></td>
</tr>
<tr>
<td>Non-professional</td>
<td></td>
</tr>
<tr>
<td>Never worked/retired</td>
<td></td>
</tr>
</tbody>
</table>


c England categories = low < £2600/month/HH; medium £2600–4300/month/HH; high > £4300/month/HH; France = low < 2500€/month/HH; medium 2500–4500€/month/HH; high > 4500€/month/HH; HH = household.

motivations could be broadly considered as altruistic reasons for purchase, as they benefit the environment and local community (Table 3). The three ranked least important were considered more hedonistic reasons (quality, convenience, budget). The most frequently stated motivation in France for purchasing from a box scheme was the quality of the produce, unlike England where access to local produce was the most important motivation. Altruistic motivations are ranked second and third in both countries—ecological commitment and natural organic production of foods.

**Barriers to making sustainable food choices more frequently**

In England, the statement that had the strongest agreement as a barrier to using the box scheme more often was that respondents ‘still like to eat some foods out of season’ (Table 3). The second statement that only showed slight agreement was the fact consumers felt it was too expensive to use the box scheme all of the time. Other constraints, such as convenience, product range and accessibility were not seen as barriers. Of the French sample, 18.2% believed there were no barriers to purchasing from a box scheme. Of the customers who thought there were barriers to buying from local food systems, the largest proportion (54.1%) reported it was too expensive for them and the limited range was the second most frequently reported barrier (11.5%).

**Perception of other consumers making sustainable food choices**

There is a similar order of ranking of perception of customers making sustainable food choices in both populations, when the statements with the strongest agreement are compared (Fig. 1). French box scheme customers perceived individuals making sustainable food choices as concerned about health, enjoying good food, committed to the cause and environmentally friendly. On the other hand in England, people purchasing food from sustainable sources were more likely to be seen as supporters of local produce than they were in France. Both countries ranked ‘trendy’, ‘young’ and ‘image conscious’ in the bottom three, suggesting neither population perceived individuals making sustainable food choices to be making their decisions as part of a popular trend.

**Discussion**

This study aimed at identifying the socio-demographic profile of consumers using commercial local box schemes in France and England; what motivates their participation in such a scheme and to identify barriers to making further sustainable food choices. The study also aims to identify whether more general influences on food culture emerge when consumers make sustainable food decisions, particularly the importance of pleasure and taste in France, and that of convenience in the UK.

The box scheme customers in this study fit the stereotypical view proposed by Vermeir and Verbeke (2006) of being rather affluent, with professional occupations dominating. They are therefore atypical of the general population of their respective regions. This contradicts earlier research in the UK of box scheme clients, which did not find participants had a high household income (Seyfang, 2004). However the majority of customers from the same study (Seyfang, 2004) were young to middle aged (25–44 years); similar to the findings of the current study. The fact that the English box scheme customers seem to be younger than those in France, and than the average in the English region they live, is possibly because ordering via the internet and receiving a home delivery is a more convenient option than sourcing foods produced by sustainable methods from other local outlets, such as farmer’s markets or local shops. Older English customers used local shops more, possibly as they have more time to access them during the daytime. A larger proportion of the French population shopped at local retail outlets compared with the English sample. These shops, such as markets and local specialist shops are used by all age groups in the French study population. These findings concur with those from a previous study of the general population that found that the French use markets and local specialist shops more frequently (Pettinger et al., 2008).

English box scheme customers reported the desire to still eat out of season foods as an obstacle to further purchasing more fruit and vegetables from sustainable sources; this was not the case for French respondents. One explanation may be that the English have become more accustomed to having all fruit and vegetables

---

**Table 2**

Frequency of visiting retail outlets in the two countries to purchase food.

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Supermarket</td>
<td>84</td>
<td>95.5</td>
</tr>
<tr>
<td>Discount Supermarket</td>
<td>7</td>
<td>8.4</td>
</tr>
<tr>
<td>Corner shop/mini-supermarket</td>
<td>57</td>
<td>67.9</td>
</tr>
<tr>
<td>Specialist local shop</td>
<td>54</td>
<td>63.5</td>
</tr>
<tr>
<td>Market</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>Farm shop</td>
<td>24</td>
<td>29.6</td>
</tr>
<tr>
<td>Health food shop</td>
<td>20</td>
<td>24.4</td>
</tr>
</tbody>
</table>

*S Occasionally—using the retail outlet more than once a month.

**Table 3**

Motivations and barriers to using the box scheme (ranked in order of importance) for French and English box scheme customers.

<table>
<thead>
<tr>
<th></th>
<th>English ranking</th>
<th>French ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of local produce</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Ecological commitment</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Natural, organic production of food</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Quality (taste, freshness, healthiness)</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Convenience</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Budget</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>I like to eat produce out of season</td>
<td>1</td>
<td>—*</td>
</tr>
<tr>
<td>It is too expensive</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I am not organised enough</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>I do not know which produce will be delivered</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>There is a limited range of produce</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>The quality of the produce is variable</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>The products are not traceable</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

*A Not identified as a barrier in the French sample.
available throughout the year via supermarkets; whereas the French use local markets more and are therefore adapted to the cycle of eating seasonal fruit and vegetables.

Consumers have numerous value conflicts when making food choices, for example convenience, cost and taste preference (Luomala, Laaksonen, & Leipamaat, 2003). Issues of sustainability therefore place further demands upon the consumer. The primary motive for the French using the box scheme was concern for quality produce in the hedonistic sense (taste, freshness, healthiness) compared to the more altruistic motive of buying local produce (to reduce food miles) by English consumers. Previous investigations have highlighted many differences between influences on food choice in England and France, indicating for example that the French place great value on the pleasurable aspects of eating and the quality of food, whereas convenience seems to be an important component of English food culture (Gibney et al., 1997; Mennell, 1996; Pettinger et al., 2004, 2006; Rozin, 1999). Lamine (2005) found that customers of non-commercial box schemes (AMAPS) are also motivated by taste, pleasure and hedonism. In England it has been identified that convenience (ease of preparation, use of pre-prepared commercial food) is more important when compared to quality when choosing food (Pettinger et al., 2004), but it seems that this is not the case amongst English box scheme users as they ranked convenience after the French as a motivating influence on participation in the scheme and restricted product range was more likely to be seen as a barrier in France. However, for the general UK population the issue of inconvenience has been highlighted as a key barrier to consuming more local food (Chambers, Lob, Butler, Harvey, & Traill, 2007).

Therefore the primary motives for sustainable food choice may be more related to cultural differences involved in food choice in general (Mennell, 1996).

The desire to purchase locally produced food may not be high on the list of priorities of the French population when choosing food because of the strong link that still remains in France with the tradition of regional agriculture (Grimes, 1998); therefore it may not be a conscious part of food choice, as food is often considered to be originating from local land in any case (Jeffries, 2001). However, both French and English respondents ranked ecological commitment and access to organic food as the next most important influences on their participation in the box scheme. These altruistic motives have also been found in investigations involving Australian and other UK participants. In these studies reported here participating experienced a transition in motives originally from health to more altruistic motives as they became more engaged in making sustainable food choices (Kneafsey et al., 2007; Kriflik, 2006; Seyfang, 2007).

As consumers become more committed to the scheme and develop more complex beliefs about sustainability, their motives appear to become more ethically and ecologically based rather than for personal benefit.

One limitation of this study was the different techniques used for data collection in the two countries (self completion vs telephone interview). Although unavoidable due to the availability of resources, the questionnaire was identical and was translated and back translated from French to English, ensuring no meaning was lost. Another limiting factor was the size of the box schemes in terms of their customer base. The French scheme had more participating customers, although it was established earlier so therefore has had time to build up its clientele. Even so, the fact that both schemes had similar policies on sourcing and delivering locally (within their regions) means they are at least comparable in terms of local scope.

Conclusion

The study's findings suggest that consumers making local, more sustainable food choices in a box scheme still remain in a niche market that professionals and wealthier citizens participate in. It seems that English box scheme customers are motivated mainly by altruistic reasons, by a desire to contribute to a more sustainable food system. On the other hand, the findings appear to reinforce the importance of food quality and pleasure for the French generally, although it seems that once this fundamental criterion has been fulfilled, French box scheme users appear equally motivated by contributing to the ecosystem in a positive way.

For sustainable agriculture to have an impact it must become financially and physically accessible to the mainstream market, maximising distribution of local products through supermarkets may be a vehicle for this given that over 75% of the populations in both countries regularly use supermarkets.

Acknowledgements

The research in France was funded by Equal, a European Social Fund (ESF) Community Initiative and was part of a development project for creating direct links between farmers and consumers (for details, see www.equal-croc.eu/spip.php). The study in England was funded by the School of Biosciences, University of Nottingham.

References


