UNIVERSITY OF EXETER

Centre for Rural Policy Research

Analysis of socio-economic aspects of local and national organic farming markets

Final report for Defra

Matt Lobley, Allan Butler, Paul Courtney, Brian Ilbery, James Kirwan, Damian Maye, Clive Potter and Michael Winter

CRPR Research Report No 29.

Analysis of socio-economic aspects of local and national organic farming markets

Final report for Defra

July 2009

Matt Lobley,[1] Allan Butler,[1] Paul Courtney,[2] Brian Ilbery,[2] James Kirwan,[2] Damian Maye,[2] Clive Potter[3] and Michael Winter[1]

[1] Centre for Rural Policy Research, University of Exeter

[2] Countryside and Community Research Institute, University of Gloucestershire

[3] Centre for Environmental Policy, Imperial College, London

This report can be downloaded from the CRPR website

http://centres.exeter.ac.uk/crpr/publications/index.htm

For further information, please contact Dr Matt Lobley, Centre for Rural Policy Research, Department of Politics, University of Exeter, Amory Building, Rennes Drive, Exeter EX4 4RJ.

Tel: 01392 264539. Email: m.lobley@exeter.ac.uk

Acknowledgement and Disclaimers

A large number of people have helped us in the course of this project. We are very grateful to all of them. Neil Spencer convened the focus groups and assisted with the Policy Forum. Chris Firth (with the help of Ulrich Schmutz) provided expertise on opportunities and barriers to expansion of organic production. Matt Reed took part in farm interviews, stakeholder engagement and provided comments on an earlier draft of this report. Carol Kambites also took part in farmer interviewers and commented on an earlier draft of this report. Members of the stakeholder panel provided helpful information at various stages of the project and a number took part in the final Policy Forum. We are grateful to Rob Fish for preparing a summary of the main report; and Alan Hopkins who convened the stakeholder workshops and contributed to several other aspects of the project. We are grateful to Guy and Rachel Watson from Riverford, Alan Schofield from Growing With Nature and Renee Elliot from Planet Organic for allowing us access to their customers and, finally, we are particularly grateful to all the farmers and consumers who gave so freely of their time to complete the postal questionnaires, take part in face-to-face interviews, focus groups and the Policy Forum. All errors and omissions are, of course, the responsibility of the authors.

The basic information on which this report is based was originally collected on behalf of, and financed by, the Department for Environment, Food and Rural Affairs.

The views expressed in this report are those of the authors and are not necessarily shared by other members of the University or by the University as a whole.

The views expressed in this report are those of the authors and are not necessarily shared by DEFRA.

CRPR Research Report No. 29

ISBN 978-1905892105

Test of statistical significance: A note

On a number of occasions in this report, comparisons are made between characteristics of sub-groups of respondents using bivariate tabular analysis. In these cases, Chi^2 has been calculated to test the statistical significance of the independence between two categorical variables. A 'significant' association between variables is taken to be one where there is less than a 5% probability of the difference arising by chance ($P<0.05$). Tables and Figures in the report note 'significant' association for 5% ($P<0.05$), 1% ($P<0.01$) and 0.1% ($P<0.001$).

This report also notes statistical significance regarding the comparison of means between two or more sub-groups of respondents. For these, the independent t-test procedure or one-way ANOVA procedure compares means of two or more classes. A 'significant' difference between means is taken to be one where there is less than a 5% probability of the difference arising by chance ($P<0.05$). Tables and Figures in the report note 'significant' differences in means for 5% ($P<0.05$), 1% ($P<0.01$) and 0.1% ($P<0.001$).

Tables with totals may not sum exactly to 100% due to rounding.

Contents

Analysis of socio-economic aspects of local and national organic farming markets

Executive Summary

The purpose of this study was to take a fresh look at the nature of organic production, consumption and marketing in England and Wales in order to better assess its current and likely contribution to rural development and its ability to meet consumer expectations. Based on a mixed methodological approach the study consulted with 2,300 individuals to reveal a complex and multi-dimensional sector with a highly committed consumer base. The research aimed to describe and account for:

- The socio-economic impacts of the organic farm supply chains on rural development;
- The extent to which organic food delivers consumer expectations; and
- The barriers affecting conversion to organic farming and expansion of existing organic farms.

Compared to other sectors of UK agriculture, organic production is still small and the findings of this research reveal that the sector is also geographically very unevenly distributed. Moreover, the organic sector is bifurcated in the sense that the largest 10% of farms in the sample account for over half of sales and half of all full-time staff employed.

Consumers of organic products emerge from this study as a distinctly well educated, and overwhelmingly white, social group, associating the purchase of organic food with concerns for bodily health and environmental sustainability. They are also brand loyal, expect to continue to consume organic food in future, and unlike non consumers of organic food, are relatively price insensitive. Nonetheless, the research also suggests that organic consumers can be segmented into different types of purchasing groups; from deeply committed organic consumers preoccupied with issues of food traceability, quality and localness, to ad-hoc purchasers of organic food, agnostic about many of these claims.

The research suggests that, due to its relatively small contribution to food production, organic farming does not currently offer policymakers a broad platform from which to launch future rural development policies, but argues that organic production involving large numbers of small, locally embedded producers is nonetheless likely to be beneficial to rural economies, albeit in geographically uneven ways. The study argues that organic producers are more likely to be willing to diversify their operations and enter into innovative marketing arrangements in ways which generate more employment overall and a greater proportion of non-family labour on their farms. In particular, the study identified a group of highly committed, typically small scale and locally orientated, organic producers who manage a more diverse range of marketing channels compared to those with a more national or regional market focus.

The study further suggests that while prospects for the survival of the smaller, locally orientated, organic producers depend, inevitability, on enterprise profitability, less than 5% of farmers surveyed were currently planning to leave the sector. Importantly, the area of land farmed by those intending to leave organic farming is less than 1.5% of the total area covered by the study.

For many of those planning to continue to farm organically, the future will be characterised by dynamism. Indeed, this study has identified a general trend towards increasing the area farmed - with close to 30% of respondents intending to expand the area that they farm over the coming years - adding more marketing channels, increasing on-farm processing and, probably as a consequence, increasing labour.

However, the study highlights that the long term viability of smaller producers in the sector depends on mitigating the escalating cost and availability of primary organic inputs such as feed and seed, limiting the concentration of box schemes by supermarket chains and national organic suppliers, as well as facilitating adding value for producers in regions with limited demand for organic food and a shortage of processing capacity. In addition, the study shows that the regulation of organic farming is perceived to be too bureaucratic and congested in terms of the number of organic certifying bodies and that, alongside the need to further incentivise organic production through agri-environmental schemes, the setting and control of organic standards should be key government priority in this area.

In addition to these key conclusions, consultation with policy stakeholders revealed that:

- The organic sector is thought to demonstrate a model of small-scale, locally embedded production which needs to be nurtured, regardless of whether the production methods themselves are organic;
- Future support for organic sector itself should be further incentivised through enrolment into generic agri-environmental schemes rather than organic aid measures;
- Additional funding streams could be levered into the organic sector through the rural development programme for England and its successor, but a venture grant scheme may need to be brokered in order to facilitate business development;
- There is perceived need for better, more integrated systems of advice, training and application systems for financial support to assist those embarking on conversion as well as development of local initiatives to link up processors, retailers and consumers;
- The setting and control of organic standards was key to the long term expansion of the domestic sector and stakeholders believed that, in an international context, the UK accreditation service had an important role to play in advising on organic standards;

- The link between organic consumption and the government's healthy eating agenda needs to be further exploited, as does increased public procurement of organic food in schools, hospitals and through other forms of public catering.

Conclusions

The research reported here is arguably one of the most integrated studies of organic consumption, production and marketing conducted to date. It throws new light on the nature of organic consumption, underlining both the on-going commitment of the majority of committed organic consumers and the gap in perceptions, degrees of 'brand trust' and price sensitivity between this group and the majority of consumers who rarely or never buy organic. While this degree of commitment suggests that recent declines in organic consumption may not be sustained and will soon hit a floor, this finding also points to difficulties, particularly in a time of recession, in enrolling new consumers into organic networks, particularly via the direct marketing channels that smaller producers are more likely to depend on. This group of producers, locally embedded and linked to consumers via short supply chains, fulfil the expectations of many organic consumers and exemplify the idea of alternative food producers. Managed by self selecting, entrepreneurial farmers, these organic producers make a valuable contribution towards employment and income generation within the local rural economy. As our broader analysis of food chains and multiplier effects across the regional and national rural economy shows, however, it is the large scale producers, concerned with the production of bulk commodities and integrated into long supply chains, that inevitably account for the main rural employment and income benefits of the organic sector, if measured in aggregate terms. While there is a good case to be made for the rural development benefits of organic farming, it is important to recognise these scale effects and their geographically uneven distribution in any policy assessment.

Chapter 1: Background, aims and objectives

After rapid growth, the area of organically farmed land has remained relatively constant in recent years. On the other hand, until recently at least, retail sales have continued to grow by an estimated 27% per annum over the last decade (Soil Association, 2007), leading to an estimated annual market value of some £1.9 billion in 2006 and over £2.1b in 2008, although much of this latest increase is likely to reflect rising food prices rather than an increase in the volume of sales (Soil Association 2009). Whilst evidence suggests that organic farming can provide a wide range of benefits, including positive employment impacts, improved environmental benefits and support for local and regional economies (Gabriel *et al.* 2009, Michèle and Michael 2009, Norton *et al.* 2009, Rundlof 2008, Lobley *et al.* 2005/2009, Morison *et al.* 2005, Midmore and Lampkin 1994, Padel and Lampkin 1994, Hird 1997), constraints in the supply chain, in particular limited growth in the area farmed, mean that the sourcing of organic produce is frequently met by imported food (Soil Association, 2001). However, this does vary considerably depending on the sector studied. Clearly, there are a range factors that affect the ability of organic producers in different sectors to meet consumer demand. In turn, consumers have their own expectations of organic food such as seasonality of produce, local food supply, and quality and variety of produce (Fearne 2008). Despite a growing body of research on different aspects of organic farming, the socio-economic dimensions of organic food and farming remain less well documented. The research presented here, therefore, was designed to deliver policy relevant knowledge on socio-economic aspects of organic food consumption, marketing and production. Unlike much previous research, which has often been 'singled sided' i.e. focusing on either production or consumption issues, this research integrates both elements in order to address the aims set out in the original project specification, which were to provide an analysis of:

A) The socio-economic impacts of the organic farm supply chains on rural development;

B) How well the organic food chain delivers public expectations; and

C) Barriers affecting conversion to organic farming and expansion of existing organic farms.

In order to achieve these broad aims, the approach for this research drew on a range of socio-economic research methodologies in order to measure, benchmark and map the development of the organic farming sector as a whole (and its main component parts - arable, horticulture and livestock, including dairy), as well as exploring the extent to which organic food delivers consumer expectations. In order to meet the aims of the research a number of specific objectives were developed:

1. Review existing knowledge on organic supply, organic food chains and barriers to the expansion of organic production.
2. Develop simple value chain models and create a national benchmark for organic businesses based on gross output values, net output values, physical

flows of commodities (including use of environmental resources), flows of services/consultants, employment, destination of sales, and imports and exports.

3. Examine the impact of organic farming on rural development in terms of local employment and income multipliers.
4. Develop whole chain models to examine upstream and downstream linkages of organic businesses to develop a detailed analysis of their relationships with different retail outlets which sell organic produce, and those that supply the production process.
5. Identify and explore opportunities and barriers to the expansion of organic production through both increasing output from existing producers and the conversion of non-organic producers.
6. Consider the extent to which the current supply of organic food meets consumer expectations regarding food quality, safety, seasonality, etc.
7. Develop implications for rural policy at regional and national scales in consultation with Defra and other stakeholders.

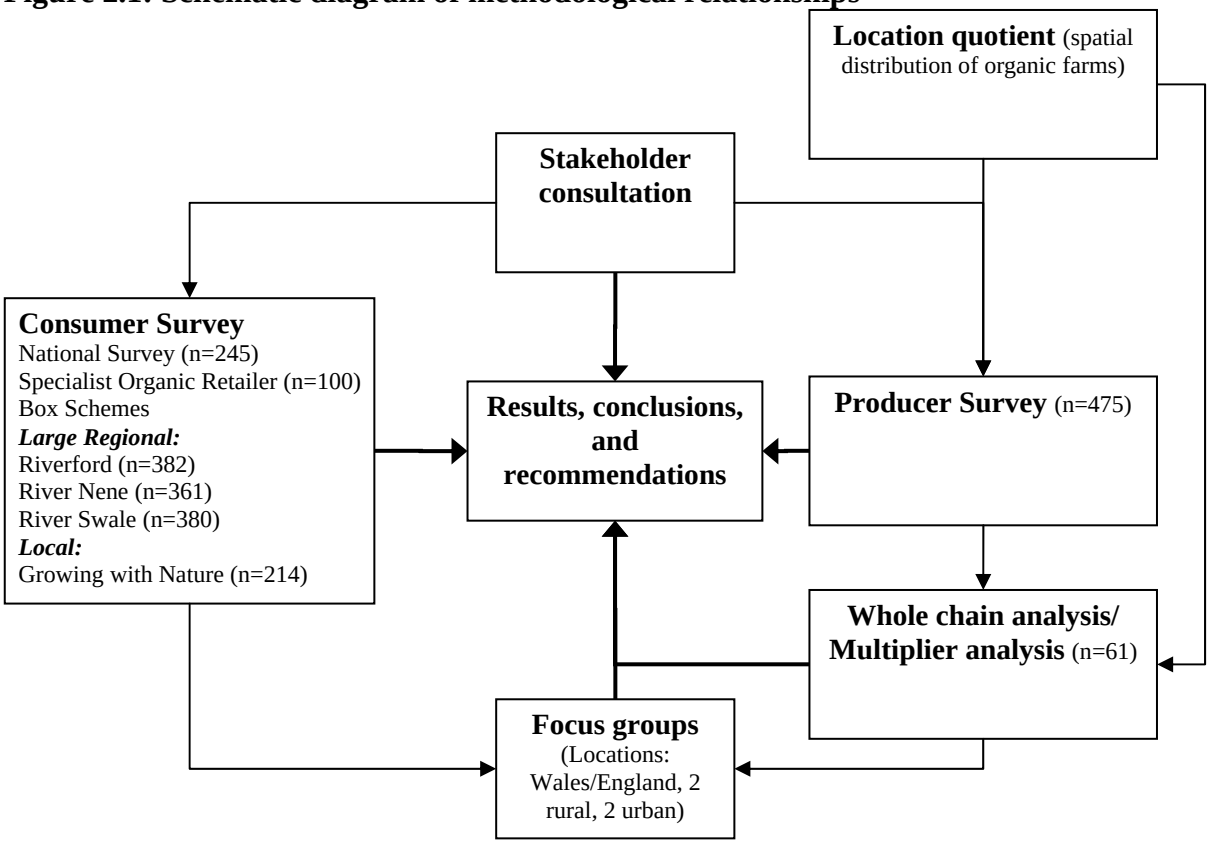
Over 2,300 consumers, farmers and stakeholders contributed to this project. The methods used are described in some detail in Chapter 2, but for now it can be noted that the research involved large scale postal surveys of consumers and organic producers, face-to-face interviews with producers, focus group meetings with both consumers and producers and a number of stakeholder meetings. The existing literature on organic production and organic farming markets is reviewed in Chapter 3. Chapters 4-8 present detailed findings from the empirical strands of the project. Based on a large survey of consumers in England and Wales and four focus groups, Chapter 4 explores the motivations for buying organic food; consumer expectations of organic food; and identifies differences based upon both where consumers purchase organic food from and also on the basis of four distinct consumer groups. The role of the producer is explored in Chapter 5, which identifies distinctly different market orientations amongst a large sample of organic producers. Chapter 6 moves beyond a consideration of just consumers or producers to an exploration of the upstream and downstream linkages of organic businesses. Chapter 7 explores some of the wider implications of local and national organic markets through a benchmarking exercise, analysis of 'simple value chains' and local economic multiplier modelling. Drawing on both the consumer and producer surveys, Chapter 8 considers the future of the organic sector. Despite current concerns, this chapter reveals a core of committed consumers who intend to keep consuming the current levels of organic food or who will even increase consumption in the near future. The view from the farm is more mixed, but nevertheless there is a core of committed producers, many of whom appear optimistic about their ability to survive. Finally, Chapter 9 considers the implications of our findings and makes some broad recommendations based on our engagement with a wide range of stakeholders.

Chapter 2: Methodology

2.1 Introduction

This chapter describes the various methodologies that have been used in this study. As the research focuses on both the consumption and production of organic food, appropriate methodologies were required to gather information separately from consumers and producers but also to bring the two groups together in the latter stages of the work. In order to understand how the various methodological strands of the project interact and contribute to the final results (described in Chapters 4-8), Figure 2.1 illustrates each element.

Figure 2.1: Schematic diagram of methodological relationships



The consumer survey (on the left hand side of Figure 2.1) was deliberately stratified in order to target particular types of consumers: those that purchase organic food from a specialist organic retailer serving a metropolitan population (Planet Organic); a large regional box scheme (the Riverford franchise); and a small local box scheme that sells its produce emphasising seasonality and local production (Growing with Nature). On the right of the diagram, the producer survey was designed to collect a range of data on the production and marketing of organic food from a large sample of producers in England and Wales. The sample was drawn from a Defra database of organic farms in England and Wales. In order to stratify this sample, the relative distribution of organic farms within each Government region was calculated using the Location Quotient (LQ) methodology (see Section 2.3). Two sub-samples were subsequently drawn from the producer survey in order to create a set of benchmarking data and data

for simple value chain analysis (see sections 2.4.1 and 2.4.2). A further sub-sample of producers who consented to being involved in further research were contacted in specific locations within the South East and South West regions of England, and in southwest Wales, for the whole chain analysis and multiplier analysis (see sections 2.5.1 and 2.5.2), although these had to be supplemented by random sampling from the Defra database and by using snowballing techniques to fulfil the required sample sizes for this part of the study.

In order to benefit from expert knowledge, stakeholder meetings were held before both the consumer and the producer surveys to ensure that issues facing those purchasing organic food, as well as farmers and growers, were fully covered and discussed. After the consumer survey and the producer surveys, once preliminary results were analysed, consenting consumers and producers were invited to one of four focus group meetings - two in a rural area and two in a more urban area. The locations chosen for the focus groups were Sussex and southwest Wales, two of the three areas used in the whole chain analysis and with a focus on local and national organic marketing channels respectively. Finally, producers, consumers and stakeholders were invited to a Policy Forum held in February 2009. The Policy Forum was designed partly to share some headline results but more importantly to bring together all aspects of the research project, verify significant findings and to consider the broad policy implications of the research. By using a range of methodologies, the framework outlined in Figure 2.1 has ensured that the results, conclusions and recommendations of the project are underpinned by a comprehensive base of evidence.

2.2 Consumer survey methodology

The consumer survey was sub-divided into several distinctive sub-samples as follows:

- General national consumers;
- Consumers of regional organic box schemes (Riverford, River Nene and River Swale);
- Consumers of a small local box scheme (Growing with Nature, based in northwest England);
- Organic consumers who purchase from a specialist organic retailer (Planet Organic in Central London).

The national consumer survey, which included a mixture of people who do and do not purchase organic food, was designed to provide a benchmark in order to facilitate comparison between different 'types' of consumer and their behaviour and attitudes towards organic produce. To ensure the representativeness of the national survey, a specialist marketing firm (Experian) provided a structured sample using their Mosaic UK classification system, which is a database constructed from multiple data sources[1]

[1] The multiple data sources include: location characteristics, demographic and socio-economic data, property values, and property characteristics, consumption and financial measures.

that determines 61 consumer types in 11 aggregate categories.[2] Figure 2.2 expands the consumer survey box in Figure 2.1 in order to illustrate its overall structure, including the number sampled in each of its 'branches' (See Appendix 1 for copies of the consumer questionnaires). It should be noted that although two thousand national consumers were originally sent questionnaires, 58 were returned by the post-office as address unknown or addressee gone away, thus reducing the target audience to 1942. In addition, it was intended that three Planet Organic stores would be included in the sample. However, while a reasonable response rate was achieved from one of the London stores (18.9%), poor response rates in the other two (1.6% and 3.6%) resulted in these stores being removed from the sample in order to avoid the potential of low response bias. This has implications for the structure of the overall sample (see below).

Figure 2.2: The design of the organic food survey

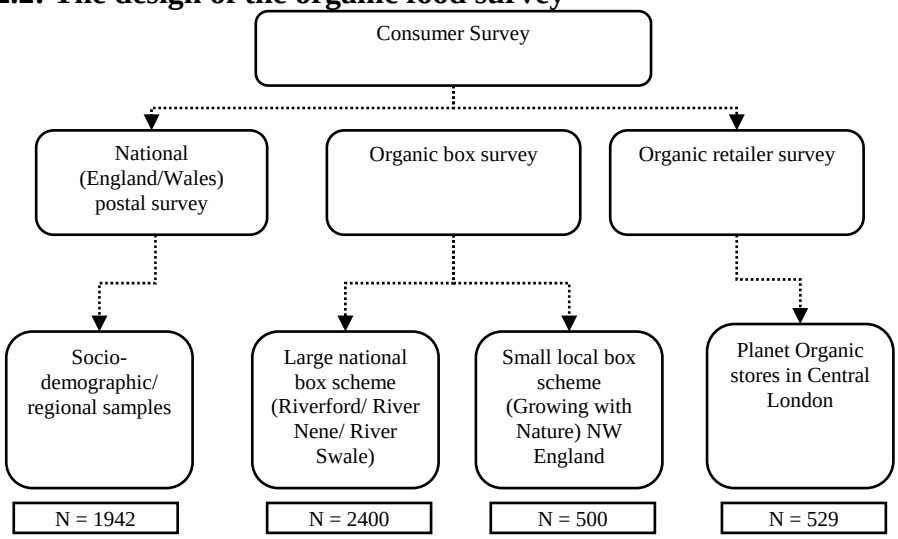


Table 2.1 details the number and percentage of responses received from each branch of the consumer survey. It is immediately apparent that box scheme customers were particularly engaged with the survey and this is reflected in response rates of over 45%. The consequent over-representation of box scheme customers must be borne in mind when considering the implications of the results from the consumer survey.

Table 2.1: Number and response rates from different branches of the organic food consumer survey

Branch of organic consumer survey	Number of responses	Percentage of responses
National survey	244	12.6%
River Nene	361	45.1%
River Swale	380	47.5%
Riverford	382	47.8%
Growing with Nature	215	43.0%
Planet Organic	99	18.7%
All consumers	1681	31.3%

[2] The stratified sample was drawn from the 11 aggregate categories: 'symbol of success', 'happy families', 'suburban comfort', 'ties of community', 'urban intelligence', 'welfare borderline', 'municipal dependency', 'blue collar enterprise', 'twilight subsistence', 'grey perspectives', and 'rural isolation' (Experian *undated*).

2.3 Location quotient analysis

The location quotient (LQ) is a ratio measure which, by controlling for the varying size of counties and unitary authorities (CUA), provides an indication of the relative spatial concentration of organic farming in England and Wales. The LQ methodology is outlined below and the results were used to inform the stratification of the producer survey and face-to-face interviews (see Appendix 2 for detailed results).

2.3.1 Data sources and method

The two sets of secondary data required for the LQ analysis were provided by Defra. Data on the number of holdings and total agricultural area in each CUA are available from the annual agricultural census and, in this case, the data for 2006 were accessed from the Defra webpages. Secondly, data on the number of organic holdings, organic area and area under organic conversion for each CUA in 2006 came through Defra via ACOS (Advisory Committee on Organic Standards). Unfortunately, the geographical units used for compilation of the organic database are different to those recorded in the agricultural census; the latter tend to use smaller geographical units which had to be amalgamated to coincide with those of the former. Also, the organic database could not provide information on either the proportion of each holding devoted to organic farming or the area devoted to different organic enterprises. This naturally restricts the level of analysis that can be provided.

The LQ measures the relative concentration of a phenomenon (number of organic farms, organic area and area under organic conversion) in a particular area (CUA) by comparing that phenomenon with the total number of farms and agricultural area in that CUA. The calculation of the LQ followed the methods used by Ilbery *et al.* (1999: 287):

$$\frac{\text{Number of organic farms in CUA 'x' } \div \text{ Number of organic farms in England and Wales}}{\text{Number of farms in CUA 'x' } \div \text{ Number of farms in England and Wales}}$$

A LQ value of 1.0 indicates that an area has neither more nor less of its share of organic farms than its overall number of farms would suggest. Areas with an LQ of over 1.0, therefore, have more than their fair share of organic farms i.e. a relative spatial concentration. One weakness of the LQ statistic is that it is sensitive to small numbers and thus the results for some of the smaller geographical units (metropolitan counties and unitary authorities) have to be treated with some caution.

Using this approach, it can be seen from Table 2.2 that South West region of England represents the 'organic core'. Indeed, the South West region accounted for 34.5% of all organic farms, 31.8% of the total organic area and 38.5% of the area of organic conversions in England and Wales in 2006. For each of these 'indicators' of organic farming, Wales and the South East region came second and third respectively. Conversely, the North East, North West, East Midlands, eastern and Yorkshire/Humberside regions compared quite badly in terms of most of these 'indicators'. The LQ analysis confirmed the pre-eminence of the South West region,

but interestingly the North East region was ranked second in terms of organic conversions (ahead of both the South East and Wales) and third for organic area (ahead of the South East, see Table 2.2). This demonstrates the importance of analysing organic farming data in relation to general farming data rather than in isolation.

Table 2.2: Regional distribution of organic farming in 2006: raw data and location quotients

	Number of organic farms			Organic area			Organic conversion		
	No.	**%**	**LQ**	**Area**	**%**	**LQ**	**Area**	**%**	**LQ**
East Midlands	235	6.3	0.7	12,447	4.2	0.37	2062	2.5	0.22
Eastern	266	7.2	0.75	10,785	3.7	0.28	3,630	4.4	0.33
North East	116	3.1	1.08	22,617	7.7	1.41	6,923	8.5	1.54
North West	173	4.7	0.48	19,458	6.6	0.76	1,781	2.2	0.25
South East	423	11.4	1.01	35,798	12.2	1.09	13,183	16.1	1.44
South West	1282	34.5	1.61	93,416	31.8	1.82	31,558	38.5	2.21
West Midlands	351	9.5	0.86	26,310	9.0	1.01	3,974	4.9	0.54
Yorks/Humber	155	4.2	0.46	9,033	3.1	0.32	3,388	4.1	0.43
England	3,001	80.9	0.96	229,864	78.3	0.91	66,499	81.1	0.94
Wales	710	19.1	1.21	63,546	21.7	1.55	15,426	18.8	1.35
England/Wales	3,711	100		293,410	100		81,925	100	

2.4 Producer survey and data uses

Using the LQ measure for organic farms in each CUA, a random sample of 1532[3] farms was stratified according to the relative number of organic farms (see Table 2.2). Prior to the main survey, a pilot survey was conducted with 75 organic farmers in the early autumn of 2007 following the same stratified sampling procedure. After amendments to the questionnaire, the main postal survey followed in November/December of 2007. To comply with the Welsh Language Act, and to ensure maximum participation from Welsh farmers, the survey was translated into Welsh and both this and an English version were sent to all farms in the Welsh sample (See Appendix 3 for a copy of the producer survey).

The main postal survey produced 514 returns in total, of which 475 were useable for subsequent analysis. Further details are given in Chapter 5. As well as providing data for analysis of farmer production and marketing activities, the producer survey provided data for the benchmarking exercise and the simple value chain analysis, both of which are detailed in Chapter 7. Each required data on the physical output of individual organic farm enterprises (see below).

2.4.1 Benchmarking exercise

The benchmarking exercise is based on farmers completing questions concerning the volume of produce sold through each marketing channel. It was anticipated that a

[3] A stratified random sample of 1500 was increased by 2% to account for postal errors and changes in farmers' circumstances, such as farmers no longer farming because of retirement, no longer in business or because they had died.

lower response rate would be achieved for volume data given the complexity of enterprises on organic farms. Out of the 475 useable responses, 62% (293) completed the question asking about how many animals, tonnes, boxes, for example, are sold through particular marketing channels. There are many reasons why respondents do not answer certain questions. In the case of the volume of produce sold through specific marketing channels, it is plausible that farms with less complex marketing channels perhaps found it easier to respond to the question, although producers with some very complex farming systems did respond. Putting the non-response to this question in perspective, the complexity of the volume question and the greater demands on the respondent, it is interesting that this was not the only question that produced a lower response rate (for instance, information on salaries achieved a similar response rate).

Ideally, to create a national benchmark for organic businesses there should be no missing data (i.e. all the farms involved should have answered all the same questions). However, this poses a problem in that the more variables that are used in the benchmarking exercise, the more likely it is for missing data to be present, particularly as the data were collected via a postal survey. Different respondents missed out answers to different questions. Therefore, to eliminate all missing data, and to create a fully comparable dataset, a subset of 199 farms was created. Importantly, all respondents in this sub-group reported data on the flow of volumes through marketing channels, as well as all the other measures used in the benchmarking exercise.

Given that the group of benchmark farms was based on a subset of the entire sample, it is instructive to compare statistically some of the key characteristics of those included in the benchmarking subset with those that were not, in order to discern if the benchmark farms are representative of the wider sample. In order to do this, independent samples t-tests were conducted on the variables listed in Table 2.3.[4]

For the majority of variables in Table 2.3 there were no significant differences between means (when $P<0.5$) for the benchmark subset and the sample as a whole. However, there were some exceptions. The most significant differences occurred in the data concerning the volume of produce sold through different market channels, although only physical data on pigs, poultry, sheep and lambs, tonnes of fruit and vegetables, and number of boxes were not significantly different when the two groups were compared. Turning to the other variables, a significant difference also occurred in the area of organic land on farms, with the area in the benchmarking subset being larger (166 ha compared to 107 ha). This is mainly explained by the absence of farms in conversion in the benchmarking data. Indeed, only 27.1% of land in conversion was located on farms in the benchmarking subset. Furthermore, out of 33 farms with all of their land in organic conversion, only one was included within the

[4] It had been intended to use variables that indicated the use of environmental resources and engagement in recycling. However, the inclusion of these would have reduced the benchmarking subgroup yet further. While these are excluded from the benchmarking exercise, they are commented on in Chapter 7.

benchmarking subset. As such, the organic land reported in the benchmarking exercise is mostly farms that were established organic businesses, and it is statistically significant that only 10.8% of these farms have been farming organically for less than five years.

Table 2.3: An example of a benchmarking table

All farms	**Number in sample:**
Farm size:	
Organic Area:	
% under organic production:	
Number of enterprises:	

Output	
Cattle:	
Calves:	
Lambs:	
Sheep:	
Pigs:	
Poultry:	
Cereal (tonnes):	
Fruit and Vegetables (tonnes):	
Milk (litres):	
Boxes:	
Dozen eggs:	

Financial	
All farm sales:	
All purchases:	
Gross margin†:	
Organic Sales:	
Purchases for organic production:	
Gross margin for organic production:	

Labour	***Number***
Total family labour:	
Total employee labour:	
	per ha
Family FTEs*:	
Employee FTEs*:	
Total FTEs*:	

Marketing Channels		
Number of channels:		
Market concentration:‡		
	% sold	***£ per ha***
Own meat box scheme:		
Own veg box scheme:		
Farmers' market:		
Internet sales:		
Own farm shop:		
Farm gate sales:		
Supply coop/company veg box:		
Locally owned private shops:		
Restaurants and private caterers:		
Public caterers:		
Sold to another farmer:		
Supermarket:		
Processor/abattoir:		
Livestock market:		
Marketing coop:		
Wholesaler:		
Packhouse:		
Grain merchant:		
Other channel:		
Direct sales only:		

†Gross margins are simply sales less purchases (excluding labour, rents, etc.). As these are not calculated accounting for all outputs values and variable costs, they should be treated as indicative.

‡The methodology which created the variable *marketing concentration*, which is explained in section 2.5.1 of this chapter and applied using the producer survey data.

*The calculation of FTEs was based on the definition from Errington and Gasson (1996) where: full-time = 1 worker, part-time = 0.5 of a worker, casual = 0.33 of a worker and seasonal = 0.125 of a worker.

There were no statistical differences between means for the financial values and the employment values when the benchmarking subset was compared with the rest of the sample. This is particularly important as it enables the comparison of benchmarking data between farm types, sizes and regions to be regarded as reliable. However, a number of significant differences did exist in the marketing channel data. In particular, means for the proportion of output by value sold through the following channels displayed significant differences: farm gate sales, private local shops, direct to other farmers, livestock markets and marketing co-operatives. In all but sales via marketing co-operatives, a lower percentage of the value of sales were recorded on farms within the benchmarking subset. Turning to differences in the means of the percentage of value sold using market co-operatives, it is likely that the over representation of dairy farms in the benchmarking survey is a possible explanation: a significant association exists between farms in the benchmarking subset that have dairy enterprises, and which sell produce via marketing co-operatives.

Despite these caveats, on the whole, the benchmarking subset represents a reasonably robust set of data that can be used for the benchmarking exercise. The limitations of the data should be noted by the user, but it does provide a starting point against which different organic farms can be compared.

2.4.2 Simple Value Chain analysis

Data from the producer survey were also used to create Simple Value Chains (SVCs) (See Chapter 7). Kaplinsky and Morris (2001) state that the SVC approach emphasizes the activities that are required to bring a product or service from conception, through different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. Figure 2.3 illustrates this concept. By following the links in Figure 2.3 from Design to Recycling, SVC analysis firstly considers sources of advice for product design and development. The next stage focuses on the production process itself, including the use of animal feed, environmental plans that assist production, the use of soil improvers, the employment of external services and added value activities. The marketing stage explores data both in terms of volume and the unit prices achieved by the sale of cattle, lambs, milk, cereal and horticultural produce via different marketing channels. For these, unit prices were derived from the total value of organic sales (value); the percentage value of organic sales sold through a particular marketing channel (% sold via MC); and the volume of organic sales (volume) for particular animals or crops using the calculation below, followed by a worked example for the livestock market channel:

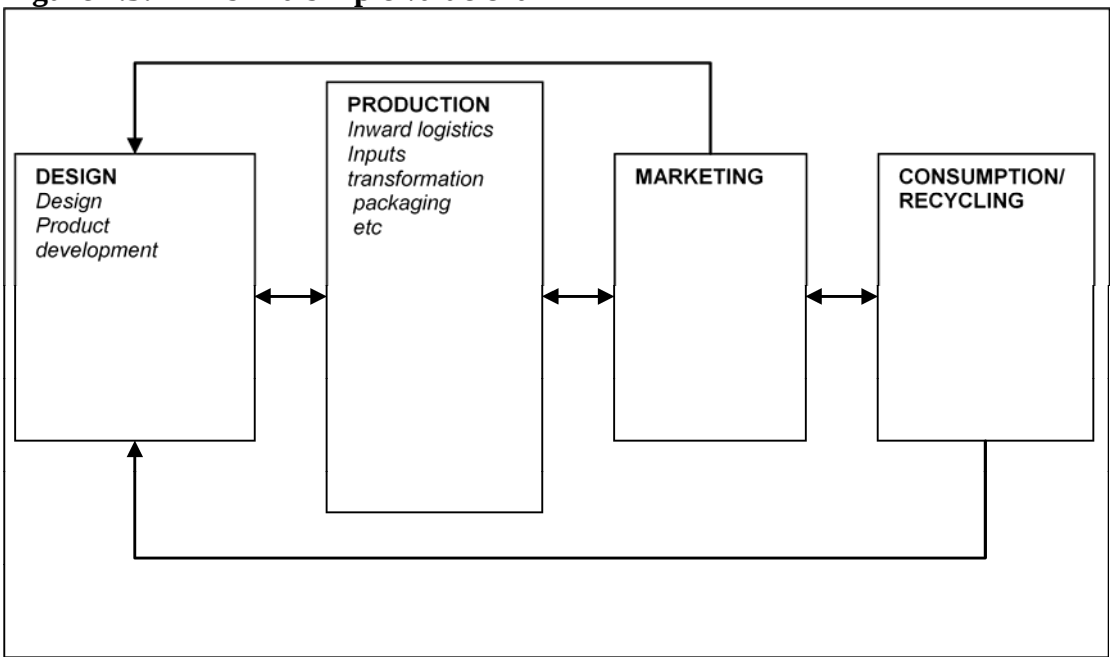
$$\text{Unit Price} = \frac{\text{value} \times \text{\% sold via MC}}{\text{volume}}$$

$$\text{Unit Price} = \frac{£4{,}000 \times 0.75}{80 \text{ (lambs)}} = £37.50 \text{ per lamb}$$

Finally, the SVC approach examines the recycling of resources used in production.

In accordance with the approach adopted for the benchmarking subset, the SVC data was compared with the non-SVC subset. Bivariate analysis confirmed that there were no statistically significant differences between the two data sets. To ensure that the unit price variables were robust in the marketing section of the SVC it was necessary to conduct independent samples t-tests. These focused on the value of organic sales and variables detailing the percentage sold via different marketing routes. For the marketing channel variables there were no significant differences between means (when $P<0.5$). However, comparing the means for the value of organic sales, the SVC subset mean was significantly higher (£163,116 compared to £107,359 for the non-SVC subset). This partly reflects the greater number of farms in the non-SVC subset that reported no organic sales as they were in conversion.

Figure 2.3: Links in a simple value chain



Source: Adapted from Kaplinsky & Morris (2001)

2.5 In-depth interviews with producers

In-depth interviews were used in order to identify links upstream and downstream from the organic producer, to explore both the geography and nature of business relations using a whole chain approach. In addition, data were collected for LM3 modelling, thereby allowing for an estimate of the local economic impacts of organic farms.

Originally, it was intended to conduct 60 face-to-face interviews with organic producers in two case study areas. However, insufficient numbers of respondents agreed to take part in further research within individual counties. Furthermore, the analysis of geographical distribution (see Appendix 2) of organic farms in England and Wales had identified three potential study areas, rather than two. Given these reasons and the results of the LQ analysis, the following study areas were chosen. The first study area (southwest Wales), included the counties of Pembrokeshire and Ceredigion; the second (the Sussex study area) combined the counties of East and

West Sussex; and the final study area was more amorphous, comprising the counties of Devon, Somerset and Gloucestershire (DS&G).[5]

In terms of sampling strategy, respondents participating in the in-depth interviews were selected in one of three ways:

- Those who had completed the postal questionnaire survey and agreed to participate in the interviews.
- Those on a database of organic producers provided by Defra.
- Those recruited through a technique of snowballing and purposive sampling.

Using these techniques, an overall sample of 61 organic producers was achieved, with the breakdown in the three study areas shown in Table 2.4. The sample comprised a diverse range of farm sizes and types. The sample of farms for face-to-face interviews was not intended to be representative either of the sample as a whole or all organic farms in England and Wales. Rather it was designed to yield rich, illustrative material in three locations and to collect the data needed for the LM3 and whole chain analyses (see section 2.5.1 and section 2.5.2).[6]

Table 2.4: Study areas and the number of in-depth interviews used in the whole chain and LM3 analyses

Study area	Number of interviews
Southwest Wales	21
DS&G	18
Sussex	22

2.5.1 Whole chain analysis

A whole chain approach aims to:

- Investigate how food supply chains are constructed by organic producers;
- Trace links between producers and other actors in the supply chain; and
- Unpack how social and economic relations co-relate in the context of a region's local (organic) food economy.

The main methodological device used in the whole chain approach was the drawing of supply chain diagrams. With the aid of the interviewer, each organic producer was asked to draw a supply chain diagram for their business, including both upstream suppliers and downstream marketing channels. Once these links were drawn, interviewees were asked to openly talk about the nature of those links, including when and how they were established. The core aim, therefore, was to map the supply chain geography of individual organic food businesses.

A producer fact sheet and an interview schedule were constructed for the whole chain analysis. The former was used to either confirm some of the information about the organic business gathered through the postal questionnaire survey or, for those who

[5] This study area also includes two farms in Dorset.

[6] See Appendix 4 for a copy of the interview schedule.

had not completed the questionnaire, to collect basic factual information about the business. After the interview schedule was piloted with an organic farm business in Warwickshire, it was divided into four main sections:

- History and perceived development of the organic business over time, including employment, organic products, contribution to the local economy and motivations for farming organically.
- Organic marketing channels used by the business, their travel distances (in time), customer relations and main problems.
- Organic inputs, their travel distances (in time), supplier relations and main problems.
- Future plans for the organic business and the main factors affecting them.

For completion of sections two and three – marketing channels and input suppliers – interviewees were provided with two additional pieces of information:

- A worked example of a whole chain diagram for an un-named organic hill meat business (Figure 2.4), to help the interviewer and interviewee complete a similar supply chain diagram for the business under discussion.
- An isochrone (line of equal time distance) map showing 30 minute and one hour travel times from their own farm business (Figure 2.5; see also Courtney *et al.* 2006). This was used to help calculate indices of geographic dispersion for both upstream inputs and downstream outputs.

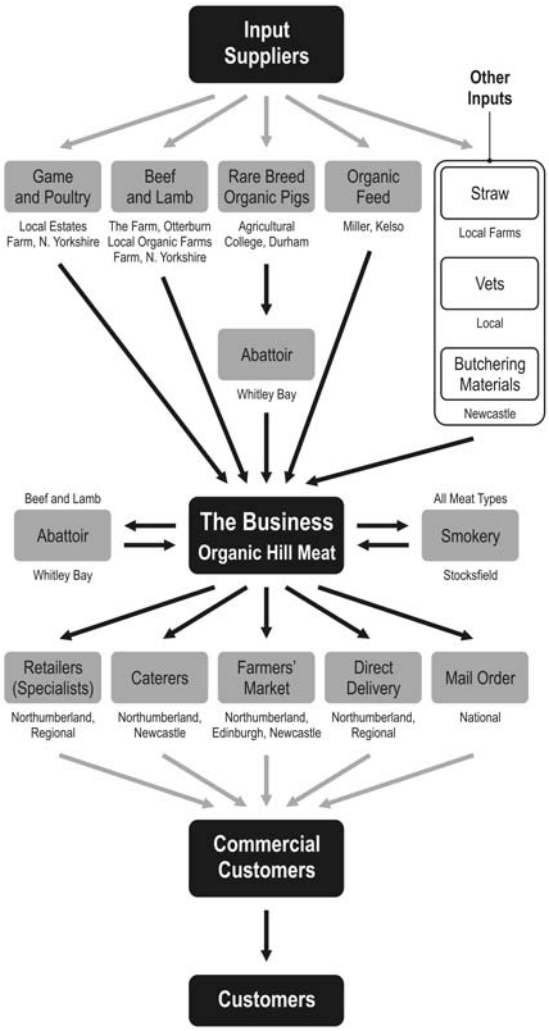
Both quantitative and qualitative techniques of analysis were applied to the collected data. The former involved the calculation of indices of marketing concentration and geographic dispersion in order to reveal general patterns and differences between study areas. All interview materials were also selectively coded and analysed to help explain the patterns found and to provide qualitative insights into the nature of supply chain relationships, contributions to the local economy, producer motives, current problems and future expectations.

Quantitative information from the fact sheet, on the proportion of products sold through the different marketing channels and the time distances involved in both the sourcing of farm inputs and selling of farm outputs for the 61 completed producer interviews, was entered into a specially created database.

Four separate indices in relation to marketing concentration and geographic dispersion were also constructed for: the proportion of organic produce sold through the different marketing channels; the destination sales of outputs; the purchases of inputs; and whole chain (i.e. outputs and inputs combined). Each measure was based on the Herfindahl-Hirschman index, a commonly used and accepted measure of market concentration. Thus the index of marketing concentration was calculated by squaring the proportion of organic produce sold through each marketing channel (in percentage terms) and summing the resulting numbers. This method was employed using data on the proportion of organic produce sold through different marketing channels from the

producer survey, and consequently enables the results from the sample of 61 farms to be considered in the wider and more statistically robust context of the main producer survey.

Figure 2.4: Whole chain diagram for organic hill meat business

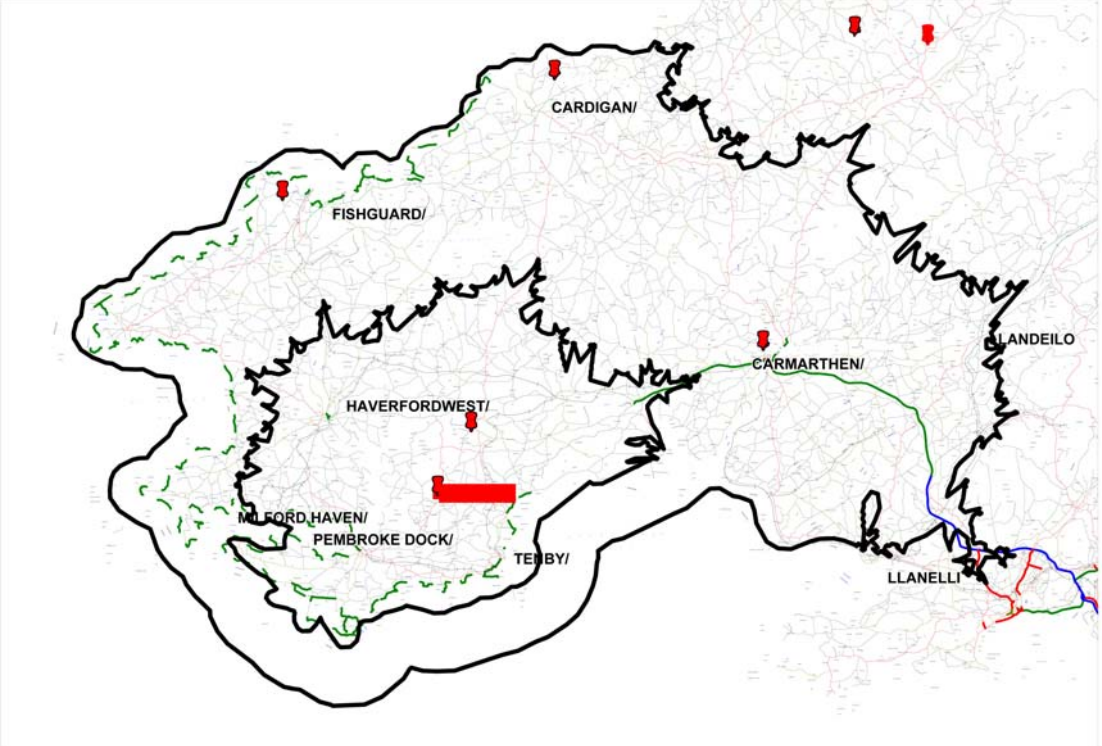


Results can range from close to 0 (when an equal proportion of produce is sold through each marketing channel) to 1 (when all produce is sold through just one marketing channel); thus the closer to 1, the higher degree of marketing concentration and the greater the dependence of the business on one main type of marketing channel. By squaring the proportion of produce sold through each marketing channel, the index gives greater weight to channels with high percentages of the produce sold. In order to calculate the index, the sales' percentages are first converted to a figure between 0 and 1, such that 90% becomes 0.9 and 50% becomes 0.5; therefore, $0.9^2 = 0.81$, whereas $0.5^2 = 0.25$. Information was collected on the proportion of produce sold through up to 10 different distribution channels, ranging from direct marketing and independent retailers to processors, marketing cooperatives and supermarkets.[7] In order to keep the number of marketing channels to a reasonable number, the direct

[7] These were: direct marketing, independent retailers, supermarkets, wholesalers, abattoir/processor, marketing cooperative, catering, public sector bodies, other farmers, and livestock markets.

marketing channel included one figure for box schemes, farm shops, farmers' markets, farm gate sales and distribution rounds rather than separate figures for each element.

Figure 2.5: An isochrone map for a farm business in south-west Wales



The index of marketing concentration thus made it possible to examine both the different ways in which the 61 businesses marketed their organic produce, and the levels of concentration (or otherwise) in their use of particular marketing channels. As well as revealing general patterns, the index made it easier to identify and compare differences in the use of marketing channels within and between the three study areas – differences that could begin to be explained through qualitative analysis. Two worked examples of the index of marketing concentration from West Sussex are given below:

Example 1: Organic beef farm sold the following proportions of produce through four different marketing channels: 0.50 independent retailers, 0.24 abattoir/processor, 0.24 marketing cooperative and 0.02 other farmers. The index of marketing concentration is thus:

$$(0.50)^2 + (0.24)^2 + (0.24)^2 + (0.02)^2 = 0.25 + 0.06 + 0.06 + 0.00 = 0.37$$

Example 2: Organic salad/vegetable producer sold the following proportions through three different marketing channels: 0.03 independent retailers, 0.95 supermarkets and 0.02 wholesalers. The index of marketing concentration is thus:

$$(0.03)^2 + (0.95)^2 + (0.02)^2 = 0.00 + 0.90 + 0.00 = 0.90$$

The second business, therefore, has a much higher index of marketing concentration than the first business, primarily because the bulk of its produce is sold directly

through one marketing channel to supermarkets; in contrast, the first business sells different proportions of its output through three main types of marketing channel – leading to a much lower index of marketing concentration. Similar exercises were conducted for three measures of geographic dispersion: output, inputs and whole chain.

2.5.2 LM3 Modelling

The method used for estimating local economic impacts of the organic farming sector, in this report, is based on the Multiplier Effect, as originally developed by John Maynard Keynes. The multiplier effect of an investment represents the number of times that it is spent and re-spent within a particular economy, before eventually leaving that economy. Understanding the multiplier effect, therefore, allows for a more accurate calculation of the total value of a particular input/investment to the economy being investigated. In simple terms, the multiplier effect can be defined as: Multiplier = (Direct Effects + Indirect Effects + Induced Effects) / Direct Effects, wherein the direct effects are the initial investment into the economy and the indirect and induced effects are the subsequent spending resulting from that original investment (Thatcher 2004; Thatcher and Sharp 2008).

However, income multipliers may extend over many exchanges, perhaps as many as 10 or 12, and can be enormously complex and time consuming to conduct. In acknowledging the benefits of the multiplier effect as a tool to better understand the impact of spending patterns within particular areas, but also recognising its complexity in implementation, the New Economics Foundation (NEF), in partnership with The Countryside Agency, developed the LM3 model. LM3 is intended to be a simplified version of Keynes' original model, which restricts the focus to three exchanges (or rounds of spending), of which the first round is the initial economic input. This is primarily for simplicity and usability, but also because it is estimated that the first three rounds of spending in an economy accounts for 85% of the total effects (Sacks 2002). The LM3 is particularly suitable for estimating impacts at the sub-regional and local level, providing that sufficient primary data can be collected. Whilst LM3 models may not be as comprehensive as Input-Output models or Social Accounting Matrices (SAMs), they benefit greatly from their relative simplicity and lower implementation costs. They are also less reliant on the need for complex secondary data, which can prove unreliable or problematic when disaggregated to the required spatial level.

Calculating an LM3 score entails adding up the totals spent in each of the three rounds of spending, before dividing this total by the round 1 figure. This means that any LM3 indicator will vary from a minimum of 1, to a theoretical maximum of 3. For example: £1.00 enters the local economy and 80% of this is then spent on local goods, leaving 80p in the local economy. If 60% of that 80p is then spent on local goods, there will be 48p left. This would result in an LM3 indicator of £1.00 + 80p + 48p = £2.28 divided by the round 1 figure of £1, resulting in an LM3 indicator of 2.28. This figure can then be compared with other local economies, such as one where £1 enters

the local economy (round 1), 50% of this first £ is spent on local goods (round 2), and 40% of the remaining 50p (round 3) remains in the local economy. In this case the LM3 indicator is £1.00 + 50p + 20p = £1.70 divided by £1 resulting in an LM3 indicator of 1.70. It is then possible to compare these two figures and to apply hard economic data to them to determine the relative vibrancy of two different economies, in terms of the effect of local spending patterns.[8] Nevertheless, it is important to remember that LM3 is an indicator (giving a general sense of what is happening) that can allow for comparisons with other organisations or businesses within the same area, or elsewhere. As with other indicators, local multiplier results are open to interpretation (Sacks 2002).

In this research, the first round equates to the initial injection of farm income into the local economy (direct effects); the second round is the purchase of materials and labour by farms (indirect effects); and the third round is the subsequent expenditure by suppliers and farm employees in the local economy (indirect and induced effects). The remaining 15% is then estimated using multiplier values derived from the three rounds of data collection. In turn this allows local income multipliers to be estimated. Employment multipliers are also estimated by incorporating employment coefficients used in previous studies.[9]

Despite its usefulness as a tool for estimating local multiplier effects, it is important to acknowledge that it is only an indicator and that there is the potential for inaccuracy at various stages of its estimation. These provisos are discussed where necessary but a number of general issues need to be born in mind when interpreting the figures.

- Third round consumption/household expenditure is likely, in many cases, to take place in supermarkets. Although these may well be physically 'local' to the consumer concerned, they are less embedded within the local economy and are likely to lead to larger leakages from the local economy than money spent in independent local shops.
- Similar issues are relevant where producers buy their seed, or other supplies, from local merchants. Again, it is significant that money is spent in these local outlets, but at the same time many of the items purchased may well have come from outside the local economy.

[8] Of course, the fact that a significant proportion of household shopping is likely to be carried out in supermarkets, thus leading to potentially greater leakages of income further down the chain, needs to be borne in mind when interpreting the present findings. In this way, estimates of subsequent expenditure through induced effects may well be artificially inflated by the model; the greater retention of consumption expenditure in the two English study areas may well be due to a greater density of supermarkets which will ultimately lead to higher income leakage through patterns of national international sourcing.

[9] Employment multipliers are derived principally from the primary data in the model but draw on two coefficients to help estimate indirect and induced employment effects, as used in previous studies (Mills, *et al.* 2000; ADAS 2005; Courtney *et al.* 2007). The indirect coefficient assumes that 1 FTE job is created for every £100,000 expenditure on farm inputs by farms and suppliers, and the induced coefficient assumes that an additional induced FTE job will arise with every 10 jobs supported either directly or indirectly at a local level.

- The quality of data sourced will be variable, with some respondents supplying better quality data than others. Collecting data of this type is inherently intrusive, as well as expensive in terms of time. In most instances it is also impossible to gauge the accuracy of the data supplied, in that there is no realistic means of corroboration.

This issue of potential inaccuracy impacting on the reliability of the LM3 was something encountered by Thatcher and Sharp (2008) in their evaluation of the Cornwall Food Programme and the Royal Cornwall Hospital Trust (RCHT). In this case, there were concerns about the figures provided by the suppliers to the RCHT and the authors, on the advice of NEF, were advised to 'test' their LM3 figures for margins of error. This approach is also adopted here, where, in reflecting upon the results of this research in the conclusions, we will assess each stage of the data collection in terms of its potential margins of error, helping to ensure a more accurate depiction of reality.

One of the most important limitations of the LM3 approach relates to the ability of the models to account for additionality and displacement in the local economy. Additionality is defined as the extent to which economic activity takes place at all, on a larger scale, earlier or within a specific designated area or target group as a result of an intervention or sector. Displacement occurs when an initiative or sector takes market share, labour or other forms of capital from other firms or organisations in an area. It is defined as the proportion of impacts accounted for by reduced impacts elsewhere in local economy. Any assessment of economic impacts, therefore, should take account of any potential loss of trade or staff by one firm as a result of increased market share of another, or any adverse effects on the local labour market as a result of increased demand for skilled labour in the area.

Given that the models estimate the impacts of food production on the wider economy, a major drawback is that, with no equivalent data for the conventional sector, they cannot estimate the additional impact of organic production on the local economy over and above that of conventional production. A number of impacts captured by the models are likely, therefore, to stand for conventional as well as organic agriculture, and in this way the impacts of organic farming on rural development can only be regarded as indicative and fairly general. That said, there are elements of organic income and expenditure that do appear distinct, and as such the models go some way to explaining the potential rural development impacts of conversion to organic production.

In the same way, a realistic assessment of the degree to which organic production displaces other forms of economic activity in the local economy is impossible without undertaking similar surveys of other farm and non-agricultural sectors. While one can assume that impacts of organic production will, to varying degrees, displace impacts of conventional production, an accurate assessment is impossible without coordinated surveys to ascertain not only the income and expenditure patterns of both sectors, but also a detailed assessment of the impacts of organic conversion on those patterns.

The models presented here do, however, go some way towards accounting for displacement effects by factoring in the potential for some non-family employment to displace other jobs elsewhere in the local economy. Given that a fair proportion of non-family labour is likely to be un-skilled or semi-skilled, one can assume that some jobs would have been taken up by people who were previously employed in the local economy, either in the agricultural sector or otherwise. To account for this potential displacement, the proportion of non-family FTEs recorded by the producer survey was therefore reduced by 75%, on the assumption that at least 25% of all FTE jobs may have displaced other jobs in the local economy.[10]

To construct the LM3 models, data on farm income, expenditure, labour and household expenditure were obtained through the face-to-face interviews. The models also incorporated data from the producer survey (farm turnover and employment) and the database of organic farm holdings held by Defra (to estimate the total number of organic holdings in England and Wales, and the three study areas).

Spatial financial data were collected as part of a wider interview about farm and whole chain activities, and thus was based only on broad estimates provided by the farmer. In some cases the farmer was unable to provide or estimate certain information, which resulted in missing data for some questions, and in turn a data set which was of variable quality. This, together with the wider limitations of LM3 modelling discussed in the previous section, must be borne in mind when using and interpreting the results, which can only be regarded as indicative.

Two sets of models were estimated. The 'Aggregate' models use total farm sales as direct effects whereas the 'Rural development' models factor in only that income derived from sales outside the local economy as direct effects, thus providing a more realistic picture of the rural development impacts on the basis that (according to net Income theory)[11] growth of an economy is dependent upon the generation of external income combined with the circulation of that income in the economy to stimulate local multipliers. Within each category, income and employment estimates were computed for two boundaries of the local economy derived from isochrones: within a 30 minute travel time of the farm and within a 60 minute travel time. The estimation framework for the LM3 modelling is set out in Table 2.5.

[10] It is possible that the estimated number of jobs previously occupied by people moving into the organic sector were subsequently backfilled by residents of the local economy. If this were the case, then the omitted FTEs could in fact be counted as additional. However, we cannot be sure whether this is the case; they could have been backfilled by non-local residents, or any backfilling by local residents could have displaced jobs further down the chain. It is therefore safer to assume that organic FTE jobs taken up by people previously employed in the local economy are not additional jobs. In any case it is prudent to remain conservative with this measure because the employment additionality measures used in this study do not take into account any potential wage effects through increased demand for labour as a result of conversion to organic, which itself could cause displacement effects in other industrial sectors.

[11] According to net income theory (See Williams, 1997), an economy needs external income in order to grow and the income effect is equal to total external income × a multiplier - total external spending.

Table 2.5: LM3 Estimation framework

Aggregate LM3 models (30 min and 60 min travel times)			Rural development LM3 models (30 min and 60 min travel times)		
Effect	**Round**	**Description**	**Effect**	**Round**	**Description**
Direct	1	Farm income received through all sales (local and non-local)	Direct	1	Farm income received through non-local sales only
Indirect	2	Farm expenditure on supplies and labour (minus savings and imports)	Indirect	2	Farm expenditure on supplies and labour (minus savings and imports)
Indirect	3	Expenditure by local suppliers on inputs and labour (minus savings and imports)	Indirect	3	Expenditure by local suppliers on inputs and labour (minus savings and imports)
Induced	3	Household expenditure (minus savings and imports) accrued to farmers and employees through wages and profits	Induced	3	Household expenditure (minus savings and imports) accrued to farmers and employees through wages and profits

2.6 Focus group methodology

The use of focus groups in this project was intended to provide the opportunity for consumers and producers to discuss the results of the project and provide feedback on some of the key questions generated by the study. By listening to and analysing the feedback, new insights are gained into the issues, themes and questions examined by the project. Furthermore, the focus groups enabled the participants to make up-to-date comments about the current conditions in local and national organic markets in the light of the significant economic changes that had taken place since the project was commissioned.

It was agreed that four focus groups in all would take place, two in a rural area and two in an urban area.[12] The locations chosen for the focus groups were in the study areas of Sussex and southwest Wales (Chichester and Brinsbury in Sussex and Haverfordwest and Tanygroes in Pembrokeshire and Ceredigion). These locations were chosen to ensure coverage of consumers and producers in England and Wales. In practical terms, these areas contained relatively large number of participants who had indicated a willingness to take part in further aspects of the project.

Participants for the focus groups were selected from individuals who had previously contributed to the study through the consumer survey, questionnaires and the in-depth interviews. Some consumers were recruited through their membership of local Soil Association groups.

Drawing on the database of participants who had already contributed to the project and other membership lists, initial contact was made with potential participants of the focus groups by telephone. The organiser, and moderator, of the focus groups used this initial telephone call to introduce himself and to find out whether the potential participants would be interested to attend a structured meeting to review the results of

[12] The Office for National Statistics (ONS) classification for urban areas was employed – i.e. settlements with populations over 10,000 inhabitants.

the project. During the call the organiser was also able to explain the purpose and context of the meeting.

In the focus group meeting six key questions were discussed:

1. What do organic farmers and producers think they are providing for their customers?
2. When you buy organic food what do you think you are getting?
3. What do you think are the issues that motivate customers to buy local food compared to organic food?
4. What makes you decide whether you are going to focus on supplying a local or national market?
5. If you had a good choice between locally grown and organic food, which one would you choose to buy and what would influence your decision?
6. How is the 'credit crunch' / 'down turn' influencing the organic market?

In accordance with the University of Exeter's policy on research ethics, each of the participants signed an attendance form that explained the protocol on confidentiality and anonymity. This clarified for the participants that all information collected and recorded would be handled in the strictest confidence. Once the focus groups were completed, producers, consumers and stakeholders were invited to a policy forum, partly to share some headline results but more importantly to bring together all aspects of the research project and verify significant findings of the research. Chapters 4, 5 and 8 make extensive use of quotes from the focus groups in order to add depth to some of the quantitative findings and to provide an up to date assessment of the implications of current economic conditions for both the producers and consumers of organic food.

2.7 Summary

The wide ranging aims and objectives of this research demand an equally broad methodological approach. Each of the methodologies described in this chapter has been integrated in order to present a comprehensive picture of organic farming. As subsequent chapters will indicate, the complementarity of these methodologies allows insights into the demand for and supply of organic produce, the changing geography of organic farming, economic performance and barriers to the further development of organic farming, the impact that organic farming has on local economies and food chains and, finally, what the future might hold for the industry.

Chapter 3: Understanding organic markets[13]

3.1 Introduction

> *In many areas there is a wave of farm conversions the scale of which has not been witnessed before. Organic demand is growing faster than domestic supply and a sector of agriculture which for many years was marginalised is becoming increasingly important* (Rigby *et al.* 2001: 599).

Whilst the growth of organic farming has eased back since 2001[14], its totemic importance in policy and markets has certainly spawned a large and diverse literature on organic farming. Thus, in seeking to provide a literature review that is relevant for a study of organic *markets*, selectivity and focus is vital. That being the case, the review is structured around the three main aims of the project[15], as set out in the opening Chapter.

- The socio-economic impacts of the organic farm supply chain on rural development;
- How well the organic food chain delivers public expectations;
- Barriers affecting conversion to organic farming and expansion of existing organic farms.

3.2 The socio-economic impacts of the organic farm supply chain on rural development

As van der Ploeg *et al.* (2000) concede, there is no comprehensive definition of rural development. For Sotte (2002), rural development refers to the provision of non-agricultural functions and employment in rural areas, fostering exchanges between sectors and territories, and thus breaking isolation and mono-functional agricultural

[13] This chapter draws on three literature reviews undertaken at the outset of the project: (i.) Organic farming markets: a review of academic and policy literature by Brian Ilbery, Damian Maye, Carol Kambites, Paul Courtney, Matt Reed and James Kirwan of the Countryside and Community Research Institute, Cheltenham; (ii.) Socio-economic aspects of local and national organic farming markets, by Chris Firth (assisted by Ulrich Schmutz) of HDRA; and (iii.) Information on the organic market for main sectors including barriers to entry and expansion in response to supply opportunities, by Chris Firth. Together these reviews amount to over 20,000 words and hence for the final report they have been much condensed as well as up-dated with the inclusion of more recent publications. Copies of the original reviews are available on request.

[14] The amount of land farmed organically in the UK fell from a high in March 2003 (at 741,000 hectares), with an 8.1% fall between January 2005 and January 2006 to 619,000 hectares; indeed, the area devoted to organic farming has fallen by 22% since 2004. This reduction is due mainly to a loss of organic land in Scotland. However, over the same time period the area of in-conversion land rose by 63% (Defra, 2006) to 86,000 hectares and the number of enquiries made to the Organic Conversion Information Service increased by 42% between 2004 and 2005 (Soil Association, 2006a).

[15] There are of course numerous issues related to organic farming outside of these three aims. Given that public policy support for organic farming originated in environmental concerns it is not surprising that biodiversity has long figured highly in the organic farming literature. Examples include Gabriel *et al.* (2009), Michèle and Michael (2009), Norton *et al.* (2009), Rundlof (2008). More recently concerns over climate change and energy issues have also begun to emerge in the organic farming literature and examples of this include Rahman *et al.* (2008) and Gomiero *et al.* (2008). Agronomic and farming systems approaches are also becoming more common. Examples include Oudshorn *et al.* (2008), Watson *et al.* (2009). And the policy approach to organic farming has also attracted scholarly attention: Tomlinson (2008).

specialisation. Errington's (2002) definition, however, is more inclusive, albeit human-centred, asserting that rural development involves premeditated changes in human activity which seek to use resources within the rural arena to increase human well-being.

Organic farming has been seen by many commentators as means of strengthening rural economies and thereby contributing to rural development. The arguments for this revolve around the tendency for organic farms to use more labour than is usually required on conventional farms, the suggestion that more localised markets for both inputs and outputs are used by organic farmers, and the role organic farming may play as an effective response to the cost/price squeeze in agriculture (Marsden *et al.* 2002). However, as Smith and Marsden (2004) note, much of this policy-related literature treats 'organics' as one homogeneous category, often with limited attention given to the different supply chains and marketing channels that may have evolved within the sector. Consequently, the differentiated aspects of organic farming's contribution to rural development have not, hitherto, figured highly in the literature. However, that is beginning to change as researchers recognise the widely varying forms and functions that organic farming may take. Arguably there is a continuum from those organic farmers who provide a radical alternative to conventional agriculture (in the manner in which they market their products and relate to the local economy) to highly commercial organic farms operating within conventional input and retail markets.[16] Thus, Codron *et al.* (2006) suggest that the organic movement happened in two waves: a radical wave in the 1970s (which is more ecologically centred) and a reformist wave in the 1990s (which is more rural development centred). A third wave, might be hypothesized as the organic food supply chains become 'conventionalised', especially in terms of rent structures, the size of businesses controlling production and conventional patterns of marketing and distribution (Guthman, 2004). The origins of this work are in the Californian organic sector, which has become well known for its incorporation into 'conventional' food chains, re-defined to suit the needs of large producers and retailers.

In a key paper, Buck *et al.* (1997: 4) expressed concern that such 'mainstreaming' will lower organic standards:

> *In California, where organic standards already emphasize inputs over processes, conventional agribusiness firms are commandeering the 'organic' label and its associated price premiums by using only allowable inputs, but otherwise employing an industrial mode of agriculture which avoids the more costly sustainable agronomic practice.*

Guthman (2004) outlined three ways in which agribusiness alter the conditions so that all growers eventually participate in the logic of intensification. These are: firstly, commandeering the label so that industry can influence the setting of production standards; secondly, appropriation, which includes moving profits further along the

[16] The alternative/conventional dichotomy has been challenged by Holloway *et al.* (2007). See also Obach (2007), Pratt (2009) and Thompson (2009) for contributions to the debate on the nature and characteristics of organic farming in relation to the wider agro-food system.

supply chain and away from the farm; and finally, conventionalisation which creates an imperative to intensify production and discourages practices such as crop rotation and the growth of pest-control crops. Various papers have tested the applicability of the conventionalisation thesis in different geographical contexts (mostly finding it not to apply as strongly as in California): Australia (Lockie and Halpin, 2005), Germany (Best 2008), Ireland (Tovey, 1997), New Zealand (Coombes and Campbell, 1998), Ontario, Canada (Hall and Mogyorody, 2001).

Several commentators (see, for example, Buck *et al.*, 1997; Banks and Marsden, 1999; Raynolds, 2000; Guthman, 2004) also point out that organic standards concentrate on limiting inputs at the expense of other aspects of the organic philosophy. While this may in part be because of the relative ease of enforcement, it opens the door to the use of input substitution to adapt organic farming to the requirements of agri-business, without taking on problematic practices such as crop rotations, and without embracing the wider philosophy of the organic movement including a commitment to fair labour practices and local markets. This opens the way for organic production to be transformed from a form of alternative agriculture to a segment of the corporate dominated agro-export model, thereby limiting positive impacts for local rural development.

3.2.1 Clustering

An important concept in economic geography of growing relevance to students of rural development is clustering (e.g. Atherton 2003), whereby firms in a particular sector of economic activity locate within particular regions or localities with proximity allowing firms to benefit from particular infrastructural advantages and, in effect, the sharing of transaction costs. Organic farming is spatially uneven, with important implications for rural development. A survey of the spatial distribution of organic production by Ilbery *et al.* (1999) found a concentration of enterprises in southern England and Wales, with some variations by sector. The data for this study were compiled in 1996. An updated analysis of the geographical distribution of organic farms in both countries is provided in this report (see Chapter 2 and Appendix 2). At a broader scale of analysis, Defra (2006) reported that, in 2006, 65% of the UK's organic producers and growers were in England (over half of them in the southwest or southeast), 16% in Wales, 14% in Scotland and 1.5% in Northern Ireland.

Explaining this continued pattern of clustering of organic enterprises in particular areas requires further empirical investigation. The most significant point is that organic farming is still not penetrating the intensive agricultural 'core' (as noted by Ilbery *et al.* 1999), with greater uptake in more 'marginal' farming areas outside the so-called 'bread basket' (especially East Anglia) where the organic premium is presumably less of an attraction. The literature suggests two further reasons for this clustering. First, much organic knowledge is place specific and is often passed on by word-of-mouth (i.e. as forms of 'tacit knowledge') rather than through official advisory systems, making it easier for farmers to adopt organic practices in areas

where they can access advice and moral support (Morgan and Murdoch, 2000). Secondly, recent research on the location of organic growers in the US suggests that 'edge effects' may be significant and that finding a location that is protected from potentially incompatible uses may be an important factor for certified organic growers so that they can avoid the need for buffer zones to protect their farms from the effects of neighbouring conventional farms (Parker and Munroe, 2007).

3.2.2 Local Employment and Income Multipliers

Lobley *et al.* (2005, 2009) have studied the extent to which organic farming can contribute to rural development, covering employment, retaining and generating value, diversification, skills, knowledge and networks, community and social capital. Here we are interested principally in the contribution of organic farming to the generation and retention of income and employment in the rural economy, through an examination of the local economic linkages associated with the activity. Those promoting endogenous models of development have emphasised the importance of interactions that limit economic leakages from particular localities, thereby both maximising local multipliers and reducing certain externalities such as those associated with long-distance transport (Winter and Rushbrook, 2003). The New Economics Foundation's 'Plugging the Leaks' (Sacks, 2002), for instance, calculates that spending money through local food systems generates more cumulative value for the local economy (£1 = £2.59) than spending money at a local supermarket (£1 = £1.40). In this case, the type of local supply link is fundamental to preventing external leakage.

In accordance with export base theory (Terluin, 2003), it is in the interest of local economies for farmers to 'export' their produce outside the area, in other words to sell to non-local markets in order to earn additional income for the local area through direct effects. This emphasis on exporting organic goods potentially flies in the face of sustainability discourses which encourage more localised marketing. However, as implied by net income theory (Williams 1997) how the farmer spends this externally generated income is also crucial. The contribution to local economic growth will depend largely on the extent to which inputs and labour are sourced locally to generate indirect and induced effects. The study by Lobley *et al.* (2005, 2009) is one of the few to have examined this (but see also Midmore and Lampkin 1994). They compared a sample of organic and non-organic famers and found very little difference in the proportion of all purchases made within 10 miles. However they did find a significant rural development gain in differential levels of employed labour:

> *The farms in the sample employed a total of 3071 people, of which organic farm businesses accounted for 60%. On average organic farm businesses employed 6.4 people per farm compared to 4.8 people on non-organic farms. One implication is immediately clear; organic farms 'punch above their weight' in employment provision. They account for less than half the sample but more than half of all employment recorded and despite operating smaller farms (in terms of area) organic farms employ more people per farm* (Lobley *et al.* 2009 p729).

This higher use of labour is related not only to the greater use of labour for certain organic farming tasks but also to farm type (a higher proportion of organic farms are horticultural which signifies a greater labour use) and the higher propensity of organic farms to be involved in diversification, on-farm processing and direct sales (Lobley *et al.* 2009).

Although no spatial data on employment linkages were available from Lobley *et al.*'s (2005) quantitative study, the findings do indicate that the potential for economic growth through induced effects is greater in the organic than conventional sector, which supports earlier studies that examined labour requirements on organic farms. Padel and Lampkin (1994), for instance, estimated that increases in labour normally range between 10 and 25 per cent higher than conventional farms. Hird (1997) reported similar ranges. Labour requirements depend, of course, on the type and mix of enterprises that make up the farm holding. As a general rule, the more diverse the enterprise mix is the higher the labour requirements will be, as the benefits of specialisation and economies of scale are lost (CRER, 2002).

Lobley *et al.* (2005) also revealed a greater reliance on non-family labour in the organic sector, with a mean of 4.0 non-family employees compared to a mean of 2.3 non-family employees per farm in the conventional sector. While far from conclusive, this may imply greater potential for income leakage through reduced induced effects caused by sourcing labour more widely. On the other hand, if this non-family labour was local it could have potentially greater benefits for rural development, especially as in some organic sectors (diary and mixed) salary levels tend to be higher than those in the conventional sector.

Looking at sales, the Lobley *et al.* (2005) study finds greater differences *between* organic sectors. Organic horticultural businesses exhibited the greatest proportion of sales made within 10 miles (67%), followed by lowland livestock (47%) and pigs and poultry (44%). Dairying was found to have the weakest ties to local markets, with only 18% of sales made within a 10-mile radius. When measured at the county level, a different pattern of sales integration emerged across the sectors. With only 14% of sales made within the county, horticulture actually exhibited the weakest downstream linkages of all the sectors. LFA (41%), mixed (32%) and lowland livestock (27%) farms were found to have the strongest ties to county markets outside the local economy, although dairying was found to be strongly integrated into regional markets, with 39% of sales made outside the county and within the region. Thus dairying had the greatest potential to facilitate rural development through generation of external income. Sales of organic arable products were fairly evenly spread across county, regional and national markets, again indicating potential for income generation through export activity.

The spatial analysis of purchases by organic businesses indicated a greater degree of upstream integration into the locality and county, which is favourable in terms of the potential for net income generation. Of all the sectors, arable and pigs and poultry exhibited the weakest linkages to the local economy, with only 29% and 26% of

inputs respectively sourced within a 10-mile radius. However, these figures increased to 64% and 57% when combining purchases for the local and county levels. Dairying, while found to be a net exporter of organic produce, actually sourced 74% of its inputs within the county, indicating that of all the sectors examined it had the greatest potential for net-income generation through external income generation combined with income retention through local sourcing.

While a useful indication of the potential contribution of organic farming to rural development, these findings are limited in the present context in that they draw only on first round linkages in the local economy and do not estimate the magnitude of indirect and induced effects associated with the linkages. Midmore and Lampkin's (1994) study did go beyond first round estimations by using Input-Output analysis to calculate the potential multiplier effects of Welsh organic agriculture compared to conventional farming in the principality. Output, income and employment multipliers were calculated for the following agricultural crops: cereals, pasture and forage, other crops, dairy, cattle, sheep and other livestock. Output multipliers suggested only marginal positive or negative differences between organic and conventional farming systems. However, income multipliers suggested that pasture and forage crops produced substantially more income than conventional agriculture, with the former recording a multiplier of 4.26 compared to 1.88. Only organic sheep and cereals produced less income than their conventional counterparts. On the basis of these findings, the authors concluded that "conversion to organic farming does have the potential to generate considerably wider social and economic impacts than simply on the farms involved" (Midmore and Lampkin, 1994: 368).

Although Input-Output analysis provides a more rigorous analysis of income and employment effects compared to a study of first round linkages, it does have its own limitations, including the costs associated with collecting primary data of sufficient quality and the problems associated with disaggregating secondary data at the required spatial level. Partly as a result, there is lack of empirical evidence on the local economic impacts of organic farming and, in turn, its potential contribution to rural development. To address this knowledge gap, a detailed examination of the direct, indirect and induced effects associated with organic farming activity is required, drawing on quantitative and qualitative methodologies that allow the size and spatial distribution of local economic multipliers to be measured and explained.

3.2.3 Changes in Organic Marketing

Conventionalisation does not only refer to the growing process (Stagl 2002). Big business has also found other ways of profiting from organic supply chains, including the production of processed products from organic ingredients and the marketing of organic products. Understanding the nature of the whole organic supply chain is thus critically important, including the input supplies used by producers to make their products and, crucially, where those products go once they are ready for sale. This latter downstream aspect will be discussed here.

In 2005, the retail market for organic products in the UK was worth an estimated £1.6 billion, an increase of 30% on the previous year (Soil Association, 2006b); this rate of increase was sustained in 2006 but has since declined (Soil Association, 2007, 2009). Such is the rapid rate of expansion that knowledge about the form and nature of organic food marketing chains is fuzzy, at least in a UK context, with currently little research on the different marketing channels used by organic producers. To date, secondary based surveys of the UK organic market have reported most organic sales through supermarket supply chains (see Klonsky, 2000; Jones *et al.*, 2001; Smith and Marsden, 2004). There is a danger that where supermarkets have become the only outlet for organic producers, they will use their power to squeeze farm-gate prices, as has happened with conventional agriculture. As Marsden and Smith (2005: 449) warn, retailers have considerable influence in terms of organic product price setting, with a motivation to establish retailer-led marketing chains to abstract rather than to capture value for the local economy. Other issues are also of concern here. For instance, the supermarkets' emphasis on the appearance of goods may cause problems for farmers and lead to 'sub-standard' goods being refused or wasted. Supermarket dominance is also of concern in terms of the potential for the globalisation of organic foods:

> *If expanding the organic market means increasing the diversity of food available and making foods available over a longer period of time, then clearly some needs will be met with imports and the opportunity for exports is increased. […] Consumers concerned primarily with the personal healthy aspects of organic rather than the environmental or social consequences will probably be receptive to imported food* (Klonsky 2000: 241).

The lengthening of organic supply chains, therefore, has obvious negative implications in terms of sustainability (see Yakovleva, 2007). However, there are also advantages for the organic sector arising from supermarket sales, particularly in terms of the range of consumers that can be reached. Coombes and Campbell (1998) suggested that organics on the supermarket shelves alters attitudes and makes their purchase more 'normal'. Likewise, Codron *et al.* (2006) identified a divergence within the radical movement caused, in part, by the opening up of opportunities to integrate into the mainstream, particularly by marketing through supermarkets. As they put it: "these divergences create sharp opposition between radicals (those who want to maintain an alternative strategy outside the dominant system) and those who want to negotiate with the dominant actors and thus open up their market" (p.288). Morgan and Murdoch (2000: 168) made a similar point, noting a division within the organic producer community in the UK because of the role of supermarkets, with, on the one hand, a set of pragmatic growers who contend and recognise that supermarkets dominate retail food markets and so must be used to build the organic food market, and, on the other hand, a set of purist growers who assert that the ethics of organic growing are contrary to all that supermarkets represent.

The motivation of the producer is thus very important. While empirical work on organic marketing chains is limited, secondary data suggest a certain degree of bifurcation in the UK organic market. Prior to the economic downturn, organic sales

had been rising rapidly. Multiple retail chains continue to dominate the market (accounting for around 73% of the total market), but have seen their sales grow at a slower rate compared to some of the alterative market channels. For instance, sales of organic produce through direct / producer-owned / alternative markets, such as box schemes, mail order, farmers' markets and independent retail shops, have increased considerably since 2004, with an 11% growth to £125 million in 2005 and a further 14% growth in 2007. By 2008 the independent retail sector account for just under 27% of the organic market (Soil Association, 2009). Box schemes have increased rapidly, growing by 53% in 2006-07 (Soil Association 2007). Although the Soil Association acknowledges that many of these are now run by supermarkets.

Most of these 'alternative' chains involve local food links, at least in terms of point of sale. The exception is direct marketing through the Internet. In the literature, such examples are often referred to as 'short food supply chains' (SFSCs). The key characteristic of SFSCs is that foods reach the final consumer having been transmitted through a supply chain 'embedded' with value-laden information concerning the mode of production, provenance and distinctive quality assets of the product. In many cases, the number of nodes between the primary producer and the final consumer will also be minimised (see Banks and Bristow, 1999; Marsden *et al.*, 2002; Renting *et al.*, 2003; Ilbery and Maye, 2005a/b; Watts *et al.*, 2005). While this 're-connection process' is best demonstrated through different forms of direct marketing and face-to-face contact between producer and consumer, products may be sold through local outlets in the region or to consumers outside the region through Internet sales.

Recent research on the nature of SFSCs more generally and the retail supply chains for local foods (including some organic products) suggests that the nature of such dedicated marketing chains is also highly complex. In terms of production, for example, it has been noted how producers change the nature of their supply chain over time. For example, an organic hill meat producer no longer supplies (specialist) butchers because of bad relations and reluctance by shops to obtain organic accreditation (Ilbery and Maye, 2005a). A number of producers have also reduced the volume of product retailed at farmers' markets, bemoaning poor returns, lack of consumer support and saturated competition with other local food producers. Producers thus sought more 'stable' alternatives (e.g. own farm shops, independent retail) and / or continue to supply established, more traditional supply chains. Dynamism and mobility are thus key features of these chains (Ilbery and Maye 2005a/b). Retail surveys have also noted examples of intra-sector competitive dynamics between different forms of retailing and various overlaps between supposedly 'mainstream' and 'alternative' food retail systems (see Ilbery and Maye, 2006).

3.2.4 Value chains

In agriculture and the food industry, value chain analysis (Kaplinsky and Morris 2001) has been applied to study a wide range of issues (examples include Dolan 2004; Ghelfi and Lucchi 2005; Grunert *et al.* 2003; Higgins *et al.* 2007; Simons and Taylor

2007). However, despite the wide use of the term *value chain* in analysis there is no single uniting theoretical or definitional basis. In its simplest form production *per se*, is only one of a number of value added links that are often two-way in nature (Kaplinsky and Morris, 2001). For example, the product design process is not only influenced by production and marketing but is in turn constrained by links further down the chain.

While a simple value chain can generate data for benchmarking purposes, it can also be transformed into an analytical tool through the recognition of three important components. Firstly, value chains are repositories for rent; secondly, value chains involve some degree of 'governance' when they are effectively functioning; and thirdly, effective value chains begin from systematic efficiency rather than point efficiency (Kaplinsky 2004).

3.3 How well the organic food chain delivers public expectations

3.3.1 Consumers' motivation for purchasing organic produce

The UK organic market has experienced two decade of growth (Soil Association 2009). When consumers decide whether or not to purchase organic food they must manage a wide array of competing imperatives, needs and desires against the backdrop of contradictory discourses about organic farming (Lockie *et al.* 2002). The attitude of consumers towards organic farming may depend on how they perceive issues such as the risks associated with industrialised food, the healthiness of organic produce, their disposition towards new technologies such as biotechnology, animal welfare, the protection of wildlife and environment, and the price of organic produce.

Many of these issues have been explored through reviews of literature and empirical studies. For example, Magkos *et al.* (2006) provide a critical review of consumer concern over the quality and safety of conventional food and how this primarily drives the increasing demand for that which is grown organically. Ankomah and Yiridoe (2006) consider the literature that compares organic against conventional farming that includes consumer attitudes with regards to knowledge about their preferences and willingness to pay for organic produce. Zanoli (2004) draws together findings of the extensive consumer studies carried out throughout Europe. Torjusen *et al.* (2004) list twelve empirical research projects in the UK, both commercial and academic between 1993 and 2002 suggesting that while some of the motivations for buying organic food have been identified, a deeper understanding of what precisely consumers mean by the terms 'health', 'environmental concern', 'animal welfare', 'quality' and 'ethical concerns' is required. Debates over the quality and safety of organic food occur because they are complex, unstable, and embedded in a wide range of issues linking food to health, environment, ethics and identity (Zanoli *et al.* 2007).

To understand consumers better, different methodological approaches have been adopted. Lockie *et al.* (2004) uses path analysis to understand attitudinal, motivational, demographic and behavioural factors that influence to food choice amongst Australia consumers. From this, they conclude that despite the consumption

of organic food becoming mainstream, there is a small highly committed group of organic consumers that are responsible for a large share of organic food sales. Furthermore, where consumers purchase their organic food may be important, with different groups being associated with different and unrelated chains leading to strong market segmentation. For instance:

> *Lancaster [focus] groups, expressed a preference for buying organic produce from markets and specialist shops. Some went so far as stating that they would never buy organic produce in multiples ("If my option is to buy organic from the supermarket, I have no faith in it–so I just go in and buy the regular stuff" (OC, female). However, others preferred shopping in supermarkets because of the convenience of being able to do all shopping in one place* (Padel and Foster 2005, pp.620).

Makatouni (2002), using 'ladder analysis', suggests that consumers of organic food perceive this as a means of achieving individual and social values that centre around health factors for either themselves or their families. The Organic Marketing Initiative and Rural Development (OMIaRD) project[17] divided consumers into low, medium and high knowledge groups to cross-reference reported frequency of purchases of organic food with produce knowledge. The results of this showed that regardless of grouping organic product knowledge remains relatively low, although there was some association between superior organic product knowledge and better overall levels of education (Midmore *et al.* 2005).

In understanding why consumers, whatever their socio-economic background, purchase organic food, many studies suggest health reasons as being one of the most important factors in purchasing decisions (Tregear *et al.* 1994, O'Donovan and McCarthy 2002, Makatouni 2002, Shepherd *et al.* 2005). Other surveys suggest that animal welfare, environmental concerns, taste, being home grown free from pesticides, diseases such as BSE, genetic modification and food additives may be further motivators behind purchasing of organic food (Kihlberg and Risvik 2007, Lea and Worsley 2008, Magnusson *et al.* 2001, Makatouni 2002, Wier and Calverly 2002, Millock *et al.* 2005). Schifferstein and Oude Ophuis (1998) argue that health and environmental concerns coincide making it difficult to detect whether it is personal or wider ecological well-being that is the motivating factor. For some consumers, Grunert *et al.* (2000) argue that quality dimensions like taste and health may be inferred from the label 'organic' if that label has gained consumer confidence.

Of course there may be reasons that prevent intentions being turned into actions. Makatouni (2002) list some of the main reasons as: high price, lack of availability, satisfaction with conventional food, lack of trust, the limited choice and lack of perceived value. Tregear *et al.* (1994) suggest that higher income earners, who perceive potential health benefits, tend to buy organic products. Price sensitive consumers, on the other hand, do not necessarily see organic food as being any healthier than conventional food (Röhr *et al.* 2005). Other analysis suggests that the

[17] OMIaRD was a three-year EU project that aimed to examine all aspects of the marketing of organic food in Europe, with a focus on rural development.

decision to buy organic products is not significantly affected by the level of income level or gender (Midmore *et al.* 2005).

3.4 Barriers affecting conversion to organic farming and expansion of existing organic farms

In order to grasp the issue of barriers we began by examining the literature on motivations for entering into organic farming. Rigby *et al.* (2001) drew on the evidence of a number of studies to discuss motivations for becoming organic growers and note the following key reasons:

- concerns about their family's health
- concerns about husbandry (e.g. soil degradation, animal welfare)
- lifestyle choices (ideological, philosophical, religious)
- financial considerations

Tovey's (1997) findings on farmer motivations in Ireland and Hall and Mogyorody's (2001) findings in Ontario similarly emphasised non-economic factors. As noted earlier, there have recently been a wave of farmers converting from conventional agriculture and it seems likely that economic considerations are significant in their decisions to do so. This economic incentive was most clearly reported by Lobley *et al.* (2005) who noted that organic farmers exhibited a range of reasons for conversion, including opportunities to make profit, to secure their family business or to take part in a wider project to transform agriculture (see also Tranter *et al.* 2007). Additionally, motivations of individuals may be changed by the experience of organic farming. Hall and Mogyorody (2001: 419) thus found that "the more conventionally oriented newcomers are sometimes transformed through their participation in the movement; that is, they come to understand the broader principles of the movement and their thinking and practices begin to change accordingly". Conversely, it seems likely that some idealistic growers have become more market-oriented in order to survive.

Rigby *et al.* (2001: 607) outlined some of the main motivations for reversion to conventional farming and identified four main reasons:

- marketing and market incentives
- cost issues
- agronomic problems (including access to technical information)
- other (including changing personal circumstances)

It is significant that marketing figures so prominently in these discussions. Commenting further on the reasons, they suggest that there are two main types of producer in their sample: first, those who were motivated by economic considerations and reverted mainly because they could either not sell the produce or could not attract a premium sufficient to cover the additional costs of production; and secondly, those who were motivated by lifestyle choices or other ideals and started up in organic

production with fairly limited knowledge or experience and subsequently failed to make a sufficient living. This particular survey was based on relatively small farms, although it seems likely that the general conclusions about the role of economic considerations may still hold. Indeed, recent research by Harris *et al.* (2008) lists financial reasons among four sets of factors underlying farmers' decisions to leave organic certification in England (the other factors include negative experiences of implementing the organic system on the farm, impacts of the Foot-and-Mouth epidemic of 2000/1, changed personal circumstances and distance to certified organic abattoirs). For some organic producers, financial outcomes have been worse than expected, the conversion process has been complex and difficult, and organic farming systems have proved harder to operate than anticipated. In the dairying sector, for example, the lack of a price premium for organic milk has been a key factor influencing withdrawal. Harris *et al.* (2008) conclude that the majority of those leaving organic certification are what they term pragmatic rather than committed organic farmers and, in this sense, organic farming is just another survival strategy.

3.4.1 Barriers to entry and expansion

The barriers to entry and expansion of organic farming can be divided into the following areas:

1. Market and marketing – lack of market, lack of domestic supply, marketing strategies
2. Services – provision of information, advice and training
3. Technical and management – perception of potential challenges and actual ones
4. Farm economics – relating to farm outputs and inputs and profitability
5. Social – fear of being an outsider and social relations of market actors.
6. Structural – both at a farm level: size of farm, ownership, age of famers and at a market level
7. Institutional – including landlord objections, legislative and certification issues
8. Farmer attitudes

In some cases there is overlap between the different areas identified above. Some authors have grouped these factors together. For example Padel and Lampkin (1994) list three main areas: perceptions and access to technical and financial information; institutional barriers; and social barriers, whereas Jones and Tranter (2006) identify technical concerns and marketing issues as the main constraints.

The presence of an organic market and issues relating to marketing feature highly in a number of studies of conversion and organic production (Jones and Tranter, 2006, Schneeberger at al, 2002, Sumption *et al.*, 2004) in that the presence or lack of a market can be a driver or constraint to conversion. In some cases this is due to a lack of processors, abattoirs and other intermediaries, of efficiency driven actors, the

necessary co-ordination of activities, of developed supply chain relations and interdependencies. In some circumstances, farmers indicate the lack of a specifically local organic market as a problem. The fear that the organic market is only a niche market and will be oversupplied or will collapse is often stated as a barrier to those considering conversion, and there is often a lack of reliable market intelligence on which to make decisions. Many farmers do change their marketing strategies following conversion, including aspects of direct or more local marketing for the first time and this can be a challenge.

Services in the form of information, training and advice are seen as crucial to farmers considering conversion to organic farming (ADAS and Organic Centre Wales, 2005, Lohr and Salomonsson 2000, Schneeberger at al, 2002). Organic farming systems are seen as management and information intensive compared to many conventional systems. There are five areas of information that need to be considered by farmers considering conversion. These are organic standards and the technical aspects of husbandry, environment issues, market intelligence, farm business management and marketing. It is recognised that prior to conversion farmers will need to spend considerable time in information and experience gathering, attending courses, farm visits and receiving advice. Therefore when these are not easily available then it can cause a considerable barrier to conversion, in the United States the provision of services were seen as more important than subsidies in encouraging conversion.

Technical and management issues have been addressed and identified in a number of studies in Europe (Cormack, 1999, Keatinge, 2005, Padel and Lampkin, 1994, Schneeberger at al, 2002, Sumption *et al.*, 2004). Key issues included problems with weeds, pest and disease control, the risk of yield losses or crop failure, maintenance of soil fertility, feed shortages and additional labour requirements.

Economic studies conducted in the UK have tended to show that organic farming is equal to or more profitable than their conventional counterparts (Jackson and Lampkin, 2006). However, the profitability of organic farming is influenced considerably by the ability to secure price premiums. Lack of premium prices or the threat of prices reducing thus making organic production less attractive is a fear of conventional farmers contemplating conversion to organic faming. In other countries such as Austria, high organic incomes are reliant on agri-environment payments.

Another important factor is related to the social aspects of conversion and again this features strongly in the literature (Padel and Lampkin, 1994, Schneeberger at al, 2002,). This relates to such issues as the fear of becoming an ‘outsider’ or intergenerational conflicts within families. However, more recent literature has reported that the negative attributes that were attached to organic farmers in the early 1980s have been replaced by a general acceptance and that the negative image of organic farming is no longer an important barrier to conversion. Despite this, interaction with other actors (farmers, marketers) or lack of it can encourage or impede the individual decision making process.

Structural issues have been specifically mentioned in one Austrian study (Schneeberger at al, 2002). Elements, such as unsecured succession, unsecured land leases and smallness of the farm can influence the decision to convert to organic farming. Whether these issues are just confined to Austria or whether they have not been considered by other studies is not clear. Information from other European countries appears to indicate that the majority of farms, which convert, are owner occupied (Holt *et al.*, 2001). The size of organic farms relative to their conventional counterparts appears to differ from country to country, and with regional differences within a country (Lobley *et al.*, 2005). In Britain, Denmark, Canada and the United States organic farms are typically smaller than conventional farms, due to a high number of specialised and lifestyle holdings. However, in other countries such as Germany and Switzerland organic farm sizes are similar or larger than the conventional average (Padel and Lampkin, 1994). Organic farmers are often younger than their conventional counterparts (Lobley, 2005).

In analysing why farmers convert or not the importance of their attitudes in making decisions is increasingly being emphasised in some studies (Kledal, 2002). Farmers have been characterised according to their strategies and values and thus divided into different types. For example: the committed conventional; the pragmatic conventional; the environmentally conscious but not organic; the pragmatic organic; and the committed organic. The attitude of some farmers is definitely a barrier to them converting to organic production, although attitudes do change.

Chapter 4: Buying organic food

4.1 Introduction

As Chapter 1 indicated, the organic market has grown considerably in recent years and in 2007 was estimated to be worth approximately £2b in terms of retail sales - or approximately 0.78% of total grocery sales in March 2007 (Reed 2009). The latest Soil Association Organic Market Report indicates that sales rose to over £2.1b in 2008, although much of this latest increase is likely to reflect rising food prices rather than an increase in the volume sold (Soil Association 2009). Current economic conditions notwithstanding, the growth in the organic market arguably reflects not just an interest in organic food per se, but also a growing interest in the (local) provenance of food and issues around seasonality. This chapter draws on the postal survey of consumers outlined in Chapter 2 and discussion from the focus groups in order to consider the socio-economic profile of organic consumers, what it is they are buying and where from, what motivates them to purchase organic food and, importantly, what consumers expect from organic food. It is important to note that the majority of consumers in the consumer survey are consumers of organic food. Indeed, they received the questionnaire with their organic food, either with a vegetable box or as they were making a purchase in a shop. Thus the responses of consumers to questions in the survey mostly relate to their actual experience of buying and consuming organic food, rather than to hypothetical purchases.

Table 4.1 details the number and percentage of responses received from each branch of the consumer survey. It is immediately apparent that box scheme customers were particularly engaged with the survey and this is reflected in response rates of over 45%. The consequent over-representation of box scheme customers must be borne in mind when considering the implications of the results from the consumer survey. Moreover, although the national survey provides a benchmark against which the other branches of the survey can be compared, given the inherent bias towards the purchase of organic food in the survey design (i.e. a large proportion of respondents were box customers or used a specialist organic retailer) respondents have also been categorised on the basis of their response to questions asking them to indicate the relative importance of the following attributes when buying food:

- local
- organic
- fresh
- from a trusted source

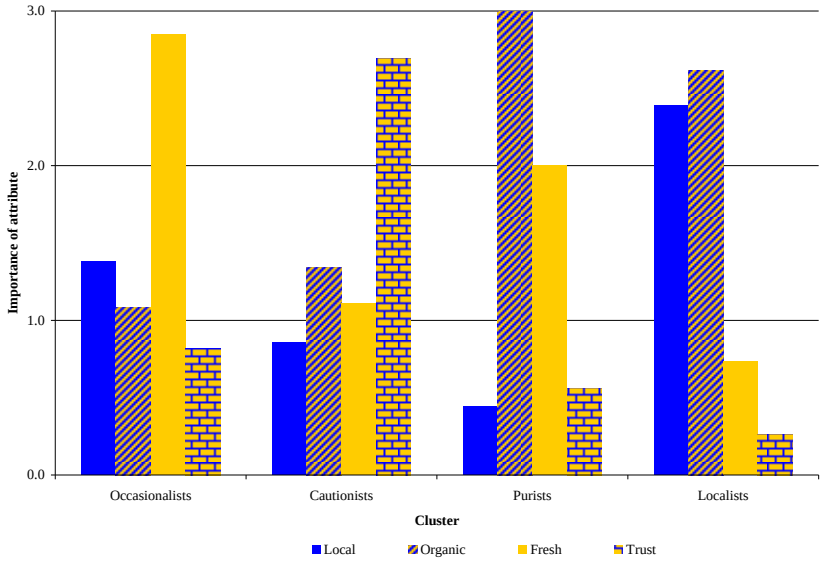
Including ‘organic’ as one of four attributes that a consumer may consider when making food purchase decisions helps address some of the inherent bias towards organic food in a sample composed of consumers who purchase organic food. Using data from these four variables, distinct consumer profiles were developed by applying hierarchical cluster analysis, using the Ward method, to classify consumers into four

distinct groups (see Figure 4.1): organic *occasionalists*, organic *cautionists*, organic *purists*, and organic *localists*.[18] The names used to label each cluster describe a key tendency of members of that cluster. The organic *occasionalists* were more likely to buy organic produce less than once a week and to purchase fewer organic foods; organic *cautionists* tended to buy organic food weekly and sourced food from a trusted source; organic *purists* stressed the importance of organicness above all other attributes and bought more organic food types; and organic *localists* who stressed the importance of organic, also attached significance to local production.

Table 4.1: Number and response rates from different branches of the organic food consumer survey

Branch of organic consumer survey	No. of responses	Response Rate %
National survey	244	12.6
River Nene	361	45.1
River Swale	380	47.5
Riverford	382	47.8
Growing with Nature	215	43.0
Planet Organic	99	18.7
All consumers	1681	31.3

Figure 4.1: Key attributes defining each cluster***



***Using one way ANOVA procedure, attribute means for each cluster are significantly different when P<0.001.

4.2 Cluster membership

Figure 4.2 illustrates the proportion of respondents in each cluster. It can be seen that a majority of respondents (46.9%) are classed as organic *occasionalists*. On the other hand, only 13.5% of respondents are regarded as organic *localists*.[19] It is statistically significant that consumers from the national survey were more likely to be *occasionalists*, with 69.7% of national survey consumers belonging to this cluster

[18] Consumers who do not buy organic food are excluded from the cluster analysis, since the primary focus is on differences in attitudes between those that do purchase organic food.

[19] In the text, these will be referred to as *occasionalists*, *cautionists*, *purists* and *localists* for brevity.

compared to 39.2% of Growing with Nature customers and 39.1% of Planet Organic customers (see Figure 4.3). In contrast, *cautionists* were spread fairly evenly throughout the sample, accounting for approximately one-fifth of consumers in each branch of the survey. Planet Organic customers were statistically associated with being *purists*, while the Growing with Nature box scheme, which trades on providing local food to its customers, and to a lesser extent River Nene box customers, were associated with being *localists*. However, despite these statistically significant associations, and with the exception of the national sample, it is clear that respondents from each branch of the consumer survey were distributed reasonably evenly across all clusters.

Figure 4.2: The proportion of respondents belonging to each cluster

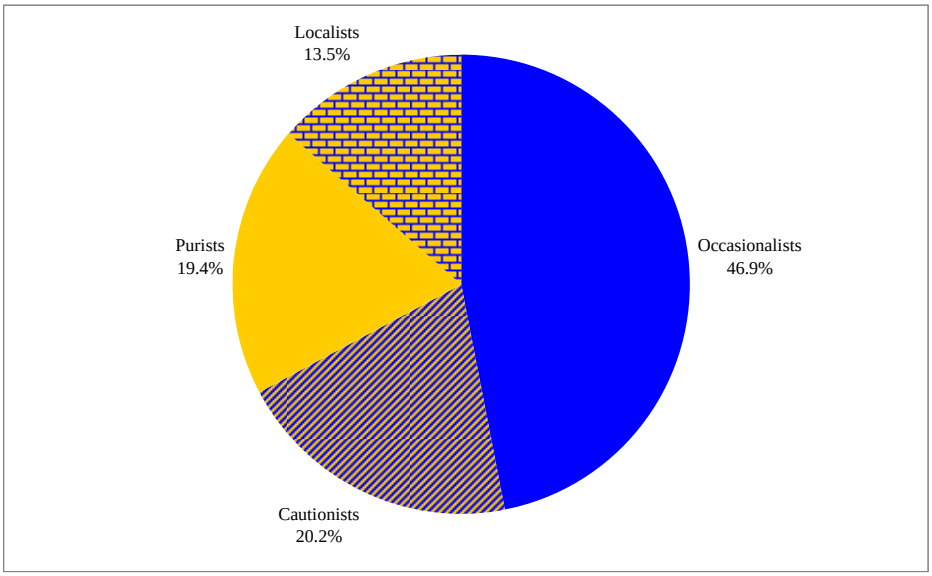
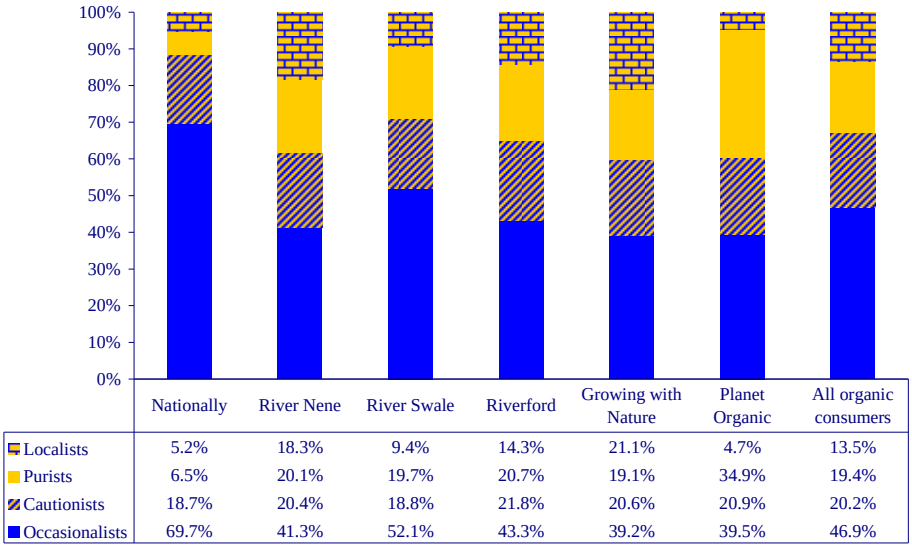


Figure 4.3: The association between branch of survey and cluster membership***



	Nationally	River Nene	River Swale	Riverford	Growing with Nature	Planet Organic	All organic consumers
Localists	5.2%	18.3%	9.4%	14.3%	21.1%	4.7%	13.5%
Purists	6.5%	20.1%	19.7%	20.7%	19.1%	34.9%	19.4%
Cautionists	18.7%	20.4%	18.8%	21.8%	20.6%	20.9%	20.2%
Occasionalists	69.7%	41.3%	52.1%	43.3%	39.2%	39.5%	46.9%

***The association between branch and cluster membership is significant when P<0.001.

The analysis presented in the rest of this chapter will focus mainly on the four consumer groups from the cluster analysis. However, results from comparing the

different survey branches will be presented alongside that of the consumer cluster analysis, where it offers further insight.

4.3 Consumer profile

The consumer profile considers the age, education, ethnicity, gender of consumers and whether a consumer had visited a farm in the previous year. Most consumers who responded to the survey were female (85%) although there was some marginal variation. For instance, box scheme consumers were more likely to be female compared to those from Planet Organic or national survey consumers. Although the sample appears skewed towards female consumers, previous research (e.g. Hughner *et al.* 2007) suggests that organic consumers are generally female. In terms of age, it is clear from the consumer survey that generally, organic consumers tended to be younger than those who did not purchase organic food (see Table 4.2). There were also some differences between different organic consumers, with Planet Organic consumers tending to be younger than those of the box schemes and the national organic consumers. Fearne (2008) reports that results from previous research on the association between age and the purchase of organic food are mixed.

Arguably, the most interesting profile indicators are those of education and ethnic origin. Box scheme consumers and Planet Organic customers emerge from the survey as highly educated. Indeed, with the exception of River Nene customers, 70% or more of box scheme consumers and Planet Organic customers were educated to at least degree level and/or were members of a professional institute (see Table 4.3).[20] This compares to 34.1% of organic consumers in the national survey and 25.0% of those who did not buy organic food. Furthermore, 30.8% of those who did not buy organic food were educated only to school leaving age level. This corroborates previous research which has also suggested that organic consumers tend to be more highly educated (e.g. Weir *et al.* 2008).

In contrast, little or nothing has been previously published on the ethnic background of organic consumers. Interestingly, organic consumers in this survey overwhelmingly described themselves as white (over 97% in the case of the River Swale, River Nene, and Growing with Nature box schemes). Planet Organic had the greatest number of customers (12.1%) describing themselves as having an 'other' ethnic origin - mostly of mixed race or of Asian origin. Of those who did not buy organic food, 13.2% described themselves as having a non-white origin.

Finally, as a proxy for connectedness to farmers, respondents were asked if they had visited a farm in the last year. Interestingly, over half of organic food consumers, with the exception of Planet Organic customers, had visited a farm in the last year. However, consumers who did not buy organic food were the least likely to have visited a farm (only 39.2% having done so).

[20] According to the General Household Survey in 2006, 22.2% of the respondents' highest education was at degree level or above.

Table 4.2: The association between branch of survey and age[***]

Age	National (buy organic)	National (do not buy organic)	River Nene	River Swale	Riverford	Growing with Nature	Planet Organic	All organic consumers
	%	%	%	%	%	%	%	%
18-24	1.6	1.9	0.3	0.8	0.3	0.5	2.0	0.7
25-39	22.2	24.5	35.3	40.9	32.0	24.3	46.5	33.3
40-54	36.5	32.1	42.0	36.4	53.4	43.5	34.3	42.1
55-64	23.8	17.0	17.4	11.3	11.6	19.2	9.1	15.2
65 and over	15.9	24.5	5.0	10.6	2.6	12.6	8.1	8.7

[***]The association between branch membership and age is significant when P<0.001.

Table 4.3: The association between branch of survey and education[‡]

Level of education	National (buy organic)	National (do not buy organic)	River Nene	River Swale	Riverford	Growing with Nature	Planet Organic	All organic consumers
	%	%	%	%	%	%	%	%
Degree, post graduate, member of professional institute	34.1	25.0	64.2	71.5	69.6	70.1	73.2	63.8
Higher education qualifications but lower than a degree (HNC/HND)	13.5	15.4	10.7	9.3	9.9	11.7	6.2	10.5
BTEC, ONC/OND	2.7	3.8	2.0	2.9	2.9	1.4	2.1	2.5
A or AS levels	8.1	3.8	6.2	6.4	6.1	5.6	6.2	6.3
GNVQs/NVQs	9.2	7.7	2.8	2.9	2.1	2.3	2.1	3.4
School Qualifications	21.6	30.8	10.1	5.1	6.7	7.9	6.2	9.6
No qualifications	9.2	11.5	2.5	1.3	1.3	0.0	3.1	2.7
Other	1.6	1.9	1.4	0.5	1.3	0.9	1.0	1.1

[‡]No statistical association exists between branch membership and level of education.

Turning attention towards the distinct organic consumer groups revealed by the cluster analysis, in terms of ethnic origin, gender, and visiting a farm in the previous 12 months, there was little difference between each cluster. Of more interest however, and statistically significant, were the age and education profiles of organic consumers in each cluster (see Tables 4.4 and 4.5). For instance, *localists* had a concentration of members in the age range 25 to 39 (43.0% compared to an average of 34.1% for all clusters). *Purists* tended to be slightly older, with 48.3% in the 40 to 54 age range. However, *cautionists* had the oldest age profile overall with 19.2% of members in the 55 to 64 age range and a further 8.5% over the age of 65.

Table 4.4: The age profile of consumer clusters*

Age	Occasionalists	Cautionists	Purists	Localists	All organic consumers
	%	%	%	%	%
18-24	0.8	0.7	0.3		0.6
25-39	36.9	27.5	28.4	42.6	34.1
40-54	42.0	44.1	48.3	37.3	43.0
55-64	13.6	19.3	15.8	12.3	15.0
65 and over	6.6	8.5	7.2	7.8	7.3

*The association between cluster membership and age is significant when P<0.05.

Table 4.5: The education profile of consumer clusters*

Level of education	Occasionalists	Cautionists	Purists	Localists	All organic consumers
	%	%	%	%	%
Degree, post graduate, member of professional institute	65.5	68.0	61.2	74.1	66.3
Higher education qualifications but lower than a degree (HNC/HND)	11.8	7.0	12.4	8.0	10.4
BTEC, ONC/OND	2.6	4.0	1.0	2.0	2.5
A or AS levels	5.7	7.3	7.6	4.0	6.1
GNVQs/NVQs	3.5	2.0	4.1	1.0	3.0
School Qualifications	8.7	7.7	9.3	8.0	8.5
No qualifications	1.6	3.3	2.1	2.0	2.1
Other	0.7	0.7	2.4	1.0	1.1

*The association between cluster membership and education is significant when P<0.05.

In terms of their educational profile, 74.1% of *localists* had achieved a degree or higher qualification. This compares to 61.2% of *purists*, and a sample average of 66.3%. Despite this, many of the differences in the education of cluster members were minimal. For instance, while significant in a statistical sense, a small minority (4.0%) of *cautionists* had a technical education (BTEC, ONC/OND) compared to an even smaller minority (between 1.0 and 2.6%) of the other clusters.

4.4 Food preferences and buying profiles

Previous research has highlighted wide variation in the frequency with which organic food is purchased (e.g. Aschemann *et al.* 2007; Midmore *et al.* 2005; Shephard *et al.*

2005). In the consumer survey, 67.6% of all respondents purchased organic food at least once a week, while only 7.5% bought it less than once a month. While this is perhaps not unexpected given the large number of box scheme consumers in the sample, there is a very strong statistically significant association indicating that organic consumers from the national survey were disproportionally likely to purchase organic food infrequently, with over half buying organic food less than monthly. In contrast, only 10.1% of Planet Organic customers purchased organic food less frequently than monthly. Generally, over 70% of box customers purchased organic food every week, which is unsurprising given the ability to have boxes delivered weekly. In part, the frequency of purchases is reflected by the consumer clusters. For instance, as Table 4.6 indicates, 80.8% of *purists* bought organic food at least once a week. This compares to 59.1% of organic *occasionalists*, who were more likely to purchase organic food less regularly, with 11.1% buying it once a month or less.

Table 4.6: The frequency of organic food purchases and cluster membership[***]

Frequency of purchase	Occasionalists	Cautionists	Purists	Localists	All organic consumers
	%	%	%	%	%
Once a month or less	11.1	3.9	2.1	1.0	6.5
Every month	29.8	23.3	17.2	23.3	25.1
Every week	59.1	72.8	80.8	75.7	68.3

[***]The association between cluster membership and frequency of buying organic food is significant when P<0.001.

In terms of the types of organic foods purchased, it is worth noting from Table 4.7 that organic vegetables were so widely purchased by survey respondents that they were not associated with any particular consumer cluster, which is not surprising given that many respondents received a vegetable box. Indeed, 96.9% of organic consumers in the survey buy organic vegetables. The second most commonly purchased organic food type was eggs, which are bought by 63.0% of all consumers and 70.4% of *purists*. Organic yoghurt, whilst the fourth most purchased product, was the second most likely product to be bought by *localists*. In terms of organic meat, chicken was the most popular, being purchased by 58.7% of all organic consumers compared to 32.9% that purchased beef, 27.6% that purchased lamb and 25.8% who bought pork. Organic *purists* were the most likely to purchase any organic meat, pointing to their commitment to include a wide variety of organic produce across their diet. Organic milk was also associated with *localists*, with 60.3% buying it compared to 40.7% of *occasionalists*. A similar pattern was repeated for cheese, although *purists* were again most associated with this product. Although these different purchasing profiles are interesting, more significant is the finding that not only did *occasionalists* buy organic food less frequently, but that they also purchased a much narrower range of food. In general, organic *occasionalists* were consistently less likely to purchase organic food in 23 out of the 25 food types listed in Table 4.7.[21] In

[21] This is based on an examination of adjusted standardised residuals from bivariate analysis between the food type and the organic cluster. When the adjusted residual is greater than 2, a significant association between the variables is assumed to exist. Thus in the case of occasionalists, 23 out of 25 associations with food types were statistically significant.

contrast, *purists* were consistently more likely to be associated with buying a wide range of different food types (21 out of 25), along with *localists* (15 out of 25). This suggests that for *purists* it was not only the organicness of individual food types that was important to them, but that they were committed to including organic food throughout their diet, whereas *occasionalists* were likely to include only a few organic food products in their diet and to do so infrequently.

Table 4.7: The association between consumer cluster and type of organic food purchased (% of cluster reporting purchasing food type)

Food	Occasionalists	Cautionists	Purists	Localists	All organic consumers
	%	%	%	%	%
Vegetables	95.9	97.7	96.9	99.0	96.9
Eggs**	58.7	64.7	70.4	64.7	63.0
Chicken*	54.9	59.5	65.0	61.8	58.7
Yoghurt***	49.2	52.6	59.2	69.1	54.5
Milk***	40.7	57.5	56.1	60.3	49.8
Fruit*	44.7	47.7	54.8	54.4	48.6
Bread***	35.2	41.5	51.4	56.6	42.6
Cheese***	27.0	40.2	49.7	47.1	36.8
Chocolate***	28.4	32.4	45.2	46.6	34.9
Beef**	28.1	34.3	38.8	39.2	32.9
Tea***	24.5	32.7	45.2	39.7	32.3
Coffee*	24.0	29.7	32.0	34.3	28.1
Lamb*	23.7	28.1	33.0	32.4	27.6
Dried beans/pulses***	18.9	29.1	39.5	37.3	27.4
Health/body care products***	18.0	26.5	37.1	36.8	26.0
Pork**	20.9	28.8	31.0	30.9	25.8
Pasta Source***	15.5	20.9	32.3	30.9	21.9
Other products***	15.2	23.9	28.6	22.5	20.6
Wine and beer***	12.5	17.0	20.4	24.5	16.6
Jam***	9.6	17.0	25.5	25.0	16.3
Herbs and spices***	9.6	18.3	26.2	20.6	16.1
Cordials*	9.8	13.7	15.6	17.2	12.7
Mustard, pickles, chutney***	7.8	13.4	19.4	18.6	12.7
Baby Food†	9.1	6.9	13.3	10.3	9.6
Ready meals†	4.3	4.9	8.5	4.9	5.3

***P<0.001; **P<0.01; *P<0.05; †P<0.1 indicates a statistical association between clusters and food type.

Turning to the different branches of the survey, a clear pattern emerges. Planet Organic customers purchased more types of organic food than any other consumers. Indeed, excluding vegetables, Planet Organic customers were statistically associated with buying 17 out of 25 of the food types listed in Table 4.7, compared to 9 out of 25 for Growing with Nature box customers, 6 out of 25 Riverford box customers and none for River Nene or River Swale customers. Planet Organic customers, as would be expected given the range that the specialist retailer offers, were more likely to be associated with buying specialist organic products such as herbs and spices, ready

meals, mustards, pickles and chutneys, tea, and health and body care products. The purchase of organic meat was not associated with any particular branch of the survey with the exception of Riverford customers who were more likely to buy pork compared to other consumers. In contrast to Planet Organic and Growing with Nature customers, organic consumers from the National survey branch were associated with not buying 22 out of 25 of the food types listed. This adds weight to the earlier finding that those in the national survey were likely to be less committed, occasional purchasers of organic food and, as we have seen in Table 4.7, *occasionalists* tend to purchase a narrower range of organic products.

4.5 Where organic food is purchased

Where a consumer buys organic food will, to a certain extent, depend on what shops or markets are available in the area that they live or work in, or centres they travel to for shopping experiences. It can also reveal underlying values such as a desire to support local farmers, or independent shops, for instance. In this context it is interesting to note that consumers from the national branch of the survey were statistically significantly more likely to buy organic produce and food from supermarkets (90.6% compared to 83.6% of all consumers) and much less likely to buy from other types of outlet. Riverford box customers, on the other hand, were more likely to buy organic produce at a range of outlets including farm shops, health and whole food shops, butchers, bakers, greengrocers and local convenience stores, as well as buying a meat box, possibly from Riverford itself.

Turning to the organic consumer groups, Table 4.8 shows that 94.6% of *localists* bought through a vegetable box scheme compared to 81.3% of *occasionalists*. Furthermore, 40.5% of *localists* went to a farmers' market to purchase organic food, while 6.3% purchased a meat box. *Purists* were more likely to buy from health and whole food shops as well as specialist organic stores, while 12.6% purchased organic food from internet sites, compared to 5.2% of *occasionalists* and 6.2% of *cautionists*. Very large proportions of all consumer clusters (80%+) bought at least some of their organic food from supermarkets.

Some consumers clearly enjoy the experience of buying food direct from the producer such as at a farmers' market, as the following quote illustrates:

> *The farmers' market is quite a nice experience, you can go there, you can talk to people, it makes shopping less of a drag and I hate going round supermarkets* (consumer, Chichester focus group).

Others expressed a preference for purchasing food locally (this theme is considered in more detail below):

> *I like the look of local food - you go into the shop and apples are different sizes, and the lettuce has got earth on it and so. It looks like real food. Do you know, what I mean?* (consumer, Brinsbury focus group).

Table 4.8: The association between consumer cluster and retail outlet

Retail Outlet	Occasionalists	Cautionists	Purists	Localists	All organic consumers
	%	%	%	%	%
Vegetable box***	81.2	86.9	86.7	94.6	85.3
Supermarket	84.0	81.4	86.1	84.8	84.0
Farmers' market†	32.3	30.7	31.3	40.7	32.9
Farm shop	25.9	28.8	26.2	30.4	27.2
Health/Whole food shop***	27.3	32.0	41.5	40.2	32.8
Butchers shop	21.2	20.3	15.6	22.1	20.1
Specialist organic shop***	10.8	16.0	20.7	14.2	14.2
Local convenience store	13.0	12.7	13.3	11.3	12.8
Delicatessen	10.5	9.5	10.9	10.3	10.3
Greengrocers	10.2	8.8	7.8	7.8	9.1
Internet**	5.2	6.2	12.6	6.9	7.1
Other outlet	6.1	8.2	7.1	8.3	7.0
Bakers	5.1	5.9	6.1	2.0	5.0
Meat box***	1.4	4.9	5.1	6.4	3.5

***P<0.001; **P<0.01; †P<0.1 indicates a statistical association between clusters and retail outlets where organic food is bought.

While it is useful to consider where consumers purchase organic food in a general sense, it is of more interest to consider the association between the types of food they bought and where they were most likely to purchase it from. For this exercise, it is necessary to narrow the focus on specific organic foods and particular outlets in order to have enough respondents for meaningful analysis. We have therefore focused on the following commonly purchased food types:

- Milk
- Yoghurt
- Cheese
- Eggs
- Vegetables
- Fruit
- Chicken
- Beef
- Lamb
- Pork

and the following points of sale:

- Vegetable box
- Supermarkets
- Farmers' market
- Farm shop
- Health and whole food shop
- Butcher's shop
- Specialist organic retailer
- Meat box

It is important to note that the survey did not record where consumers purchased each food type, but it recorded what they bought and which retail mechanisms they used. This enables us to identify associations between retail outlets and the purchase of certain types of organic food. Table 4.9 indicates statistically significant associations between these selected organic foods and selected retail outlets. The table shows a strong statistical association between the purchase of organic milk, yoghurt and fruit and the use of supermarkets. This narrow range of products is interesting, given the dominance of supermarkets revealed above in terms of the 84.0% of consumers who use them. The association between purchasing these products and shopping in supermarkets is probably a reflection of the convenience offered by such stores. In contrast, consumers buying organic meats were much more likely to use farmers' markets, farm shops, butchers' shops, meat box schemes and to a lesser extent internet sites, vegetable box schemes and specialist organic shops. This may be a reflection of consumer desire for traceability and a closer connection to the producers of organic meat. It is unsurprising that meat was not associated with health or whole food shops as these tend to specialise more in vegetarian types of food. In terms of other food types, consumers who bought cheese were most likely to be associated with many of the different retail outlets. This may reflect the wide range of different types of organic cheese and the wide range of outlets that stock such cheeses.

Table 4.9: Significant associations between selected organic foods and selected retail outlets

	Vegetable box	Supermarket	Farmers' market	Farm shop	Health/whole food shop	Butchers shop	Specialist organic shop	Internet	Meat box
Milk	***	***			**		***		*
Yoghurt	*	***	*		***		***		*
Cheese	***		***	**	***	**	***	***	***
Eggs			**	***		***	*		
Vegetables	***			**			***	*	
Fruit	**	***	**		***		***		
Chicken	**		***	***		***			**
Beef			***	***		***	**	***	***
Lamb	***		***	***		***		**	***
Pork	**		***	***		***	**	**	***

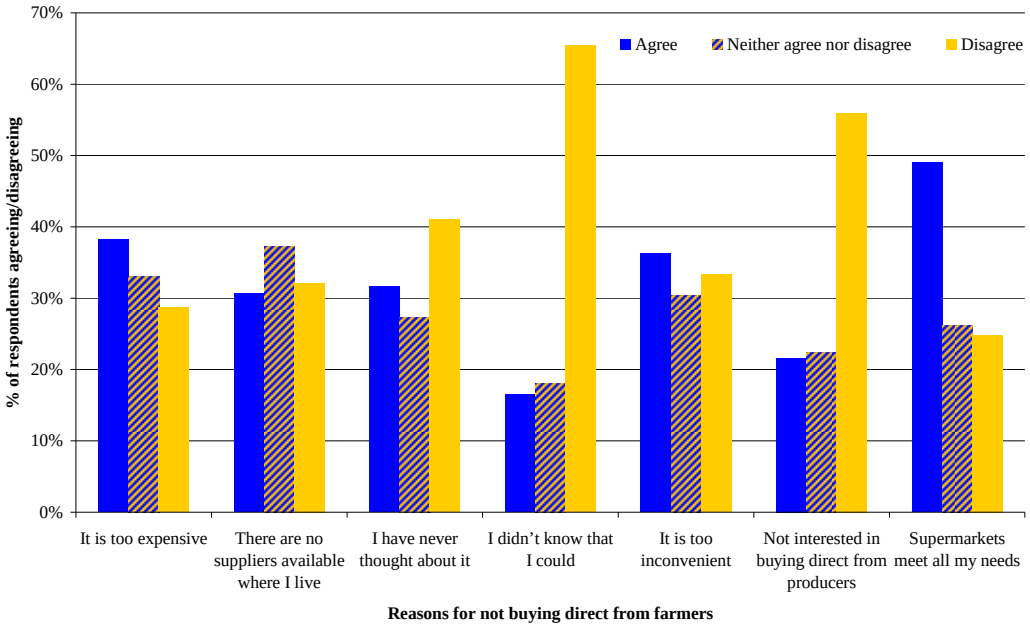
***P<0.001; **P<0.01; *P<0.05 indicates a statistical association between retail outlet and food type.

Finally, in terms of understanding where organic food is purchased, consumers who bought organic food, but who did not buy directly from producers, were asked about their reasons. Given that many of the respondents were box customers, Figure 4.4 represents only individuals from the national survey and Planet Organic that reported that they did not purchase direct from producers (approximately 9% of the total sample). Clearly, Figure 4.4 demonstrates that the level of ignorance among consumers about the ability to buy direct from producers was low, as only 16.4% of consumers did not know that they could buy organic food direct from the producer. Furthermore, as only 21.5% agreed that they were not interested in buying direct,

there are obviously other barriers facing this group of consumers. For some of those who did not buy direct from the producer the reason was the presumed expense (38.7%), for others it was a lack of suppliers in their area (30.7%), while some consumers had not thought about it (31.7%). One of the main reasons however, was the convenience provided by supermarkets. Indeed, nearly half of consumers who did not buy direct from producers cited this reason. In addition, 36.2% agreed that buying direct was too inconvenient.

In terms of differences between the branches of the survey and consumer clusters, consumers in the national branch were significantly more likely to believe that it was too expensive to buy organic food direct from producers, with 52.3% of consumers agreeing with this statement compared to only 14.0% of Planet Organic customers. Moreover, 63.2% of consumers from the national branch agreed that supermarkets meet all their needs, whereas 46.3% of Planet Organic customers disagreed with this statement. In terms of the consumer clusters, awareness that you could buy direct was not an issue. However, a clear division occurred between the *occasionalists* and *cautionists* who held the view that buying direct was too expensive and the supermarket meet all their needs, whereas *purists* and *localists* were more likely to disagree with this perspective.[22]

Figure 4.4: Reasons why consumers do not buy direct from farmers



4.6 Reasons for buying organic produce

There are many reasons that motivate consumers to purchase organic food in general (i.e. not specifically linked to a particular outlet or produce type). The analysis, when focusing on the branches of the survey, quite clearly illustrates a grouping of important motivating factors reported by respondents but also reveals some interesting differences. Across all branches of the survey, concerns with health, food safety,

[22] It should be noted that only seven *localists* answered this section and therefore it is unlikely to be representative.

environmental impacts, food miles and support for British farmers emerge as important motivators in the purchase of organic food, with large proportions of respondents stating that they 'agree' or 'agree strongly' with these as reasons why they purchased organic food (see Table 4.10). However, there was some variation between the different consumer branches with national consumers being somewhat less concerned with health and food safety motivations, and Growing with Nature and Planet Organic consumers being more concerned with such issues. Furthermore, national consumers were less motivated by the environmental impact of organic produce and both National survey and Planet Organic consumers were less strongly motivated to purchase organic food in order to reduce food miles. For Planet Organic, a central London location was clearly an influencing factor in terms of food miles. The final motivator perceived as important by all consumers was support for British farmers, although consumers from the national survey and Planet Organic customers were less likely to see this as an important motivating factor. Perhaps this reflects the wider range of products these consumers were purchasing. Far fewer consumers were motivated to buy organic food as a special treat for themselves, friends or family. Planet Organic customers were slightly more strongly motivated by these factors but overall these figures suggest that the purchase and consumption of organic food was seen as a mainstream part of the diet and not something reserved for special occasions. Furthermore, most consumers were not motivated to purchase organic food because they had 'some extra money'.

Table 4.10: The association between motivations for buying organic food and survey branch (% of respondents 'strongly agreeing' or 'agreeing' with statement)

	National	River Nene	River Swale	Riverford	Growing with Nature	Planet Organic	All organic consumers
Healthier for me and/or my children***	62.2	89.7	81.8	87.6	85.8	90.9	83.9
Because it is safer***	57.0	85.8	76.3	80.2	83.5	85.4	78.9
To treat myself***	33.7	17.7	21.0	19.3	19.5	45.2	22.4
To cook a special meal for myself or my family***	16.6	17.1	17.5	16.8	20.3	37.9	18.8
To cook a special meal for my friends**	14.0	15.5	14.9	15.2	14.6	27.7	15.7
When I have some extra money***	30.0	8.7	11.4	11.7	12.2	19.6	13.3
Because it is better for the environment***	46.9	88.8	88.2	89.4	89.3	76.0	83.8
To reduce my food miles***	28.7	72.8	72.1	75.7	80.3	37.4	67.9
Because I want to support British farmers***	61.8	83.6	82.1	82.6	88.2	62.3	80.1

***P<0.001; **P<0.01 indicate a statistical association between branch membership and motivation for buying organic food.

These trends were reflected in the responses of those in the four consumer clusters. From Table 4.11 it can be seen that three particular motivators were expressed above most others:

- organic produce is perceived as healthier;
- organic produce is better for the environment;

- the desire to support British farmers.

However, not all consumers rank these in the same order.[23] Taking the sample as a whole, the supposed health benefits were ranked highest, although of the consumer clusters, only *purists* ranked this first. *Cautionists* and *localists* ranked environmental benefits as their most important reason for purchasing organic food, whereas *occasionalists* gave the highest ranking to the desire to support British farmers. While the ranking exercise highlights differences in consumers' reasons for buying organic produce, these become reasonably uniform in the lower order of Table 4.11, although significant differences occur between organic consumer groups.

Table 4.11: Ranking of reasons that motivate consumers to purchase organic food[†]

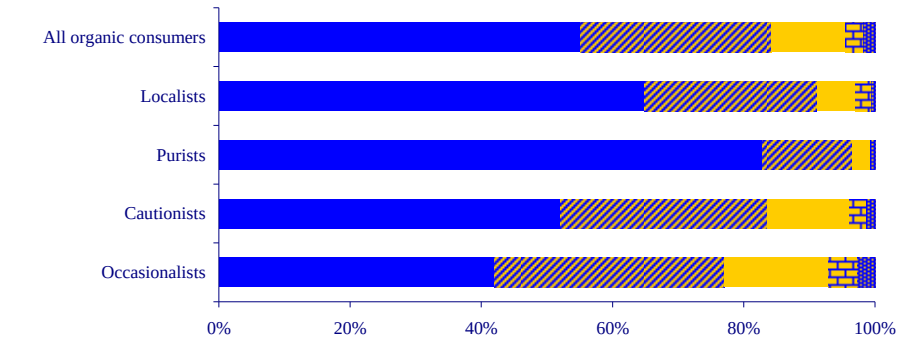
Statement ranking	All organic consumers	Occasionalists	Cautionists	Purists	Localists
1	Healthier	British farmers	Environment	Healthier	Environment
2	Environment	Environment	Healthier	Safer	British farmers
3	British farmers	Healthier	British farmers	Environment	Healthier
4	Safer	Safer	Safer	British farmers	Safer
5	Reduce food miles	Reduce food miles	Reduce food miles	Reduce food miles	Reduce food miles
6	Treat	Treat	Treat	Treat	Special meal for family
7	Special meal for family	Special meal for family	Special meal for family	Special meal for family	Treat
8	Special meal for friends	Special meal for friends	Special meal for friends	Special meal for friends	Special meal for friends
9	Extra money	Extra money	Extra money	Extra money	Extra money

[†]A significant difference ($P<0.001$) in score values exists between the organic consumer groups and the following motivators: healthier, environment, safer, extra money, reduce food miles and support of British farmers.

Figures 4.5 and 4.6 consider some of these motivators in more detail. Figure 4.5 illustrates the differences between consumers who bought organic produce because of its perceived health benefits. While the majority (84.1%) of all organic consumers 'strongly agree' or 'agree' that organic produce was healthier for them or their children, *purists* were significantly likely to agree strongly, with 82.9% agreeing strongly with this motivator compared to just 42.0% of *occasionalists*. On the other hand, 22.9% of *occasionalists* had no opinion or disagreed with the supposed health benefits of organic produce. Clearly then, while the perceived health benefits of organic food were important in overall terms, it was less important for those who purchased organic food less frequently.

[23] Answers to attitudinal questions were recorded using a Likert five-point scale, and these have been ranked according to their means.

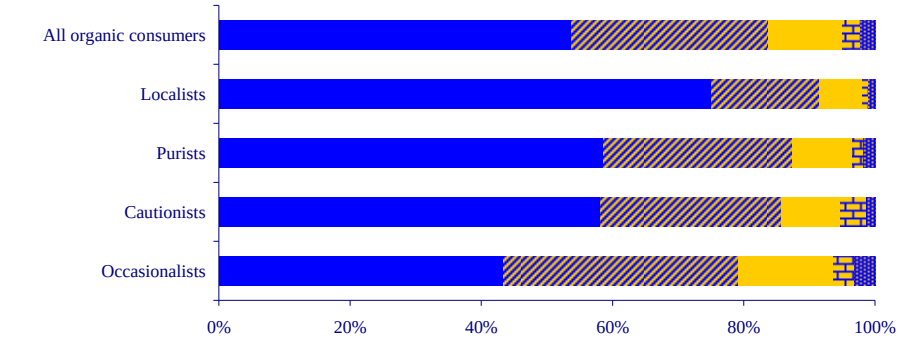
Figure 4.5: The association between health motivation ('I buy organic produce because it is healthier for me and/or my children') and consumer clusters***



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	2.7%	1.3%	0.7%	0.5%	1.7%
Disagree	4.4%	2.6%	0.0%	2.5%	2.9%
Neither agree nor disagree	15.8%	12.5%	2.7%	5.9%	11.2%
Agree	35.0%	31.6%	13.7%	26.2%	29.0%
Agree strongly	42.0%	52.0%	82.9%	64.9%	55.1%

***The association between cluster membership and health as a motivating reason is significant when P<0.001.

Figure 4.6: The association between environmental motivation ('I buy organic produce because it is better for the environment') and consumer clusters***



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	3.2%	1.3%	1.7%	1.0%	2.2%
Disagree	3.2%	4.0%	1.7%	1.0%	2.8%
Neither agree nor disagree	14.5%	9.0%	9.2%	6.5%	11.2%
Agree	35.8%	27.6%	28.8%	16.5%	30.1%
Agree strongly	43.4%	58.1%	58.6%	75.0%	53.7%

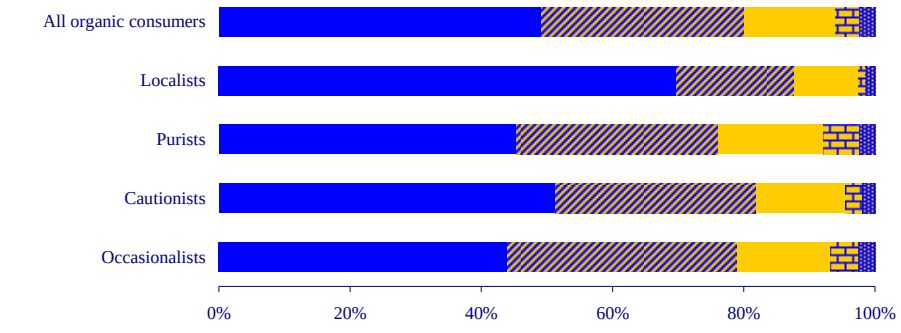
***The association between cluster membership and the environment as a motivating reason is significant when P<0.001.

As Table 4.11 indicates, *localists* and *cautionists* were highly motivated by the perceived environmental benefits of organic food. As can be seen from Figure 4.6, there is a strong statistical association between being an organic *localist* and agreeing strongly that organic produce was better for the environment (75.0% of agreed strongly with this statement). Although the environment motivator was also important for both *purists* and *cautionists*, they were less strongly motivated by environmental concerns than organic *localists*. *Occasionalists* were the least likely to be strongly motivated by environmental concerns and a large minority (20.9%) either

had no opinion or disagreed that this was a factor motivating their purchase of organic food.

Support for British farmers was ranked third overall in Table 4.11, although it was placed first by *occasionalists*. Interestingly, the only group not to rank support for British farmers in the 'top 3' was the *purists*. Looking in more detail, Figure 4.7 shows that 69.8% of *localists* associated themselves strongly with this motivator. *Purists* on the other hand, tended to be associated with disagreeing with this as a reason for buying organic food (23.9% either had no opinion, disagreed or disagreed strongly). Buying from British farmers was closely related to the issue of food miles and whether consumers bought organic produce to reduce their carbon footprint. As Figure 4.8 indicates, 36.8% of *purists* were not concerned with food miles when buying organic food compared to 18.9% of *localists*. This adds weight to the argument that for the *purists* it was the organicness of the food and associated farm system that was of primary importance and that support for British farmers and wider environmental concerns such as food miles were of much less significance. Another interesting tendency in the lower rankings of Table 4.11 is that *occasionalists* were more likely to buy organic food as a treat, with 25.2% either agreeing or agreeing strongly with this as a reason compared to 19.2% of *purists* and 16.0% of *localists*. This is perhaps related to having some additional income, as *occasionalists* were also more likely only to buy organic food when they had extra money.

Figure 4.7: The association between support for British farmers ('I buy organic to support British farmers') and consumer clusters***



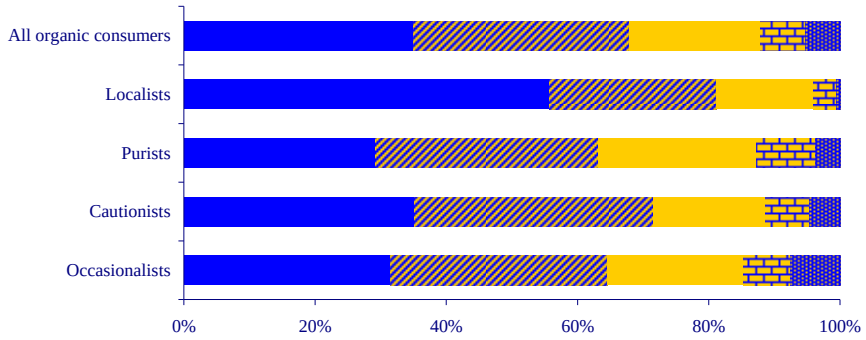
	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	2.6%	2.0%	2.4%	1.5%	2.3%
Disagree	4.2%	2.6%	5.5%	1.0%	3.7%
Neither agree nor disagree	14.3%	13.5%	16.0%	9.9%	13.9%
Agree	35.0%	30.6%	30.7%	17.8%	30.9%
Agree strongly	43.9%	51.3%	45.4%	69.8%	49.2%

***The association between cluster membership and support for British farmers as a motivating reason is significant when P<0.001.

Analysis of consumer motivations has revealed evidence of both broad agreement regarding the most important motivating factors, but also different perceptions between the different consumer clusters. Each consumer group, while often agreeing that certain issues were important motivators in purchasing organic food, nevertheless placed different emphasis on specific motivating factors. Thus, *purists* were clearly motivated by the view that organic produce is healthier and safer to eat, rather than

more environmental issues such as food miles, although they believed organic food was better for the environment. *Localists*, on the other hand, tended to rank environmental issues much more highly in combination with buying their food from British sources that reduces food miles. *Occasionalists* were in some ways similar to *localists*; they also placed significant emphasis on the notion that organic food should be British, and that its production was better for the environment. However, unlike the other groups, because they bought organic less often, they were more likely to be motivated to purchase organic food as a treat, buying it when they had some extra money. *Cautionists* were characterised as not having strongly held attitudes towards organic food with proportionally fewer agreeing that organic food was better for the environment for instance.

Figure 4.8: The association between food miles ('I buy organic produce to reduce my food miles') and consumer clusters***



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	7.6%	4.7%	3.8%	0.5%	5.3%
Disagree	7.2%	6.7%	8.9%	3.5%	6.9%
Neither agree nor disagree	20.7%	17.1%	24.1%	14.9%	19.9%
Agree	33.1%	36.5%	34.0%	25.4%	32.9%
Agree strongly	31.4%	35.1%	29.2%	55.7%	35.0%

***The association between cluster membership and reducing food miles as a motivating reason is significant when P<0.001.

The analysis of consumer motivations has helped indicate why consumers purchase organic food and has clearly illustrated differences between different groups of organic consumers. It has also begun to reveal what it is that consumers expect from organic food in a broad sense, and it is to this issue that the chapter now turns.

4.7 Expectations when buying organic produce

Expectations are important when buying organic food. What a consumer expects from organic produce can act as a proxy for what they believe that food represents. In part this includes expectations regarding the perceived taste and nutritional benefits of organic food, but also wider expectations regarding the consumption of organic food and support of organic farms. In other words, the notion is that organic food and farming delivers a number of benefits to the consumer, some of which are private goods and others which have public good aspects. It is clear from Table 4.12 that consumers expected organic produce to be free from chemical residues; to benefit the environment; and that it has not been genetically modified. All consumers gave these

expectations the highest rankings (although the order of the 'top 3' varies slightly). In the lower rankings of Table 4.12, the ability to give feedback to producers and contact with producers was of limited importance, whereas expectations around traceability, seasonality and support for British farmers were ranked medium-high in terms of consumer expectations of organic food.

Table 4.12: Ranking of consumer expectations regarding organic produce[†]

Statement ranking	All organic consumers	Occasionalists	Cautionists	Purists	Localists
1	Residue free	Residue free	Residue free	Residue free	Environmentally beneficial
2	Environmentally beneficial	Environmentally beneficial	Environmentally beneficial	No genetic modification	Residue free
3	No genetic modification	No genetic modification	No genetic modification	Environmentally beneficial	No genetic modification
4	Expect to know source	Seasonality	Expect to know source	British farmers	Expect to know source
5	British farmers	Expect to know source	Seasonality	Expect to know source	British farmers
6	Seasonality	British farmers	British farmers	Seasonality	Seasonality
7	No air transport	No air transport	No air transport	Give feedback	No air transport
8	Give feedback	Give feedback	Give feedback	No air transport	Give feedback
9	Contact with producer	Contact with producer	Contact with producer	Contact with producer	Contact with producer

[†] A significant difference ($P<0.001$) in score values exists between the organic consumer groups and the following expectations: produce that has not been genetically modified and farming practices that are beneficial to the environment. A significant difference ($P<0.005$) in score values exists between the organic consumer groups and the following expectations: produce that is free from chemical residues and the ability to give feed back to producers.

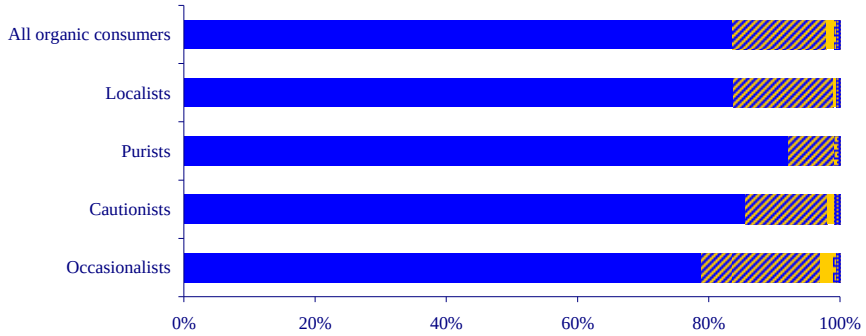
Examining some of these expectations more closely illustrates some of the differences and similarities between organic consumer clusters. Figure 4.9 reports on the expectation that organic produce should be free from chemical residues and it is clear that the overwhelming majority of consumers agreed strongly or agreed with this statement. Indeed the variation for those that agreed ranges from a minimum of 97.0% of *occasionalists* to a maximum of 99.2% of *purists*. This indicates that all but a very few organic consumers were unambiguous in the expectation that organic food should be free from chemical residues. Similarly, Figure 4.10 suggests that organic consumers also had a clear expectation that organic farming should be beneficial to the environment, with 96.6% of *occasionalists* to 98.4% of *purists* and *localists* either agreeing or agreeing strongly. These expectations around the residue-free nature of organic food and its environmental benefits were clearly expressed in the following examples from the focus groups:

> Facilitator: *When you buy organic food what do you think you are getting?*
>
> Consumer 1: *Food that is basically grown without pesticides and other things that are harmful to us, mainly grown with natural fertilizers that occur naturally in nature. Freedom from contaminants that are quite bad for the human body.*

Consumer 2: *There is a lot of motivation about the environment and so on. When I buy organic that is what I think I'm getting. Purity, you know what I mean.*

Consumer 3: *I think I'm getting food that has been produced without herbicides, pesticides, no GM, it is all of those things. And the food that I am eating will not have chemicals or residues in them. It is best for wildlife as well* (consumers, Chichester focus group).

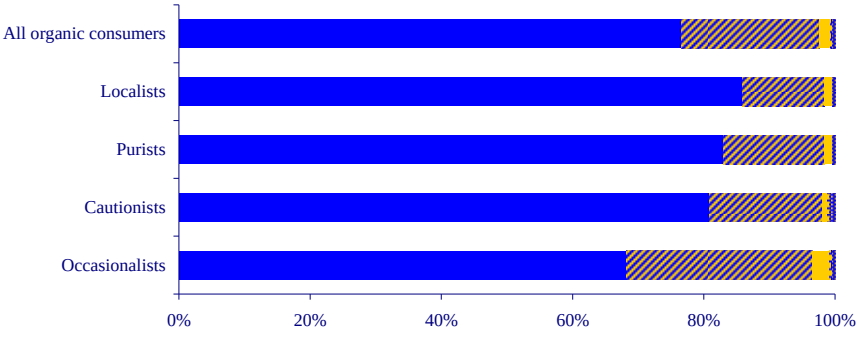
Figure 4.9: The association between the expectation that organic produce is free from chemical residues and consumer cluster‡



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	0.5%	0.8%	0.4%	0.5%	0.6%
Disagree	0.5%	0.0%	0.4%	0.0%	0.3%
Neither agree nor disagree	2.0%	1.2%	0.0%	0.5%	1.2%
Agree	18.1%	12.5%	7.1%	15.3%	14.3%
Agree strongly	78.9%	85.5%	92.1%	83.6%	83.6%

‡No statistical association exists between the consumer clusters and this expectation.

Figure 4.10: The association between the expectation that organic farming practices benefit the environment and consumer clusters‡



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	0.4%	0.8%	0.4%	0.5%	0.5%
Disagree	0.4%	0.4%	0.0%	0.0%	0.2%
Neither agree nor disagree	2.7%	0.8%	1.2%	1.1%	1.7%
Agree	28.3%	17.1%	15.5%	12.6%	21.1%
Agree strongly	68.3%	80.9%	82.9%	85.8%	76.5%

‡No statistical association exists between the consumer clusters and this expectation.

In some cases, organic certification was taken as a short hand for a bundle of expectations, making it easier to judge a product and to even be a 'lazy' consumer!

What I'm looking for is the assurance of that. If you are buying from a certified scheme you know it is assured. It is a laziness thing; one doesn't

> *have to keep looking at the packet. Thinking about what might be in it worrying about it. You can just say thank you very much. I don't have to worry about GM; I don't have to worry about chemicals, that sort of thing* (consumer, Chichester focus group).

Not all expectations of what organic food delivers benefited from such unanimous approval as that outlined above. For instance, consumers diverged over the weight attached to the expectation that organic produce should not have been transported by air. As Figure 4.11 shows, while 43.5% of *localists* agreed strongly with this, only 33.6% of *purists* and 33.8% of *occasionalists* shared such sentiments. However, a large proportion of each group were undecided on this issue, with *occasionalists* being statistically more likely to disagree strongly with this expectation. Those with a strong objection to air-freighted organic produce tended to object on a number of grounds including taste, seasonality, domestic self-sufficiency and carbon emissions, as the following examples illustrate:

> *There is no reason why we should ship in food that we could be producing* (consumer, Brinsbury focus group).

> *Air Miles is definitely an issue, it is a big consideration, there is a huge carbon footprint flying in vegetables from Africa and other parts of world* (consumer, Brinsbury focus group).

> *I wouldn't buy French beans from Kenya. Organic or not, in or out of season. They don't taste of anything. If it came to the situation that I was so desperate for French Beans and I couldn't find an organic supplier of them, I would wait until my vegetable box showed up with some. I think we should stop bringing this stuff in from abroad and air freighting it in* (consumer, Chichester focus group).

> *We have almost stopped eating fruit and vegetables out of season. I never eat strawberries out of season. Strawberries imported out of season are flavourless. I wouldn't even if they had good flavour, because I feel we should go back to eating food that we can grow fairly locally. Apart from those things like coffee and the bananas, I wouldn't be a martyr. Things like beans and strawberries that we can grow in this country, but only for a limited season, I personally would not even import them from other parts of the world* (consumer, Chichester focus group).

In terms of other expectations, both *purists* and, to a marginally lesser extent, *localists* were more likely to agree strongly that organic food should not be genetically modified (90.9% and 85.8% respectively). This compares to 79.5% of *cautionists* and 72.5% of organic *occasionalists*. Expecting to know where organic food is produced was more likely to be important to both *localists* (61.1% agree strongly) and *cautionists* (52.9%). This *knowledge* in turn engenders *trust* in the produce, both of which were important to these groups. The notion of trust in organic food covered trusting the producer, trusting that the food was safer and healthier, and trusting that organic production meant improved animal welfare. For some consumers, this was combined into a conscious lifestyle choice to minimise their environmental footprint:

> *In a sense that I am leaving the smallest possible footprint I can manage. I do think about my children's health and I'm concerned about my children's health, but I feel it is part of the whole damn thing, the environment as a whole is healthy. If certain conventional farming practices are not good for animals, how can it be good for humans? And it gets into the soil. It's about the future, and I do somehow trust the local farmer. I also want to feel able to consume meat and I do consider how much I consume, I want to consume meat without having to think how much an animal has suffered or has been tortured, it is not an acceptable moral choice in my opinion* (consumer, Brinsbury focus group).

Expectations, such as giving feedback to the producers or having personal contact with farmers, were generally much less important, as identified in the rankings of Table 4.12. Indeed, only *localists* (37.4%) were statistically associated with agreeing strongly that the ability to give feedback to producers was an important expectation, compared to 30.3% of all organic consumers. Far fewer agreed with the expectation that actual contact with the producer was important (29.0% of *localists* and 23.7% of all consumers). Furthermore, *occasionalists* were more likely to disagree (31.9%) and disagree strongly (16.8%) with this expectation compared to 20.5% and 14.2% of *localists* respectively. Nevertheless, for those that valued the ability to give feedback and had personal contact, the ability to get to know producers and then allow their relationship with the producer to influence food purchasing decisions was clearly important, even if it resulted in a decision not to buy organic food:

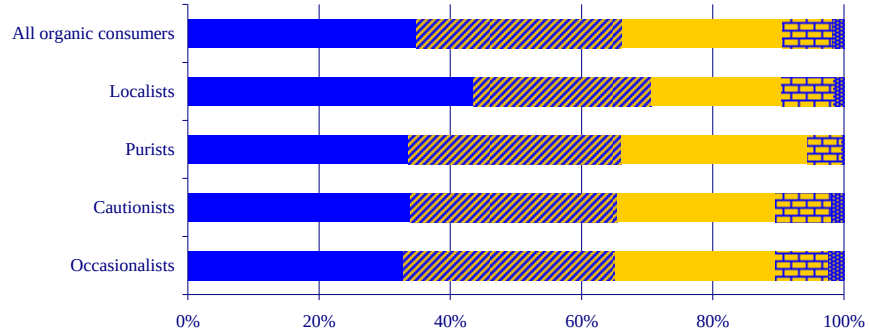
> *I think we get to know the producers; we tend to get to know the man who brings his stuff to the farmers' market. It is a thing that would influence me if I liked the man* (consumer, Chichester focus group).

> *It also gives you the opportunity to discuss with the person, you might say to him, 'I see you are not certified organic', and he may say, 'I do everything organically but I'm not prepared to pay the fee the Soil Association charges to become organic'. And you can judge for yourself whether you believe him or not and you can discuss with that person how the food is produced* (consumer, Chichester focus group).

This analysis has demonstrated that expectations of organic food tend to focus on a few important issues: freedom from chemicals; benefits to the environment; and no genetic modification. By considering the branches of the survey, some interesting differences emerge. For example, customers of the Growing with Nature box scheme were more likely to agree strongly with the following expectations: to know where their organic food is from; that it has not been transported by air; that organic farming is beneficial to the environment; to support British farmers; to only buy organic produce that is in season; and to have personal contact with the producer. It is possible that these customers were dedicated to the message that their box scheme promotes: "fresh seasonal produce from local growers, with the minimum of wasteful packaging, and travelling the shortest possible distance from the field to your plate" (Growing with Nature website). Conversely, consumers from the national branch of the survey and, to a lesser extent the customers of the retailer Planet Organic, were more likely to disagree and disagree strongly with Growing with Nature customers,

although absolute numbers of both of those groups disagreeing with the general expectations discussed in this section, were small.

Figure 4.11: The association between the expectation that organic produce has not been transported by air and consumer cluster‡



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	2.4%	1.9%	0.4%	1.6%	1.8%
Disagree	8.1%	8.6%	5.1%	7.9%	7.6%
Neither agree nor disagree	24.4%	24.1%	28.5%	19.9%	24.5%
Agree	32.2%	31.5%	32.4%	27.2%	31.3%
Agree strongly	32.9%	33.9%	33.6%	43.5%	34.8%

‡No statistical association exists between the consumer clusters and this expectation.

While the expectations regarding organic produce in general are interesting, further insight is gained by understanding what consumers expect in association with more specific food items such as vegetables, meat and milk. This suggests that consumer expectations vary according to type of organic food.

4.8 Expectations when buying organic vegetables

Buying organic vegetables is the cheapest way into organic consumption (other than growing your own) and, given that that the sample was biased towards box scheme customers, it is unsurprising that 96.8% of respondents reported buying organic vegetables. The most important expectations (i.e. those with the highest score) when compared to non-organic vegetables were that organic vegetables are expected to:

- be free from pesticides
- have a minimum of packaging
- taste better
- be safer to eat

Clearly, some of these expectations go beyond what is required for organic certification purposes. Slightly less emphasis was placed on seasonality and an expectation of higher nutritional quality, although these were still strongly held expectations. The latter was noticeably more important to Planet Organic consumers, as were expectations concerning taste and food safety. The strength of expectations regarding local production of organic vegetables varies considerably and was more important for Growing with Nature customers than for others. Other than national consumers, few survey respondents expected organic vegetables to be as cheap as

non-organic alternatives and, box scheme members in particular, did not expect their vegetables to be soil free!

Turning to the four consumer clusters, the expectations behind purchases of organic vegetables are illustrated in Table 4.13. Clearly reinforcing the general expectation that organic produce should be free from chemical residues, 93.1% of consumers thought that their vegetables should be free from pesticides. Indeed, as Table 4.13 shows, for every consumer group this expectation was the most highly ranked. The second most highly ranked expectation was that vegetables should have had minimal or no packaging. Only *purists* ranked this lower, in fourth position, although expectations regarding packaging were also closely connected to attitudes towards supermarkets and local retailers:

> *There is probably less packaging involved when you buy local food. With supermarkets virtually all of it is packaged* (consumer, Chichester focus group).

Table 4.13: Ranking of consumer expectations regarding organic vegetables[†]

Statement ranking	All organic consumers	Occasionalists	Cautionists	Purists	Localists
1	Pesticide free	Pesticide free	Pesticide free	Pesticide free	Pesticide free
2	Minimum packaging	Minimum packaging	Minimum packaging	Safer	Minimum packaging
3	Taste	Taste	Safer	Taste	Safer
4	Safer	Safer	Taste	Minimum packaging	Taste
5	Nutrition	Seasonality	Seasonality	Nutrition	Seasonality
6	Seasonality	Nutrition	Nutrition	Seasonality	Nutrition
7	Local	Local	Local	Freshness	Local
8	Freshness	Freshness	Freshness	Local	Freshness
9	Cheapness	Cheapness	Cheapness	Cheapness	Cheapness
10	Soil free	Soil free	Soil free	Soil free	Soil free

[†] A significant difference ($P<0.001$) in score values exists between the organic consumer clusters and the following expectations regarding organic vegetables: better taste than non-organic vegetables, of higher nutritional quality, free from pesticides and safer to eat than non-organic vegetables. A significant difference ($P<0.005$) in score values exists between the organic consumer groups and the expectation that organic vegetables have minimal or no packaging.

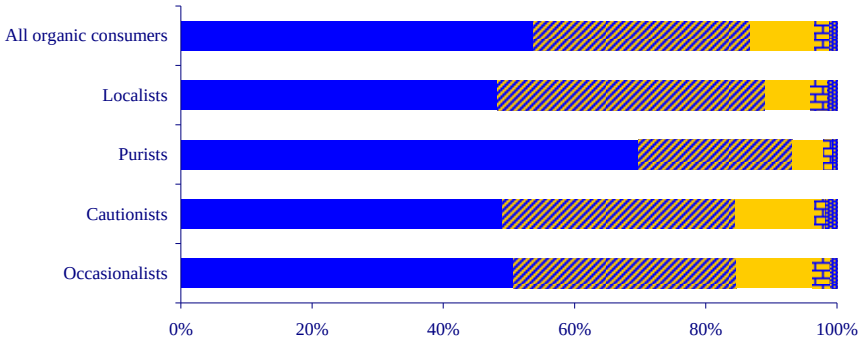
The third and fourth placed rankings (for most respondents) were expectations that organic vegetables should taste better and be safer than non-organic, respectively. Alternatively, expecting organic vegetables to be as cheap as non-organic vegetables was much more lowly ranked, with vegetables being free from soil being ranked last. The relative rankings of some of these expectations could have been predicted since many of the consumers in the groups were box customers. For instance, the expectation that organic vegetables should be free from soil is significantly associated with box customers, with 75.5% disagreeing that vegetables should be soil free compared to 47.2% of non box customers. Furthermore, if the retail source of organic vegetables is considered, only 41.1% of Planet Organic customers thought soil on organic vegetables to be acceptable compared to 79.6% of Riverford Box customers.

There were some significant variations between expectations of organic vegetables and the consumer clusters. *Purists*, for instance and *localists* were more likely to

agree strongly that organic vegetables should be free from pesticides (90.7% and 85.4% respectively agreeing strongly with this expectation). *Occasionalists* were somewhat less likely to agree strongly with this expectation. For the second most highly ranked expectation, minimum or no packaging, 69.0% of *localists* were more likely to agree strongly compared to 53.2% of *occasionalists*. This provides further confirmation of the picture that is developing that *occasionalists* tend to have less strongly held opinions and expectations regarding organic food than the other clusters.

Turning to the taste of organic vegetables (see Figure 4.12), *purists* were most likely to agree strongly with this expectation. Indeed significantly more *purists* than the other consumer groups expected that organic vegetables taste better. Furthermore, *purists* were also more likely to agree strongly that organic vegetables were of a higher nutritional quality, 63.0% compared to 38.6% of *occasionalists*, 48.5% of *cautionists* and 47.7% of *localists*. The final expectation considered, concerns the freshness of organic vegetables. Clearly, in Table 4.13, this ranked lowly at eighth position, yet there were some interesting variations between consumer clusters. For instance, it is significant (in a statistical sense) that 41.5% of *purists* expected their organic vegetables to be fresher than non-organic vegetables, compared to 25.4% of *cautionists* and 25.1% of *localists* (see Figure 4.13). *Localists* on the other hand, were more likely either to have no opinion or to disagree with this expectation. Indeed, 43.8% of *localists* fell into these two categories, compared to 25.1% of *purists*.

Figure 4.12: The association between expectations regarding the taste of organic vegetables ('I expect organic vegetables to taste better than non-organic vegetables') and consumer cluster***



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	1.0%	1.7%	0.7%	1.5%	1.2%
Disagree	2.7%	1.7%	1.4%	2.5%	2.2%
Neither agree nor disagree	11.7%	12.2%	4.8%	7.0%	9.8%
Agree	33.9%	35.5%	23.4%	40.7%	33.1%
Agree strongly	50.7%	49.0%	69.8%	48.2%	53.8%

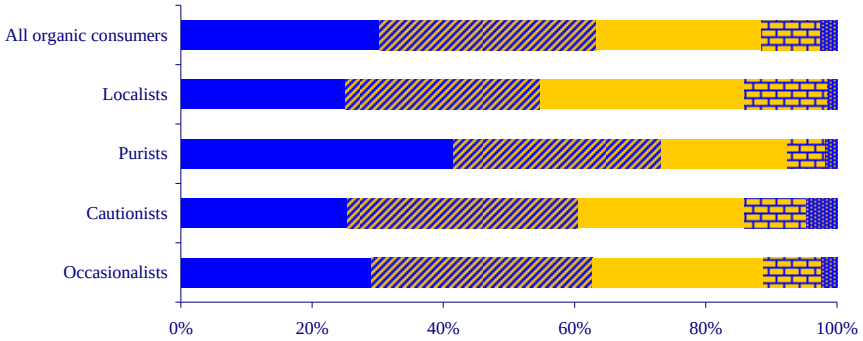
***The association between cluster membership and the expectation that organic vegetables taste better is significant when P<0.001.

Issues of freshness, taste and nutritional quality were often combined in discussions of organic food. There was some debate about the ability of the organic market to meet these expectations, but this was complicated by the addition of the local food dimension:

Is organic food any better flavoured than conventional food? And the negative side, which is the lack of chemicals, the enhanced vitamin content, and so on, I'm yet to be totally convinced about that, but I am convinced it's no worse than conventionally produced food. My hope is that it's better (consumer, Chichester focus group).

On the flavour front, I'm not convinced, I have tried an experiment…. I've tried them side-by-side, but I cannot pick up any difference. It depends on the freshness but it's not the only thing. Sometimes you can go and buy fresh organic and the fresh inorganic is better than the organic. But if you've got local producers and it is not much time between picking and eating, then the local is going to be best (consumer, Chichester focus group).

Figure 4.13: The association between the freshness of organic vegetables ('I expect organic vegetables to be fresher than non-organic vegetables') and consumer cluster***



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	2.4%	4.7%	1.7%	1.5%	2.6%
Disagree	8.9%	9.4%	5.9%	12.6%	8.9%
Neither agree nor disagree	26.0%	25.4%	19.2%	31.2%	25.2%
Agree	33.8%	35.1%	31.7%	29.6%	33.1%
Agree strongly	29.0%	25.4%	41.5%	25.1%	30.2%

***The association between cluster membership and the expectation that organic vegetables are fresher is significant when P<0.001.

4.9 Expectations when buying organic meat

Nearly two-thirds of the consumers surveyed bought organic meat. Given that meat is a very different product from vegetables it is not surprising that the most strongly held expectations – regarding animal welfare standards, lack of growth hormones and use of free range systems – were also different. Other expectations such as meat safety and improved taste were similar to those for organic vegetables. Consumers from the national survey tended to place slightly less emphasis on these expectations whilst Planet Organic customers placed more emphasis on the taste benefits, although the difference was marginal. Again, consumers of organic meat did not expect it to be as cheap as non-organic meat, nor did they expect organic meat to be leaner.

Interestingly, in terms of the consumer clusters, *cautionists* were more likely to purchase organic meat while *occasionalists* were least likely (see Figure 4.14). In buying organic meat, Table 4.14 indicates that consumers expected it to have been

produced to the highest animal welfare standards, where no growth hormones had been used and free range farming techniques had been employed. Expectations that organic meat was lean or cheap were the least highly ranked, taking 8th and 9th place respectively, for all consumers. Indeed, looking at these two expectations in more detail reveals there was no significant association between these and any of the consumer groups.

Figure 4.14: The incidence of organic meat purchases: consumer cluster groups compared

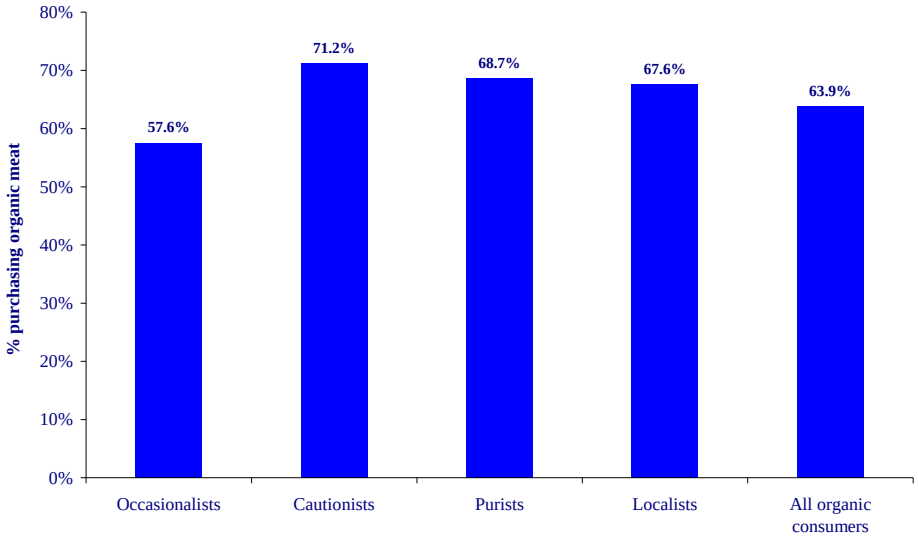


Table 4.14: Ranking of consumer expectations regarding organic meat†

Statement ranking	All organic consumers	Occasionalists	Cautionists	Purists	Localists
1	Animal welfare	Animal welfare	Animal welfare	Hormone free	Hormone free
2	Hormone free	Hormone free	Hormone free	Animal welfare	Animal welfare
3	Free range	Free range	Free range	Free range	Free range
4	Safer	Taste	Safer	Safer	Safer
5	Taste	Safer	Taste	Taste	Taste
6	Nutrition	Nutrition	Nutrition	Nutrition	Nutrition
7	Local	Local	Local	Local	Local
8	Leanness	Leanness	Leanness	Leanness	Leanness
9	Cheapness	Cheapness	Cheapness	Cheapness	Cheapness

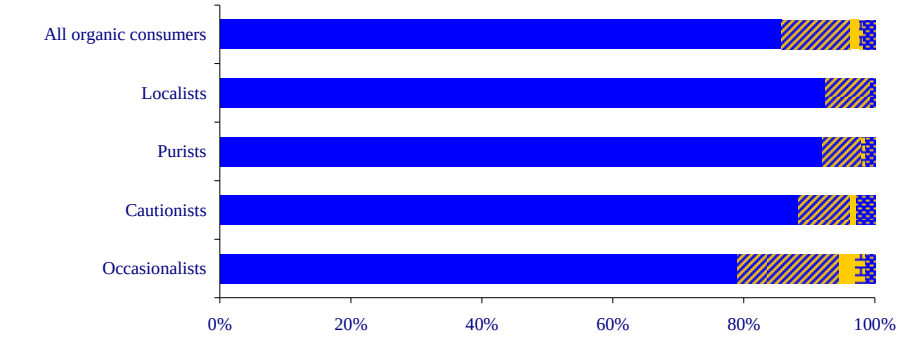
†A significant difference (P<0.001) in score values exists between the organic consumer groups and the expectation that organic meat: safer to eat than non-organic meat. A significant difference (P<0.005) in score values exists between the organic consumer groups and the following expectations regarding organic meat: free from growth hormones; and to be reared as free range.

Most consumers, regardless of their grouping, agreed strongly that organic meat should be free from growth hormones and that animals should have been cared for to the highest animal welfare standards. Figure 4.15 illustrates this for the growth hormones expectation, with 92.4% of *localists* and 92.0% of *purists* agreeing strongly. Marginally fewer *occasionalists* (79.0%) agreed strongly, although a further 15.5% agreed with this expectation. A very similar pattern is repeated for animal welfare standards and free range production.

The following quote from a Focus group participant indicates the multiple expectations associated with organic meat:

> *When I buy organic meat I expect to get freedom from inputs, freedom from farming practices that introduced BSE, I'm expecting that the animal would have had a good life. I'm expecting to get flavour and less shrinkage – and all that water pouring out. Even though it might be more expensive to begin with, I think you're getting good value for money with organic meat* (consumer, Chichester focus group).

Figure 4.15: The association between the expectation that organic meat is free from growth hormones and consumer cluster‡



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	1.5%	2.8%	1.5%	0.8%	1.7%
Disagree	1.5%	0.0%	0.5%	0.0%	0.7%
Neither agree nor disagree	2.5%	0.9%	0.0%	0.0%	1.3%
Agree	15.5%	7.9%	6.0%	6.8%	10.6%
Agree strongly	79.0%	88.3%	92.0%	92.4%	85.7%

‡No statistical association exists between the consumer clusters and this expectation.

Turning attention to the safety of organic meat, *purists* were more likely to agree strongly that organic meat was safer than non-organic meat. Indeed, 82.8% of *purists* compared to 54.8% of *occasionalists* agreed strongly with this expectation. *Occasionalists* were more likely to give no opinion. In terms of taste, no significant association between this expectation and the consumer groups was apparent. This does not imply that the taste of organic meat was not important to consumers as 89.5% agreed that it tasted better than its non-organic equivalent. 65.0% of *purists* agreed strongly with this expectation, compared to 52.8% of *cautionists*. In discussing expectations and perceptions of the taste, organic meat was often contrasted with "cheap meat":

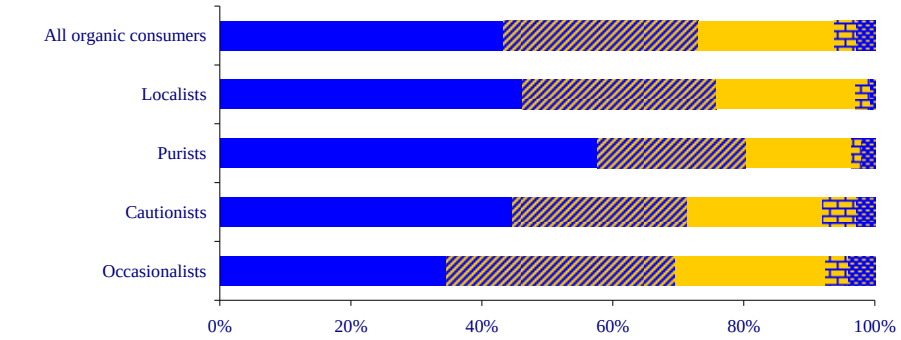
> *I do not eat meat, but my husband does, he swears the organic meat has much better flavour. It is to do with the whole way the animal is raised. You would get a better product, it is probably more significant in terms of quality, than it is with organic vegetable. My husband really refuses to eat cheap meat now* (consumer, Chichester focus group).

> *Cooking organic meat (you can tell it) is a totally different product. I cannot bring myself to cook conventional mince, but I can cook organic mince. Organic means it doesn't have that horrible smell. I think the smell of non-organic meat is basically some of the stuff coming out of it.*

Don't know whether I'm being over the top here, I don't like cooking non-organic meat (consumer, Chichester focus group).

Expectations regarding the nutritional benefits of organic meat varied significantly by consumer cluster. As Figure 4.16 shows, *purists* were likely to agree strongly that organic meat had a higher nutritional value (57.6%), compared to *occasionalists* (34.6%). Indeed, *occasionalists* were the most likely to neither agree nor disagree with the statement concerning nutritional expectations. The final expectation considered here is that organic meat should have been produced locally. As would be anticipated, *localists* were strongly associated by agreeing strongly that organic meat should be produced locally, while *occasionalists* were more likely to disagree strongly.

Figure 4.16: The association between the expectation that organic meat has a higher nutritional quality and consumer cluster***



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	4.0%	2.8%	2.0%	0.8%	2.9%
Disagree	3.5%	5.2%	1.5%	2.3%	3.3%
Neither agree nor disagree	23.1%	20.7%	16.2%	21.2%	20.8%
Agree	34.8%	26.8%	22.7%	29.5%	29.7%
Agree strongly	34.6%	44.6%	57.6%	46.2%	43.3%

***The association between cluster membership and the expectation that organic meat has a higher nutritional quality is significant when P<0.001.

4.10 Expectations when buying organic milk

The final set of expectations concern the purchase of milk. Overall, fewer organic consumers purchased organic milk (56.1%), although this did vary significantly between branches of the survey and the four consumer clusters. For instance, 65.6% of Riverford box customers and 63.6% of Planet Organic customers bought organic milk compared to only 33.5% of the National branch of the survey. Figure 4.17 shows that *localists* followed by *cautionists* and *purists* were most likely to buy organic milk (70.0%, 64.6% and 64.6% respectively). *Occasionalists*, on the other hand, were considerably less likely to purchase organic milk (45.0%).

In terms of expectations, the use of the highest animal welfare standards and freedom from antibiotics were the most strongly held expectations about organic milk. The safety of organic milk was also important, particularly for Planet Organic customers. Indeed, Planet Organic customers were also likely to have more strongly held expectations regarding the nutritional value of organic milk and its taste. Likewise,

Table 4.15 shows a high degree of consistency as all consumer groups ranked first the expectation that the milk has been produced to the highest animal welfare standards; second, that milk should be free from antibiotics; and third that organic milk is safer than non-organic milk. While there were some differences in the lower rankings of Table 4.15, the expectation that organic milk should be as cheap as non-organic milk, as for meat, was ranked last. As one focus group participant commented:

> *We get organic milk from the milkman and every time I get my bill, I think I must be mad. If I had three children at home, I would have to think differently, just purely how would you feed them all?* (consumer, Chichester focus group).

Figure 4.17: The incidence of organic milk purchase: consumer cluster groups compared

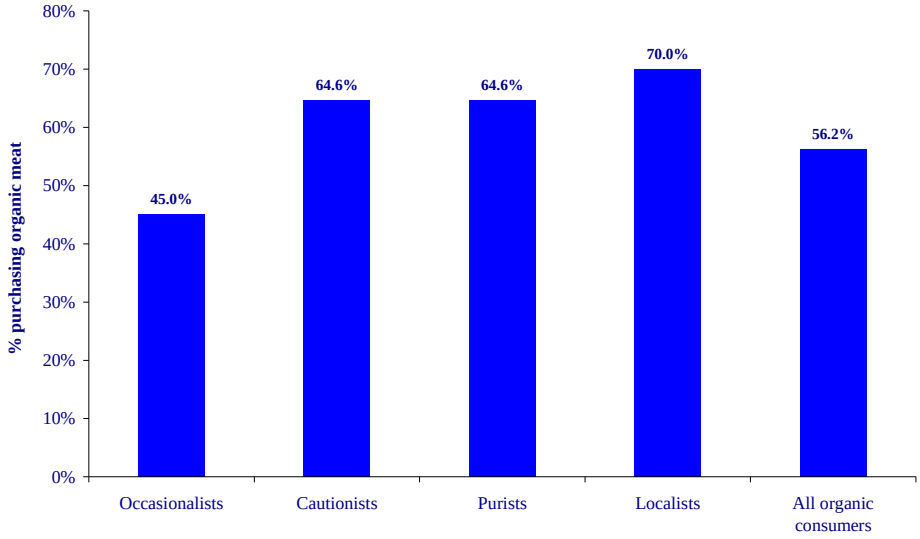


Table 4.15: Ranking of consumer expectations regarding organic milk†

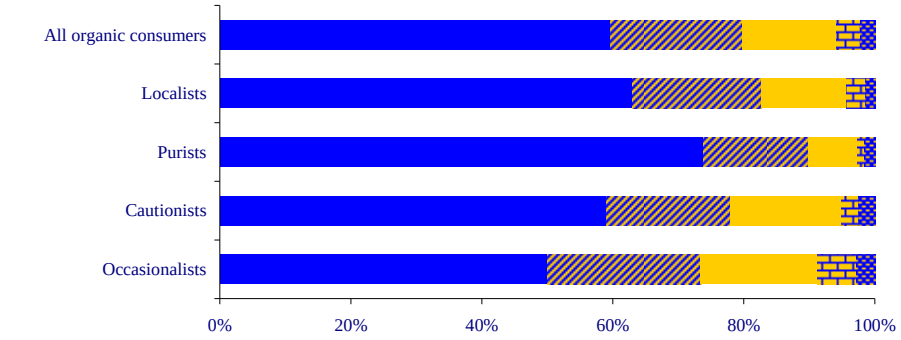
Statement ranking	All organic consumers	Occasionalists	Cautionists	Purists	Localists
1	Animal welfare	Animal welfare	Animal welfare	Animal welfare	Animal welfare
2	Free from antibiotics	Free from antibiotics	Free from antibiotics	Free from antibiotics	Free from antibiotics
3	Safer	Safer	Safer	Safer	Safer
4	Nutrition	Nutrition	Nutrition	Nutrition	Local
5	Taste	Taste	Local	Taste	Nutrition
6	Local	Local	Taste	Local	Taste
7	Cheapness	Cheapness	Cheapness	Cheapness	Cheapness

†A significant difference ($P<0.001$) in score values exists between the organic consumer groups and the expectation that organic milk is safer to drink than non-organic milk. A significant difference ($P<0.01$) in score values exists between the organic consumer groups and the expectation that milk has been produced locally.

Most expectations regarding organic milk were fairly similar across the consumer clusters. However, three expectations stand out: that of organic milk being safer than non-organic milk; that it has a higher nutritional quality; and that organic milk tastes better than non-organic milk. In terms of safety, Figure 4.18 shows that 73.8% of *purists* agreed strongly that organic milk was safer, compared to 59.6% of all

consumers in the survey and 50.0% of *occasionalists*. Indeed, *occasionalists* were again more likely to have no opinion or disagreed with this expectation. Expectations regarding nutritional quality were similar to the milk safety expectation. *Purists* were again more likely to agree strongly that organic milk had a higher nutritional quality, with 61.5% agreeing with this view. Similarly, Figure 4.19 shows that *purists* were more likely to agree strongly that organic milk tasted better than non-organic milk.

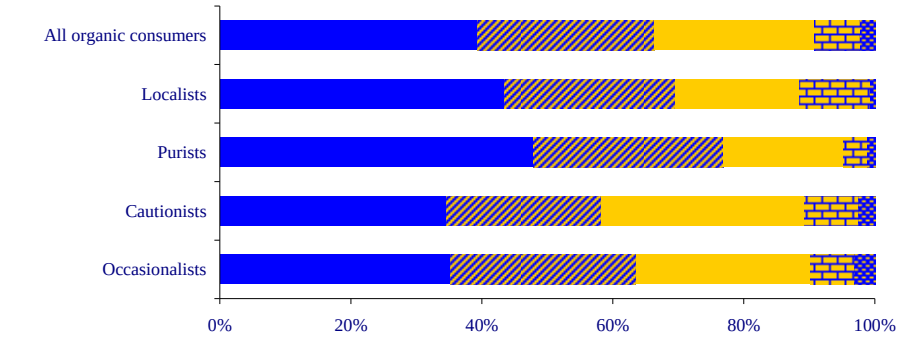
Figure 4.18: The association between the expectation that organic milk is safer than non-organic milk and consumer cluster‡



	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	2.8%	2.6%	1.6%	1.4%	2.3%
Disagree	6.0%	2.6%	1.1%	2.9%	3.6%
Neither agree nor disagree	17.7%	16.9%	7.5%	13.0%	14.5%
Agree	23.4%	19.0%	16.0%	19.6%	20.1%
Agree strongly	50.0%	59.0%	73.8%	63.0%	59.6%

‡No statistical association exists between the consumer clusters and this expectation.

Figure 4.19: The association between the expectation that organic milk tastes better than non-organic milk and consumer cluster**



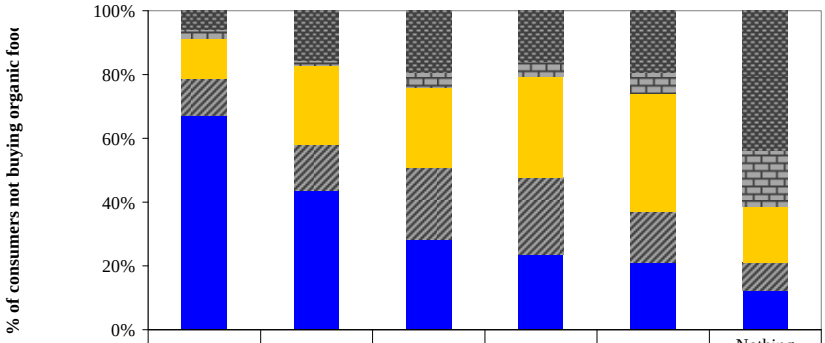
	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	3.2%	2.6%	1.1%	0.7%	2.2%
Disagree	6.7%	8.2%	3.8%	10.9%	7.1%
Neither agree nor disagree	26.7%	30.9%	18.3%	18.8%	24.5%
Agree	28.3%	23.7%	29.0%	26.1%	27.0%
Agree strongly	35.2%	34.5%	47.8%	43.5%	39.3%

**The association between cluster membership and the expectation that organic milk tastes better is significant when $P<0.01$.

4.11 Reasons for not purchasing organic food

Finally, 21.7% of the respondents to the national consumer survey said that they did not buy organic food. These consumers were asked about what would change their mind and encourage them to buy organic food. Figure 4.20 demonstrates that price is the main factor. Specifically, 78.6% agreed that if organic food was cheaper they would be more likely to purchase it. However, this may also be connected to income, as 57.8% also agreed that more income would encourage them to purchase organic food. These results are interesting given that most organic consumers in the survey were not particularly price sensitive. One potential explanation is the presence of a distinct market segment that is genuinely more price sensitive and therefore may well never purchase organic food in significant quantities if any kind of organic price premium is perceived to exist. Alternately, it may be that once people start buying organic food and appreciate its characteristics, price becomes a less important motivating factor so that organic 'converts' are not price sensitive.[24] Approximately 50% of those that do not currently purchase organic food thought that easier availability of organic food and better quality could influence their decision to buy it. Only 21.0% of those not buying organic food agreed that nothing would change their mind, with 43.9% disagreeing strongly with this notion, suggesting that there is the potential to encourage more people to buy organic food in the future.

Figure 4.20: Factors that might change the minds of people who presently do not buy organic food



	Cheaper prices	More income	Easier availability	Better quality	Clearer labelling	Nothing would change my mind
Disagree strongly	5.7%	15.6%	19.4%	15.9%	19.4%	43.9%
Disagree	2.9%	1.6%	4.5%	4.8%	6.5%	17.5%
Neither agree nor disagree	12.9%	25.0%	25.4%	31.7%	37.1%	17.5%
Agree	11.4%	14.1%	22.4%	23.8%	16.1%	8.8%
Agree strongly	67.1%	43.8%	28.4%	23.8%	21.0%	12.3%

4.12 Organic food, local food and local organic food

Throughout the analysis presented in this chapter, it has been clear that for some there is an overlap between their motivation to buy organic food, expectations of organic food and their attitudes towards local food. Indeed, for *localists* 'local' was almost as

[24] This issue is returned to in Chapter 8 when discussing consumer intentions regarding future purchases of organic food.

important an attribute as 'organic' in their food purchase decisions, while for *purists*, the localness of organic food was relatively unimportant. As Table 4.16 indicates, for the survey as a whole, freshness emerges as the most important feature and it was the single most important characteristic for the majority of branches in the survey, other than Growing with Nature customers who ranked organicness more highly. Local food received a lower ranking although it is interesting to note that Growing with Nature customers ranked this more highly than other survey respondents and that Planet Organic customers gave localness a much lower score. In the context of Planet Organic, the low score is probably a reflection of difficulty with the local food concept in a central London location.

Table 4.16: Most important attribute when buying organic food (by mean score)[1]

	National (buy organic)	River Nene	River Swale	Riverford	Growing with Nature	Planet Organic	All organic consumers
	%	%	%	%	%	%	%
Fresh***	2.5	1.9	2.1	2.0	1.8	2.2	2.1
Organic***	1.0	1.8	1.6	1.9	1.9	2.1	1.7
Local***	1.3	1.2	1.3	1.1	1.6	0.6	1.2
Trusted†	1.3	1.0	1.0	1.1	1.1	1.1	1.1

[1] The higher the score the more importance given to an attribute.
***Using one way ANOVA procedure, attribute means for each survey branch are significantly different when P<0.001.
†Using one way ANOVA procedure, attribute means for each survey branch are significantly different when P<0.1.

Not only did different respondents place an alternative priority on localness compared to organicness, it is evident that there was considerable variation regarding the meaning of 'local' with some respondents admitting that:

> *I don't understand it at all. "Locally" could mean many things* (Planet Organic consumer).
>
> *I don't have a clear idea* (Planet Organic consumer).

These respondents were in a very small minority, however, as when asked, most (99.6%) were able to offer an explanation of what they understand "locally produced food" to mean. Most offered an explanation based on geography (34.9%) or distance (33.3%), while 23.2% reflected some of the flexibility and lack of precision of the term and offered a somewhat tautological definition such as:

> *Food grown locally* (River Swale consumer).
>
> *Food grown or reared locally to my home* (National survey organic consumer).
>
> *Food which is produced in my local area and sold in my local area* (River Nene consumer).
>
> *Locally produced food is what it says on the tin. Produced locally [but] not necessarily organic or free range* (River Swale consumer).

Those offering a geographical understanding of the term local food often referred to local food as:

> *Food produced in the UK* (Planet Organic consumer).

Food produced in England (Planet Organic consumer).

Produced within the county I live in or no further than adjoining counties (National survey organic consumer).

Produce that has been produced & reached point of sale without leaving local region (National survey organic consumer).

Of those defining local in terms of distance, the mean distance was 49 miles but this ranged from a minimum of 3 to a maximum of 300. Others reflected the difficulty of being able to adopt a single definition of local, recognising that the distance involved may vary according to the type of food and also that seasonality and localness are often closely allied:

Depends of the product. For most items within my geographical area – this or adjoining counties. For some very seasonal or non-indigenous crops then local may be UK (River Nene box customer).

I have [the] understanding that locally produced food is in season; reduced food miles; supporting a little farmer; however, they might use pesticides (Riverford box customer).

An added complication in all of this is the recognition that any definition of 'local' in terms of a certain radius is conditional upon where an individual lives. For instance, many consumers living in London acknowledged the difficulty of accessing local food and adjusted their definition of local food accordingly:

Living in London I tend to class food produced in the South East of England as local (Riverford box customer).

UK - I live in central London so can't expect true local food maybe within 200 miles. (Planet Organic customer).

Food that is produced within a 30-50 mile radius (realistically) or where I will eat it. Living in London I would not expect it to be produced within the M25 (Riverford box customer).

Other consumers, rather than necessarily mentioning physical distance, were concerned with time from harvest to consumer and freshness:

Food that is harvested and available to purchase within 24 hours. In other words, fresh (Riverford box customer).

Food which is not transported over vast miles and fresh food, veg, etc to be not more than 48 hours old (River Swale box customer).

Although these examples do not say anything about transport methods, a number of respondents specified that local food should not involve transport by air:

Food that is not transported by air or sea (Riverford box customer).

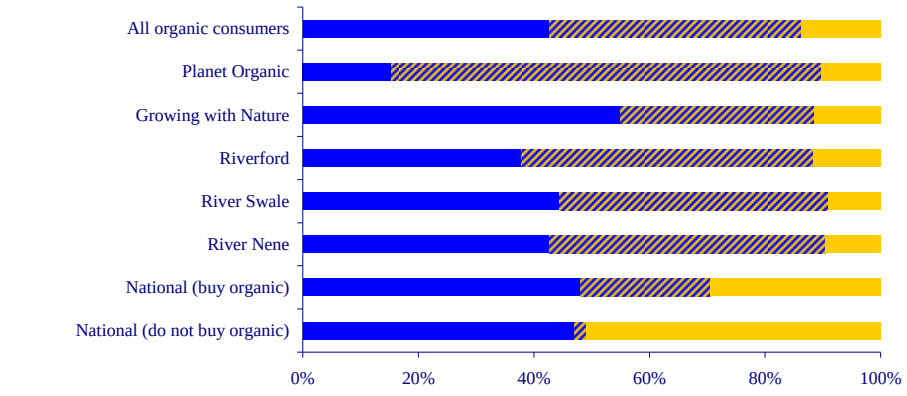
Locally produced food is sourced from local producers i.e. close to locality of sale, not sure of distance but to my knowledge locally produced food will have less food miles than non locally produced and geographically should have no air miles (Planet Organic customer).

Grown and produced in the area where I live and has not been transported by air (National survey organic consumer).

This analysis points to the difficulty of devising a single shared meaning of local food. Although there is a degree of commonality in the definitions offered by consumers in terms of distance based approaches or broader geographical approaches, the actual distances mentioned and the geographies of 'local' discussed vary widely. Moreover, as we have seen with the word 'organic', 'local' is taken by many as a form of shorthand denoting freshness, seasonality and no air miles. For many consumers then, local food is not just about distance (whether measured in physical distance or time).

Definitional issues aside, in order to explore the relative merits of local versus organic food, respondents were asked to state which they would chose if they had to chose between either local or organic food. As Figure 4.21 shows, consumers from the national survey that purchase organic food and Growing with Nature customers were the most likely to say that they would buy locally produced food that was not organic; in the case of Growing with Nature this accounted for 55% of responses. River Swale and Nene customers were relatively evenly split between a preference for organic and local, whilst Riverford customers have a clear preference for organic above locally produced food. Planet Organic customers, on the other hand, would almost always favour organic food over locally produced food that was not also organic. The only group that would be swayed by price to any significant degree was consumers from the national survey.

Figure 4.21: If you had to make a choice between organic and local produce, which would you choose?***



	National (do not buy	National (buy organic)	River Nene	River Swale	Riverford	Growing with Nature	Planet Organic	All organic consumer
Whichever is cheaper	51.0%	29.5%	9.6%	9.2%	11.6%	11.5%	10.2%	13.8%
Organically produced (not locally grown)	2.0%	22.4%	47.7%	46.4%	50.5%	33.5%	74.5%	43.5%
Locally produced but not organic	47.1%	48.1%	42.7%	44.5%	37.8%	55.0%	15.3%	42.7%

***The association between branch membership and the choice consumers make is significant when P<0.001.

This analysis points to considerable complexity in terms of food preferences and attributes and these issues were explored further in the focus group meetings.

Analysis of the transcripts of the focus groups reveals that local food, when compared to organic food, is sometimes assumed to be fresher and therefore better food:

> *….they can see where their food comes from, because they can go and see the farm. I feel that if all food was local there might not be organic food. Because in a sense it is a substitute. People in the city, they at least have an assurance that the food is produced in a friendly manner. But that does not address the issue that your local food might come from your factory farm. So local is a hopeless word for giving any assurance of quality. But there may be a perception amongst consumers that local is better quality that might arise because hopefully it is fresher, and a perception that organic is more expensive, and that they may feel more comfortable buying local rather than organic* (consumer, Haverfordwest focus group).

Another consumer cautioned that a local point of sale is not necessarily the same as local production and freshness:

> *You have got to be careful, just because it's in the local shop doesn't mean that it's been grown locally. If they are growing it, and it is fresher, maybe it tastes better* (consumer, Chichester focus group).

Although these contributors recognised that local need not necessarily be synonymous with freshness or high welfare standards, others pointed to the value of personal relationships and connections that are associated with purchasing local food, particularly where this was specifically associated with economic support for local farmers:

> *I think people would choose local over organic if they are somehow in touch with producers, they either know them, all live roughly in the area they may want to support that and somehow that buying local has some important consequences* (producer, Haverfordwest focus group).
>
> *Some people buy local because they understand what the farming industry is up against. The loss of farmers going out of business and they do try to support farmers* (producer, Haverfordwest focus group).
>
> *People try to support farmers and that's particularly true in a rural area where they have cousins and uncles who are in the farming business - where if you go into a big urban area then that contact is lost* (producer, Haverfordwest focus group).
>
> *You can also build a relationship with them. And food security is important, if we don't cherish our local producers, there won't be any. And then when China decides not to supply us with food anymore, we won't have anything to eat. Food security is a really important issue. And it should be more important to the government than it appears to be. That is a motivation for me for buying local produce* (consumer, Chichester focus group).

In an admittedly rather simple choice experiment, when asked how they would respond if faced with a choice of either locally produced food or organic food that was

not from a local source, focus group participants revealed their preferences and also some of the complexity behind their decisions:

> *I would buy local. The decision would be influenced by where does the organic come from? If it is Argentinean organic I do not want to know* (consumer, Brinsbury focus group).

> *My wife does most of the shopping, but I would buy local. I would buy most of my vegetable from the local farm shops even if it is not organic matter, I know and trust the farmers. Yes they will be using some sprays but pretty minimal sprays. If I couldn't get it from there I would probably be buying organic from the supermarkets just because of the trust* (consumer, Brinsbury focus group).

> *I would make a spontaneous decision on hoof. If it is locally grown and I know the farmer who's grown it, I would probably be quite happy to have it. But in the absence of any of the knowledge I would go for the organic* (consumer, Brinsbury focus group).

In contrast to the consumers above, the following example shows a consumer that is concerned with factors other then the localness (or possibly even the organicness) of their food purchases:

> *The three things I consider is quality, price and flavour. And none of those take precedent over another. I'm looking for a reasonable price but it's got to have the flavour. Although the quality might look okay and the price is okay but if it hasn't the flavour, I don't want it. I will buy local or non-local -it doesn't matter to me. It doesn't bother me, I'm not that hung up on the local aspect. But it's those three things that come into play for me. But I certainly wouldn't buy local just because it's local. I'm not prepared to do that* (consumer, Chichester focus group).

Finally, the following quote from a committed organic consumer shows how preferences and attitudes can vary according to social connections as well as the local context:

> *I would say most of our food - about 75% is organic, some of it is not organic because I cannot source it. Also in summer we have a pick your own farm, which also has a farm shop, now I know how much they spray, because I've got some friends who live nearby. Because the children love picking fruit, we will go and buy fruit from there. I always have a slightly uneasy feeling about it, my husband would do it all the time. If it was an organic farm I would be there all the time it would be an easy decision. I decided I would not buy from the farm shop there. I do buy from the farmers' market. I do not know how much spray they use (at the farmers' market). It is unlikely that it is badly grown, but I don't know about it. It looks as though it could have been grown in someone's back garden. The vegetable tends to lack that slightly polished and uniformed look that you get with supermarket food. There tends to be some quite small producers. Even if it's not organic it's probably close to how I would like to see the land reared. Some of them are quite prepared to say 'come and see where we farm'. There is a sense of openness about how they farm and even if they're not organic, they have got standards that are heading in that*

direction and even if they don't have certification I don't care. So long as they are doing it in a way that adheres to those principles (consumer, Brinsbury focus group).

4.13 Summary and implications

The analysis in this chapter has demonstrated that consumers of organic food share many characteristics in terms of what motivates them to purchase organic food and what they expect from organic food. It is equally clear however, that there are some significant differences between consumers based on where they purchase organic food (i.e. via box schemes, specialist retailers or supermarkets), but also based on their relative preferences for local, fresh and organic food. In all of this it must be remembered that the sample of consumers is somewhat biased. It was deliberately biased towards consumers of organic food, based on the assumption that there were different 'types' of organic consumer (and the analysis presented in this chapter largely confirms this assumption). However, the poor response from Planet Organic consumers effectively biases the sample towards box consumers. In addition, and this may or may not be a function of the biases outlined already, the sample is skewed heavily towards well educated, white women and this should be borne in mind when drawing wider implications. That said, highly educated women probably do account for the bulk of committed organic consumers (Hughner *et al.* 2007).

In terms of common motivations and commonly held expectations regarding organic food, the analysis presented here has confirmed previous research (e.g. Tregear *et al.* 1994, Alvensleben 1998, Makatouni 2002, Harper and Makatouni 2002, O'Donovan and McCarthy 2002, Shepherd *et al.* 2005) indicating that consumers are strongly motivated by health and environmental concerns, although in addition, the analysis has demonstrated that the desire to support British farmers is often a strong motivating factor. In terms of the wider expectations of organic food, most consumers expect it to be free from chemical residues, environmentally beneficial and GM-free. However, there are notable differences between the different consumer cluster groups.

For instance, *occasionalists* are quite distinct in the sense that they are infrequent purchasers of a narrow range of organic products. Not only do they tend to buy only a few products on an infrequent basis, they also tend to lack strong opinions and expectations regarding organic food. This group is less likely to buy direct from producers or from a specialist retailer, preferring instead to purchase organic food from supermarkets. Also, in marked contrast to the other organic consumer groups, *occasionalists* are more likely to buy organic food as a treat and to be income sensitive. *Purists*, on the other hand, are driven more by personal and family health/well-being motives. They tend to be very frequent purchasers of a wide (indeed, the widest) variety of organic products suggesting that 'organic' is an important part of their lifestyle and not just part of the diet. They are also the most likely to use 'alternative' outlets such as health and wholefood shops and this lends weight to the idea that they are less motivated by a desire to support British farmers and the environment, for example, and more by a self/family centred motivation to

adopt what is perceived to be a healthy lifestyle. Thus for this group 'organicness' is of greater significance than 'localness' or support for domestic producers and a concern with food miles. *Localists* are different again being strong supporters of box schemes and farmers' markets. These consumers exhibit strong environmental motivations and a desire to support British and/or local farmers. Many expect, and indeed appear to enjoy, the opportunity to interact with producers and give feedback. Perhaps because of this they frequently stress the importance of trust in the source of their food and, linked to this, the importance of knowing where their organic produce is from.

Finally, in many ways, *cautionists* are harder to characterise. In some instances they have less strongly held opinions regarding what they expect organic food to deliver for them. This may be an example of a classic cautionary approach, adopting the middle ground rather than holding strong views and opinions. That said, they tend to have strongly held expectations and motivations regarding the environment and, significantly, knowledge of the source of their organic food and trust in that source and production system.

Interestingly, some of the expectations of what organic food delivers revealed by respondents to the consumer survey go beyond the requirements of organic certification. This suggests that there may be a danger of an 'expectations gap' developing between what is required for organic certification (which largely reflects industry and trade concerns) and what consumers expect organic food to deliver (see Cook *et al.* 2007). In that sense, organic farmers who supply food direct to consumers, building a relationship with those consumers, perhaps allowing them to visit the farm to witness the environmental and animal welfare aspects of organic production, may be in a stronger position than those who, following organic conversion, continue (for whatever reason) to supply bulk agricultural commodities. It is here also that tensions between organic food and local food may be played out. Some consumers, although motivated to buy organic food, place such emphasis on local food (for a variety of reasons) that if organic food fails to deliver on their expectations regarding localness, may favour locally produced and sold food over non-local organic produce.

Although for some, buying locally and direct from the producer is an important aspect of consuming organic food, for those who buy organic food but who do not buy direct from the producer, the main reasons are convenience of supermarket shopping and the perceived inconvenience of buying direct. It is not clear how easy it would be to influence the shopping behaviour of this group or even if it would be desirable. The group of organic consumers with a preference for using supermarkets as a source of organic food confirms that different groups of consumers have different preferences and opportunities for how and where they purchase organic food.

Finally, most of the regular consumers of organic food in the survey do not appear to be particularly price sensitive. That is, they do not expect organic food to be comparable to non-organic food in terms of price and the quantity of organic food that

they purchase is not particularly sensitive to their income level. In contrast, those who do not currently purchase organic food (and to some extent those that make only occasional purchases) are price sensitive. Previous research (e.g. Hughner *et al.* 2007) has also shown price to be the main barrier for non-purchasers of organic food. It may therefore be the case that once consumers become habituated to purchasing organic food, they also become less concerned with price compared to the other attributes of organic food.

Chapter 5: Producing organic food

5.1 Introduction

The previous chapter indicated that, to some extent, consumers are looking for different things when they buy organic food. There are of course many shared expectations and motivations for buying organic food but, as we have seen, some consumers place great emphasis on buying local food - and in doing so in supporting local farmers, while others are more concerned with the 'organicness' of the produce they purchase and expectations regarding health and freshness. Against this background, this chapter focuses on the producers of organic food. Based on a large postal survey of organic producers in England and Wales (see Chapter 2 for details of the methodology), this chapter identifies the wide range of organic produce being produced in England and Wales and considers the varied routes by which this produce reaches the market. Using farmers' own assessment of the main focus of their marketing activities the analysis identifies distinct local, regional and national market orientations, exploring what different market orientations may mean in terms of the type of food that is produced and how it is delivered to the market.

5.2 Overview of the producer survey

The producer survey produced a total of 514 completed questionnaires, of which 475 were useable for subsequent analysis (an average response rate of 32.7%, although this ranged from 27.7% from the North East to 44.3% from Yorkshire and Humberside) (see Table 5.1). Most farms (81.9%) were located in England, with the remainder in Wales. The total area of organic farms in the survey was 84,168 ha, of which 62,260 ha was registered as organic. A further 7,708 ha was in organic conversion. The registered organic land captured by the survey accounts for 21.3% of all organic land in England and Wales. The Soil Association (SA) was the most common certification body amongst the sample certifying 64.3% of the farms in the sample. Organic Farmers and Growers (OF&G) certified 27.0% of the sample. In comparison with Defra data for 2007, 58.0% of organic holdings were certified by the SA and 30.9% by the OF&G. This suggests that the producer survey slightly over represents the former while under representing the latter.

The survey not only reflects a significant proportion of organic production in England and Wales, it also reflects the diversity of organic farming. For instance, the survey captured a wide range of farm sizes. The mean size of survey farms was 177 ha, of which 132 ha was registered organic. However, the median size of farms is lower at 92 ha (and 67 ha respectively for the registered organic area), suggesting that the sample is skewed by a few very large farms. Close to one-fifth (18.9%) of farms in the sample were under 25 ha and a further 13.7% were between 25 and 50 ha. On average 82.9%[25] of the area of each survey farm was registered as organic. A few farms (7%) had all of their land still in conversion, while 60.3% had all of their land

[25] This excludes land in conversion.

in registered organic production. The latter farms accounted for 57.7% of all organic land in the survey. Further analysis revealed a statistically significant association between farm size and the proportion of the farm that is under registered organic production. Farms of under 50 ha are significantly more likely to be under 100% organic production compared to their larger counterparts (see Table 5.2). There was some evidence from the survey to suggest that larger farms were able to convert to organic production in a step-wise manner, perhaps retaining a specific non-organic enterprise. For smaller farms on the other hand, it appeared to be 'all or nothing'.

Table 5.1: Organic producer survey sample size and response rates

Government region	Sample size	No. of responses	Response rate %
East Midlands	97	34	36.6
Eastern	111	32	31.7
North East	48	13	27.7
North West	71	19	28.8
South East	175	52	31.5
South West	530	164	32.7
Wales	291	86	31.2
West Midlands	145	47	33.1
Yorkshire and Humberside	64	27	44.3
Unknown[1]	-	1	-
Total	1532	475	32.7%

[1]One respondent destroyed the coding that identified his or her regional identity.

Table 5.2: The association between farm size and the proportion of registered organic land***

Farm size	Proportion of farm that is registered organic (%)			
	100% organic	75% or greater organic	Less than 75% organic	No organic land (In conversion)
Less than 25 ha	79.8	7.9	6.7	5.6
25-49.99 ha	78.5	9.2	4.6	7.7
50-99.99 ha	62.5	22.9	10.4	4.2
100-199 ha	52.6	20.2	15.8	11.4
200 ha and over	39.1	30.9	23.6	6.4
All farm sizes	60.3	19.4	13.3	7.0

***The association between farm size and the proportion of registered organic land is significant when $P<0.001$.

5.2.1 Organic conversion

A significant minority (22.1%) of farms in the survey had some land in conversion, accounting for 7,708 ha (9.2% of the total farmed area captured by the survey). Of these, two-thirds of farms (66.7%) had less than 50 ha in conversion, which made up 17.8% of the total land area being converted. A relatively few large tracts of land (greater than 200 ha) were being converted on just 7.6% of farms, yet contributed a disproportionate 37.5% of all land in conversion.

In relative terms, twice the area of land in Wales was in conversion (15.0%) compared to England (7.5%). Considerable variation was also apparent within England, with 3.8% of the total area farmed by survey farms in the East Midlands in conversion,

compared to over 14% in the West Midlands and Yorkshire and Humberside (see Table 5.3). In terms of farm type, nearly one-third (32.9%) of the land in conversion was on cattle and sheep farms and a further quarter (25.3%) was located on dairy farms. Only 951 ha of arable land was in conversion (12.5%), as was 635 ha of horticultural land (8.4%).

Table 5.3: Total area of land in organic conversion in England and Wales

Country/Region	Area in conversion	% of total area farmed in conversion
England	5,959	7.5
Wales	1,749	15.0
English Regions		
East Midlands	161	3.8
Eastern	921	10.9
North East	376	5.0
North West	204	10.1
South East	775	5.8
South West	1893	7.5
West Midlands	982	14.1
Yorkshire/Humberside	647	14.5
Total	7,708	9.2

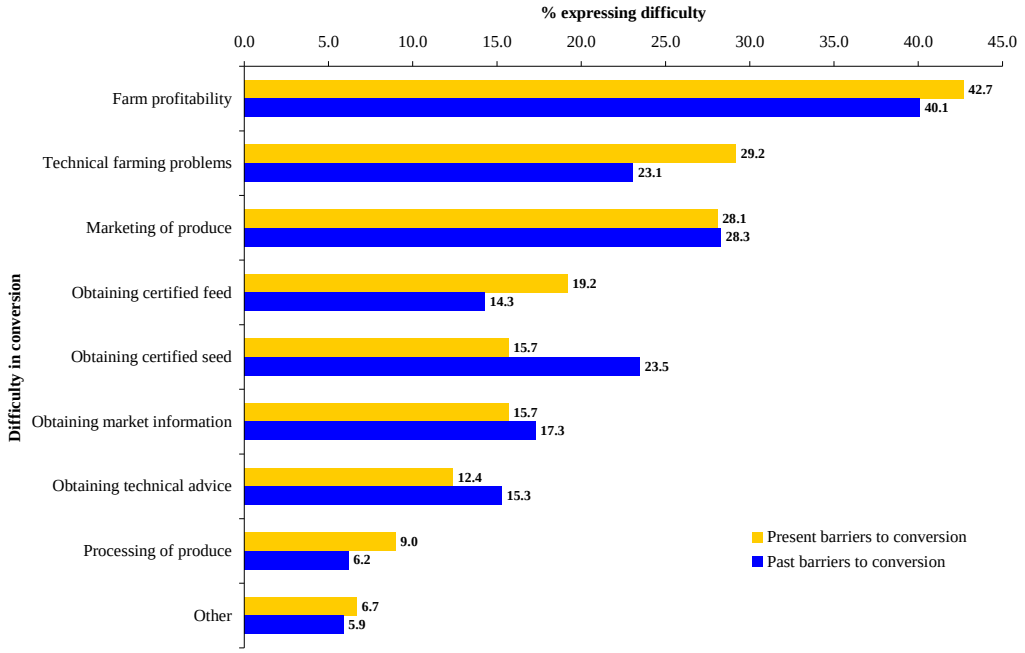
Over half of the land currently in conversion (52.0%) was on farms with no previous history of farming organically and as such represents new entrants to the organic sector. Indeed, when considering the association between length of time farming organically and the current conversion of land to organic production, those farms with land in conversion are statistically significantly more likely to have been farming organically for less time (7.2 years compared to 9.5 years for those with no land in conversion). This suggests that longer established organic farms are less likely to convert new land into organic production. Only 3.8% of the total area farmed by farmers that have been organic for over 10 years was in conversion, compared to 20.3% of the area of those that have been farming this way for less than five years. Moreover, farms that have been in organic production for 10 years or more have an average of 90% of their farmed area under organic production. This compares to 65% for those who have been farming organically for less than 5 years.

Some of the barriers that farmers with land in conversion have encountered are illustrated in Figure 5.1. The principal 'barrier', both for those currently in conversion and for those already fully established as organic producers, relates to difficulties with farm profitability (mentioned by 42.7% of farmers with land in conversion). Other barriers experienced by farmers in the survey involved technical farming problems (29.2% of those with land in conversion) and the marketing of produce (28.1% of those with land in conversion). In comparing farmers with land currently in the process of conversion with those that had converted in the past, it can be seen from Figure 5.1 that the barriers confronting farmers are not much different. Indeed, only technical problems with farming, obtaining certified feed, and

profitability seem to be of marginally greater significance as barriers for those currently in the process of conversion.

For those citing problems obtaining certified feed, it is likely that as domestic production of organic livestock has expanded, the area of organically certified feed has failed to expand sufficiently to keep up with demand from livestock farmers. Looking at the barriers and difficulties experienced by farmers in more detail confirms (as would be expected) that difficulty in obtaining feed is more likely to be associated with farms that are principally livestock businesses. In particular, 23.4% of cattle and sheep farms indicated this difficulty compared to 14.8% of dairy farmers and 12.7% of mixed farmers (many of whom are likely to grow their own feed). Furthermore, it is statistically significant that Welsh farmers were more likely to face barriers in obtaining animal feed (27.0% compared to 12.8% of farmers in England). Similarly, Welsh farmers are statistically more likely to find marketing their produce difficult. In part, this is related to the geography of the country in that farms are remote from markets and feed suppliers (this issue is considered further in Chapter 6). Finally, farms of over 200 ha, whether those in the process of conversion or those that have already converted, are more likely to experience technical farming problems. Indeed, 37.5% of farms over 200 ha suggest this as a barrier compared to 12.1% of farms under 25 ha and 24.9% of all farms.

Figure 5.1: Comparison of barriers to organic farming - farms with land in the process of conversion and those that have converted in the past.



5.2.2 Organic farm enterprises

Farms in the sample operate a wide range of organic agricultural enterprises ranging from beef and sheep to venison and water buffalo. Table 5.4 presents a breakdown of the more commonly occurring enterprises. It can be seen that organic beef is by far the most common enterprise, present on 57.2% of farms, closely followed by sheep

(found on 42.2% of farms) and cereals (38.0%). Many of the farms in the survey were characterised by multiple enterprises. On average, respondents operated 2.7 agricultural enterprises (the median was 2), although a significant minority (22.8%) operated four or more enterprises.

Table 5.4: The frequency of commonly occurring enterprises on organic farms

Enterprise	Number	%
Dairy	110	23.2
Beef/Suckler	271	57.2
Sheep/lambs	200	42.2
Pigs	51	10.8
Poultry	96	20.3
Cereals	180	38.0
Vegetables	121	25.5

Respondents were asked to indicate which agricultural enterprise was the most important in terms of turnover. This data has been used in combination with detailed sales data (see section 5.3.2) in order to construct the farm type categorisation. Using this approach the two most common types of farm are beef and sheep (31.3% of sample farms) and mixed farms (25.8% of sample farms). The relatively large proportion of mixed farms reflects the nature of organic farming systems which tend to favour mixed farming. The low proportion of arable farms in the sample (just 4.5%) can be explained in the same way: 38.0% of the sample reported operating a cereal enterprise but only 9.1% stated that this was their most important enterprise. The implication is that most farms with arable enterprises are growing their own feed so, although cereal production is widespread, few farms in the sample can be classified as arable.

5.3 The farm business

5.3.1 Farm labour

The total number of people (family and non-family employed labour) working on organic farms in the survey was 2,557, of which 38.6% were engaged on a full-time basis. 35.6% of labour was provided by family members with the remainder employed either on a full-time, part-time, casual or seasonal basis. Seasonal workers made up the greatest proportion of non-family labour and account for 42.0% of workers. Of the employed labour on farms in the survey 25.9% were migrant workers. A significant minority of the sample (23.9%) reported experiencing problems with either recruiting or retaining staff, or both. Many respondents could point to a 'shortage of skills' as a difficulty in recruiting sufficiently competent staff, while also recognising a variety of contributing factors such as low pay, provision of suitable accommodation, high housing costs away from the farm, better paid opportunities in other parts of the economy and low farm profitability, as illustrated by some of the following respondents:

> *Hard to find workers skilled and motivated enough at the price we can afford. Due to low turnover, we have to get it right* (mixed farmer, England).

> *We are unable to pay more than minimum wage, which in Dorset is really not a living wage - house prices for buying or renting being so high* (horticultural producer, England).
>
> *We looked for herdsman a while ago and there are very few about. Without top rate accommodation it's impossible* (dairy farmer, Wales).

Other farmers suggested that the difficulties that they had experienced with recruiting and retaining staff centred on the perceived hard toil of agricultural work:

> *When looking for casual/part-time, the work involved is manual (and) exposed to the elements as is outdoor based. Not easy to retain usually younger people as hard work in difficult conditions as dictated by the weather* (poultry farmer, England).
>
> *Most English people tend to lean on the shovel, obviously spoilt by years of so called economic welfare. Migrant workers understand the ethos of work!* (horticultural producer, England).
>
> *Very few people available with 1) animal husbandry skills, 2) prepared to do the necessary physical work* (cattle and sheep farmer, England).

Until very recently, recruiting migrant workers has been seen as a solution to the difficulties of obtaining agricultural workers. While in many cases this is a strategy that works well, it can also bring new problems, particularly that of language (although this is not always the case), as these farmers illustrate:

> *Herdsman. Difficult hours, bad money. Tried two Polish workers for three years. Language problems for us [therefore] back to English speakers. [Now] one Irish worker* (dairy farmer, Wales).
>
> *In the past language and skill barrier with non UK employees* (poultry farmer, England).
>
> *Can be a problem but good at the moment with four good young men, three speak English. All from agricultural backgrounds* (dairy farmer, England).

However, not all farmers experience difficulties recruiting and retaining staff, suggesting that they are not much different from other sectors of the economy:

> *No more problems than any other business experiences* (mixed farmer, England).
>
> *No problem provided you pay reasonable (£6.50/hr) and treat well.* (cattle and sheep farmer, Wales).

5.3.2 Farm finances

The overall value of sales recorded by the farm survey was £76 million, of which 73.7% was directly associated with organic enterprises. The mean value of organic sales per farm was £135,894 although, if the median value is considered, this is much lower at £54,000, suggesting that a few farms account for a disproportionate amount of organic sales. Indeed, 80% of all farms have organic sales that are below £200,000 and just 10% of farms in the survey account for over 50% of sales. Of these, one-third are dairy farms and a further 40.5% are mixed farms. Considering the incidence

of dairying as an enterprise rather than a farm type it is highly significant (in a statistical sense) that 52.4% of the top ten percentile are engaged in dairying. Dairying thus makes a significant contribution to the sales recorded by organic producers in the survey. In terms of total labour employed, the same top 10% of farms employ one-third of the workforce in this survey. Moreover, this increases to 49.9% when only full-time employees are considered, suggesting that a certain scale of operation is necessary to enable the support of full-time positions. The final reflection on these top ten farms concerns the average wage paid to employees. These farms, on average, pay nearly £9,000 more per full-time equivalent; £23,579 compared to £14,657 and if medians are considered this differential increases to nearly £10,000 (from £23,362 compared to £13,872). While these differences may seem high, it should be noted that many of the 'top ten' farms have dairy enterprises and that a wage for a herd manager can be up to £30,000 pa.

The value of all input purchases (excluding labour) recorded by the survey was £42m, of which 63.2% was used to support organic production. A value for farm gross margin can be approximated by deducting the value of purchases from that of sales. On average, farm gross margin was £73,729 or £69,398 when only organic produce is considered. Interestingly, when the median gross margins for the farm as a whole and that associated the organic production only is considered, the gross margin for the latter is greater at £23,000 compared to £20,000. Furthermore, it is not until the eighth percentile (80%) that the gross margin from organic production only, is less than that for the farm as a whole. While it might be tempting, using this analysis, to propose that sales from organic production create more income, it is more reasonable to suggest that the lower value of purchases required for production is the main driver associated with better gross margins. The gross margin of organic production differs significantly between farm types. Table 5.5 indicates that the average gross margin of dairy farms (£106,251) is much greater than all other farm types, with the exception of the 'other' category which also includes a small number of pig and poultry units. It can be seen that for each farm type the median gross margin figures are noticeably lower than the means, suggesting that a few farms with larger gross margins dominate each category and that many are operating with lower gross margins. This is consistent with the analysis presented above, indicating that the 'top-ten' percent of organic farms account for a disproportionate amount of sales and employment.

Table 5.5: Gross margins from organic production and farm type[***]

Farm type	Mean	Median
Dairy	£106,251	£86,114
Cattle & Sheep	£19,126	£7,000
Arable	£56,440	£11,450
Mixed	£96,608	£38,000
Horticulture	£64,649	£13,000
Other	£123,065	£58,500
All Farms	£69,873	£23,160

[***]Using one way ANOVA procedure, means for gross margins for each farm type are significantly different when $P<0.001$.

5.4 Market channels and market orientation

5.4.1 Market channels for organic produce

The organic producer survey collected a range of data on producer orientation to different types of market, the specific routes to market currently used and changes over time, as well as data to quantify the significance of different market channels. It should be noted that the survey sought data on the first destination of organic sales and that this is not necessarily synonymous with the final customer. There are several different ways of addressing the issue of the importance of different market channels. For example:

1. The incidence of each marketing channel.
2. Producers' own perception of the most important market channel.
3. The proportionate value of the goods traded through different market channels.
4. The relative concentration or diversity of marketing channels.

Each of these different methods is used below, and as the analysis progresses it reveals a strongly consistent and coherent picture regarding the marketing of organic produce. Figure 5.2 indicates that marketing cooperatives, contracts with processors, farm-to-farm sales and sales to wholesalers are the most frequently occurring market channels. Together, marketing cooperatives and contracts with processors account for 42.6% of all marketing channels recorded in the survey. This does not necessarily mean that these are the most important marketing routes. For instance, certain channels may be employed frequently but for relatively low value produce. Consequently, respondents were asked to indicate which route they perceived to be the most important for their business (see Figure 5.3). As can be seen, marketing cooperatives and contracts with processors emerge as the most important market channels (in 26.2% and 16.5% of cases respectively). Indeed, they are much more important than any other sales route. That said, taking the three different types of box scheme together (i.e. own meat box, own veg box and other box scheme), 13.5% of the sample indicate that a box scheme was the most important marketing channel. If other market channels selling directly to the end customer are also included (i.e. farmers' market, internet sales, and own farm shop), direct sales are reported to be the most important marketing channel by 24.5% of the sample. It should be noted that although direct sales are often also local sales, direct marketing channels are not necessarily local, as in the case of internet sales or meat boxes that are sold through mail order.

Looking at the proportionate value of produce traded through different channels (Figure 5.4) confirms the importance of contracts with processors and marketing cooperatives, which account for 24.0% and 26.4% respectively of all sales by value. Farmers' own box schemes account for only 4.6% of all sales but all direct sales to the end consumer represent 10.1% of the value of all produce traded by farmers in the survey.

Figure 5.2: The relative frequency of different marketing channels

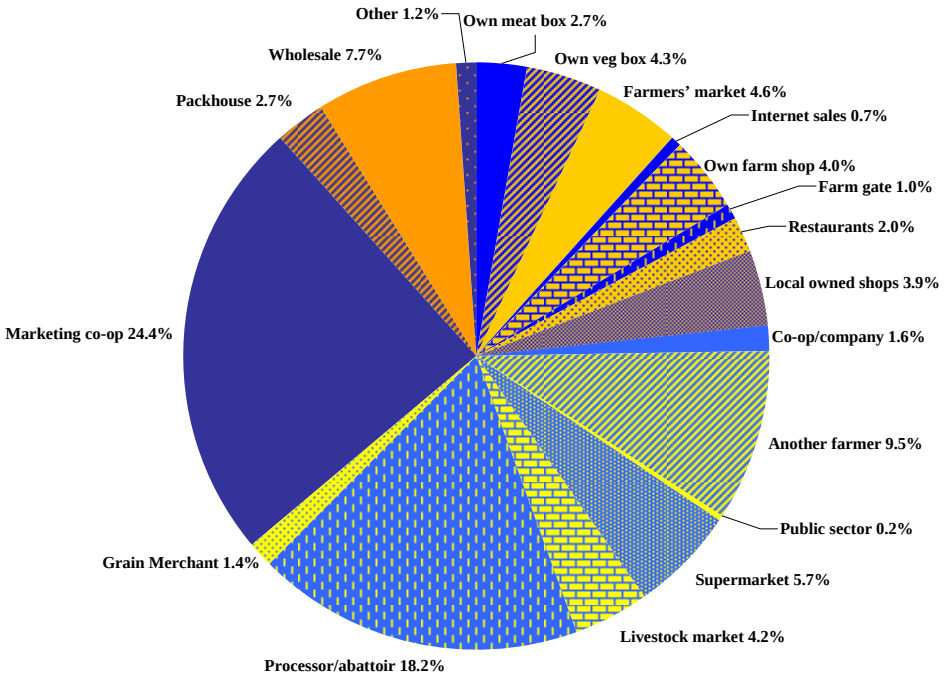


Figure 5.3: Most important marketing channel identified by farmers

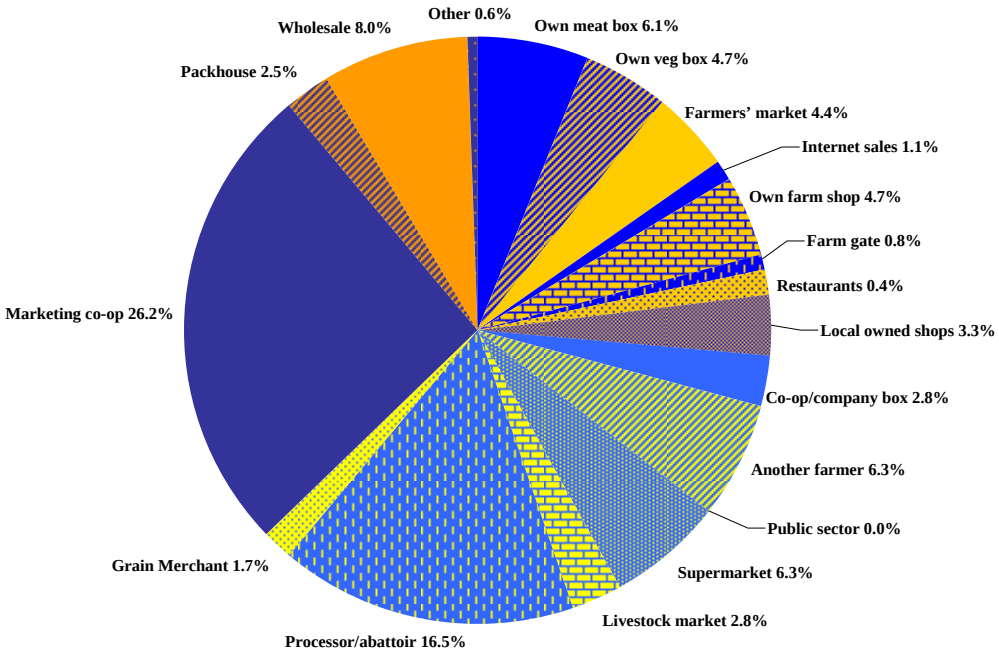
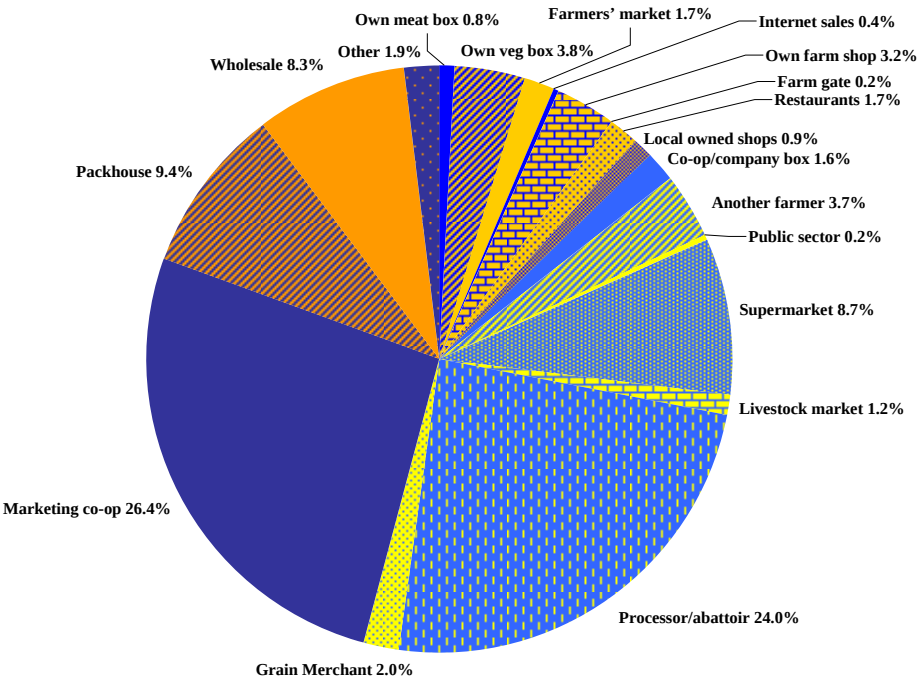


Figure 5.4: Value of sales though different market channels (% of all sales)



An alternative approach to understanding farmers' use of different marketing channels is to consider marketing concentration, as measured using the Herfindahl-Hirschman Index (HHI) (see Chapter 2). The HHI illustrates the concentration of marketing channels on farms where 1 equates to 100% of produce being marketed via a single route. For the whole sample, the HHI is relatively high at 0.75 (see Table 5.6). While some farms have a diverse set of marketing channels, 35.9% of farms record an index score of 1, indicating a focus on a single marketing channel.

Considering the geography of market concentration reveals some interesting patterns (although these are not significant in a statistical sense). Indeed, if the median HHI score is considered, in all but in the North East region, the median is greater than the mean indicating that mean HHI is skewed towards farms that sell their produce through few channels. The Eastern region, North East and South East all stand out as having a lower level of market concentration than England as a whole (in terms of median HHI), while the marketing of organic produce in the East Midlands is notably more concentrated than the national average.

A number of factors are likely to influence the degree of market concentration, including farm type. As Table 5.7 indicates, there is a clear association between farm type and the degree of market concentration. It is significant (in a statistical sense) that the mean HHI for dairy farming is 0.88, reflecting the few opportunities that these types of farms have for marketing their produce through multiple channels. As could be expected, mixed and horticultural holdings, on the other hand, have lower mean and median HHI scores, indicating that produce is sold through more channels and is therefore less concentrated.

Table 5.6: Marketing concentration (HHI score) in England and Wales

Region/Country	Mean HHI score[‡]	Median HHI score
East Midlands	0.80	0.90
Eastern	0.69	0.75
North East	0.78	0.76
North West	0.76	0.82
South East	0.70	0.71
South West	0.77	0.82
West Midlands	0.79	0.82
Yorkshire/Humberside	0.73	0.82
England	0.75	0.82
Wales	0.73	0.75
England & Wales	0.75	0.82

[‡]Using one way ANOVA procedure, HHI mean scores for each region are not significantly different.

Using a number of approaches, analysis of farm survey data points to the use of a wide range of market channels, but has also revealed the dominance of a few channels, notably marketing cooperatives and contracts with processors. This tendency towards market concentration has been confirmed using the HHI index, although it is clear that some locations and some types of farm are associated with a wider diversity of market channels. Against this background, the next section considers farmers' market orientations and explores what different market orientations may mean in terms of the type of food that is produced and how it is sold.

Table 5.7: Marketing concentration (HHI score) of different farming types

Region/Country	Mean HHI score[***]	Median HHI score
Dairy	0.88	0.96
Cattle & Sheep	0.73	0.69
Arable	0.82	1.00
Mixed	0.66	0.66
Horticulture	0.71	0.74
Other	0.89	1.00
All farm types	0.75	0.82

[***]Using one way ANOVA procedure, HHI mean scores for each farm type are significantly different when $P < 0.001$.

5.4.2 Market orientation: National, regional and local organic markets

In order to begin to characterise the organic market and explore if it is possible to identify distinct local, regional and national markets, respondents were asked to indicate the main geographical focus of their organic sales. A total of 431 respondents (i.e. 91%) were able to indicate the main focus of their organic sales activities as either local (34.8%), regional (28.1%) or national (37.1%). This does not mean that those with a 'local' orientation were exclusively focused on serving the local market as many farmers operate a range of market routes, sometimes supplying both local and regional markets, for instance. It is however, a good indication of where the respondent saw their main market. Moreover, as the analysis below indicates, there are some distinct and statistically significant differences between the farms and marketing activities of respondents depending on their market orientation.

Table 5.8 indicates the geographical distribution of farms with different market orientations. It can be seen that there are some quite notable regional differences (although none are significant in a statistical sense). For instance, compared to the sample as a whole, Wales, the North East and the East and West Midlands have a larger share of farms with a largely national market orientation. The North West and Yorkshire and Humberside are characterised by a relatively larger share of business with a regional market focus, whereas the South East, South West and the Eastern region in particular, have a large concentration of producers strongly orientated towards the local market. Comparing Tables 5.7 and 5.9 it can be seen that the Eastern region and South East are both characterised by lower than average HHI values and a higher than average proportion of farmers with a local market orientation, indicating that these regions are characterised by organic farms pursuing the local market through a wide variety of market channels.

Table 5.8: Regional differences in farmers' main market orientation‡

Region/Country	Local %	Regional %	National %
East Midlands	18.2	30.3	51.5
Eastern	48.1	18.5	33.3
North East	33.3	8.3	58.3
North West	29.4	35.3	35.3
South East	40.4	25.5	34.0
South West	39.7	32.2	28.1
West Midlands	23.8	31.0	45.2
Yorkshire/Humberside	36.0	36.0	28.0
England	35.3	29.6	35.1
Wales	32.1	22.2	45.7

‡No significant association exists between regions and main market orientation.

In terms of the total value of organic sales recorded by the survey, those farms focusing on local markets accounted for 13.7% of all sales, while those with a regional or national focus accounted for 35.4% and 50.9% respectively. Thus, although a local market orientation is important in terms of the number of producers involved, in terms of its contribution to aggregate sales income it is much less important (see Figure 5.5). This is at least in part due to the smaller size of farms associated with a local market orientation (see below). Interestingly, for a significant minority, the last five years has seen an increasing concentration on particular geographic markets. For instance, while 58.4% report no change in their market orientation between 2002 and 2007, 13.3% reported that they now focus more on regional markets and 16.3% report a greater focus on local markets.

The questionnaire did not define the terms local, regional and national, instead leaving respondents to self define and self select. Our justification for this is that as long as a farmer thinks that they are mostly focusing on the local market (however defined), that will influence their behaviour and choice of marketing routes. Indeed, when we look at the proportion of total sales made through particular market routes, it soon becomes apparent that there are some significant differences between marketing strategies depending on where a farmer sees their main market. For instance,

producers with a 'local' orientation sell 15.6% of their produce by value through their own box scheme, compared to 4.4% for those with a regional or national orientation (See Figures 5.6-5.8). Sales through either their own farm shop or other independent local shops are also of greater significance for producers with a local market orientation. On the other hand, locally orientated producers sell a much lower proportion of their produce (by value) via a contract with a processor or abattoir compared to those with a regional or national orientation (the figures being 9.5%, 21.2% and 21.7% respectively). Marketing co-operatives are also a much less significant route for locally orientated farmers than for those with a regional or national market orientation. This analysis therefore confirms the point made above that the overall market focus of a particular business does not imply exclusivity. Locally oriented farms also sell some of their output through regional and national channels but the majority of their sales are made through local marketing routes. The analysis (presented in the pie charts) also points to a greater diversity of market routes associated with farmers with a local orientation, whereas for farmers with regional or national market orientations over half of all sales are via marketing co-operatives and contracts with processors.

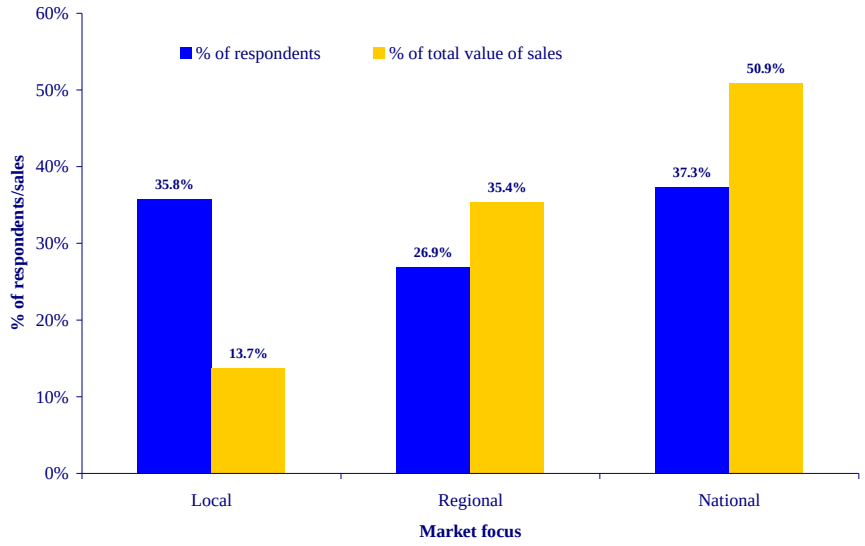
Indeed, given that farmers were self-selecting in identifying their overall market orientation, it is interesting to note that the market of concentration (HHI score) of those with a local market orientation is significantly lower than for those with a regional or national orientation (see Table 5.9). This indicates that those targeting local markets are also using a wider range of channels to sell their produce. On the other hand, farmers with a national market orientation have a significantly higher mean and median HHI, indicating that these farmers are confined to a very few channels, or even a single market channel to sell their produce.

Figure 5.6 shows that not only do locally oriented producers have a distinct profile in terms of marketing routes, but that these routes are often direct routes to the end consumer, whereas producers with a regional or national focus tend to sell indirectly to the consumer through longer and more complex supply chains. The analysis confirms that 36.7% of the value of all produce sold by locally oriented farmers is sold via direct routes[26] compared to just 7.2% and 5.2% respectively for those with a regional or national orientation. The difference between farms with a regional or a national market orientation is less pronounced than between those with a local orientation and all other farmers. Farms with a regional market focus tend to sell marginally more, in terms of value, to processors and abattoirs, other farmers and packhouses (22.7%, 10.2% and 4.1% respectively), compared to nationally focused farms. Sales via marketing co-operatives and by contract with processors are also more important for this group compared to those with a local market orientation, but less than those with a national focus. Producers with a national market orientation are different again. Sales through various direct marketing routes are modest, with the

[26] Direct routes are defined here as those that directly serve the end consumer with no intermediary stages, such as sales via own box scheme, at a farmers' market, farm gate sales, own farm shop sales or direct to consumers from internet sales.

majority of sales being made through marketing co-operatives, contracts with processors, and to a lesser extent, wholesalers (farms with a national orientation sell 67.4% of their output through these three routes compared to 58.9% in the case of those with a regional focus).

Figure 5.5: The distribution of farms with different market orientations***



***Using one way ANOVA procedure, the value of sales for each market orientation are significantly different when P<0.001.

Figure 5.6: Local market orientation and the relative importance of different market channels

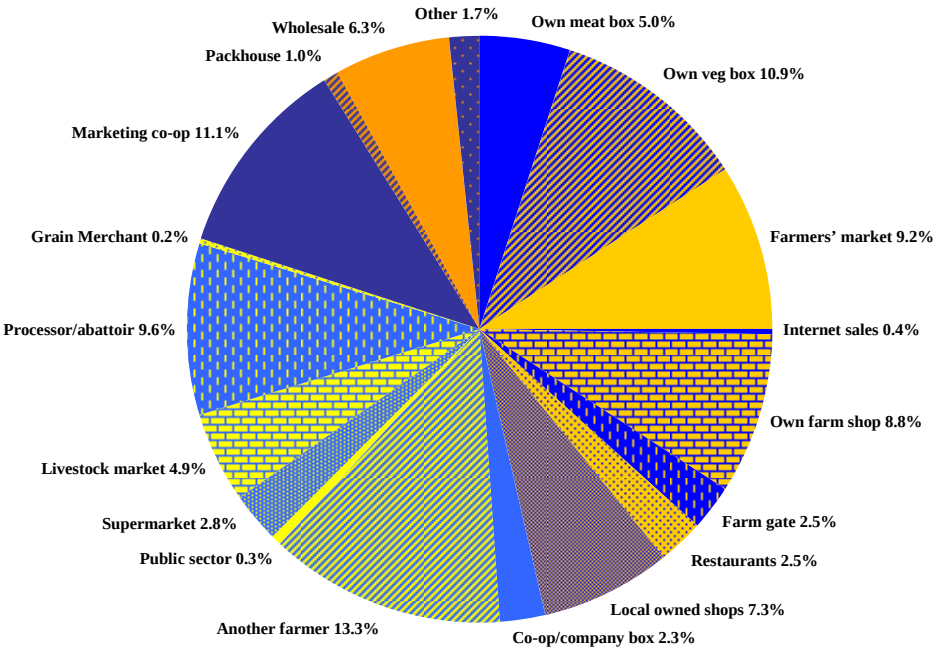


Figure 5.7: Regional market orientation and the relative importance of different market channels

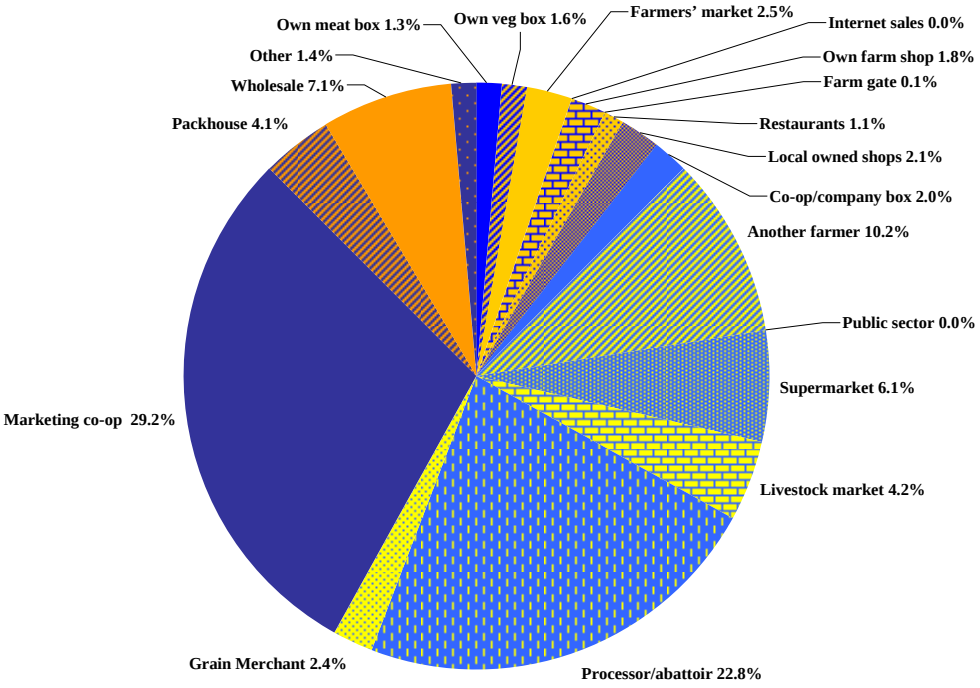
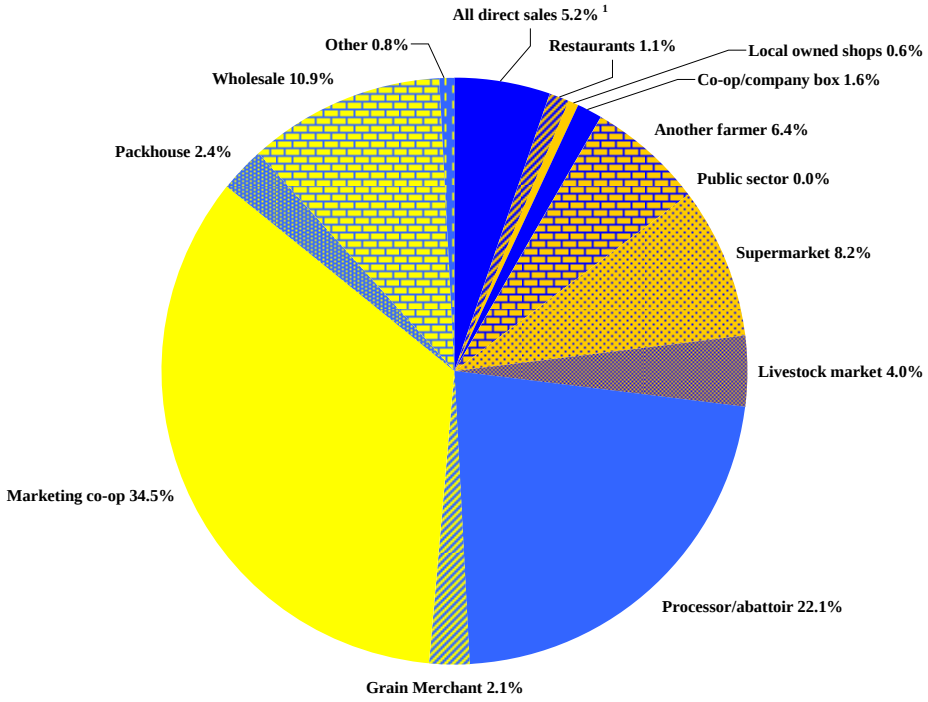


Figure 5.8: National market orientation and the relative importance of different market channels



[1]Note: All direct sales includes own meat and vegetable box, farmers' markets, internet, own farm shop and farm gate sales.

For Figures 5.6-5.8, the means for farms with local, regional and national market orientation differ significantly for own vegetable box, farmers' market, own shop, locally owned shops, marketing co-operative where $P<0.001$; for processor/abattoir where $P<0.005$; for own meat box, farm gate, and direct to farmers where $P<0.05$; and for supermarkets where $P<0.1$.

Table 5.9: The association between main market orientation and market concentration (HHI score)

Main market orientation	Mean HHI score***	Median HHI score
Local	0.69	0.66
Regional	0.76	0.82
National	0.81	0.91
All farms	0.75	0.82

***Using one way ANOVA procedure, HHI mean scores for main market orientation are significantly different when P< 0.001.

Table 5.10 provides further confirmation of the differences between the marketing activities of those with a local orientation compared to those with a regional and national sales focus. For instance, 23.4% of those with a local market orientation identified their own vegetable or meat box as their most important marketing channel compared to 5.9% of those with a regional orientation and just 3.6% of those with a national market orientation. Similarly, farmers with a local orientation were much more likely to identify farmers' markets or their own farm shop as the most important route compared to those with regional and national market orientations. On the other hand, while 8.7% of producers with a local market orientation identified marketing cooperatives as their most important market channel, this contrasts with 35.3% of those with a regional orientation and 37.0% of those mainly serving national markets.

Table 5.10: The association between main market orientation and most important marketing channel (% of respondents)‡

Market channel	Main market orientation			
	Local %	Regional %	National %	All farms %
Own box scheme (Meat)	10.4	4.7	2.9	5.9
Own box scheme (Vegetables)	13.0	1.2	0.7	5.0
Farmers' market	8.7	2.4	1.4	4.1
Internet sales	0.9	0.0	2.2	1.2
Own farm shop	10.4	1.2	0.0	3.8
Farm gate	2.6	0.0	0.0	0.9
Co-op/company box scheme	3.5	2.4	2.2	2.7
Local privately owned shop	7.0	2.4	0.0	3.0
Restaurants and private caterer	1.7	2.4	0.7	1.5
Direct to another farmer	11.3	3.5	4.3	6.5
Contract with supermarket	2.6	4.7	10.1	6.2
Contract with processor/abattoir	10.4	20.0	19.6	16.6
Livestock market	2.6	1.2	3.6	2.7
Marketing co-operative	8.7	35.3	37.0	26.9
Wholesale	4.3	10.6	10.9	8.6
Packhouse	0.0	4.7	2.2	2.1
Grain Merchant	0.0	3.5	2.2	1.8
Other	1.7	0.0	0.0	0.6
All Channels	100.0	100.0	100.0	100.0

‡ No significant association exists between marketing channels and main market orientation.

The differences between farmers with different market orientations are not confined to the type of market routes they use, nor to those they identify as the most important to their business. As can be seen from Table 5.11, producers with different market

orientations, particularly those with a local orientation, operate a distinct range of enterprises. Producers with a local market orientation are less likely to operate dairy or cereal enterprises on their farms but are much more likely to produce vegetables, salads, fruit, herbs and nuts compared to those with a regional or national market orientation. Certain enterprises were perceived to be associated with barriers to local and/or direct supply:

> *Any dairy farmer today, you've got to be signed up for a contract, it just happens, it is fait accompli. You do have some farmer-processors, but you have got to pour a hell of a lot of money into it. We've got a very successful one locally, but it has not come over night and I don't know what is going to happen to it. Because of the TB scare all their cattle have gone* (producer, Tanygroes focus group).

> *Again it is legislation and red tape, I would absolutely love it, to milk in the morning, put it in the back of the pickup and deliver it locally. I would love to do it, but by the time you get the pasteurization in place, it is not impossible, but you would have to be dedicated. You have to do a hell of a lot of marketing. We found it with the farm shop, I wouldn't do it again. Definitely not* (producer, Tanygroes focus group).

Table 5.11: Main market orientation and the frequency of main agricultural enterprises (% of farmers with enterprise)

Enterprise	Main market orientation			
	Local %	Regional %	National %	All farms %
Dairy	8.0	28.1	34.6***	23.5
Beef	57.3	62.0	56.0	58.1
Sheep	46.7	37.2	42.1	42.3
Pigs	14.0	9.1	8.8	10.7
Poultry	24.7	17.4	17.6	20.0
Goats	3.3	2.5	0.0	1.9
Cereals	29.3*[1]	45.5	43.4	39.1
Vegetables	38.7***	18.2	17.0	24.9
Salads	26.0***	6.6	3.8	12.3
Fruit	30.7***	5.8	8.2	15.3
Herbs	16.0***	0.8	5.7	7.9
Nuts	4.7**	0.0	0.6	1.9
Other[2]	9.3	11.6	8.2	9.5

***P<0.001; **P<0.01; *P<0.05 indicates a statistical association between main market orientation and type of enterprise.

[1]This represents a significant association between farms that grow cereals but *do not* market them locally.

[2]Includes energy crops, horses, hops, cut flowers and worms.

Farms with regional or national orientations are distinguished by a significantly greater frequency of cereal and dairy enterprises. Interestingly, sheep and beef enterprises are almost equally common for all three groups of farms (national, regional and local oriented sales), reflecting both the multiple marketing channels used for these and the nature of what is being produced. Not all farmers produced finished livestock, for instance:

I'm not that bothered about selling locally because I do not sell to the general public. I sell them on to another organic farmer. I need to cast the circle wider, there are not many of us about. I would prefer local because it is less transport but I usually find myself going 150 miles to sell. We breed the cattle but we don't take them through to finish, we only take them through to stores. I have to cast the net to a much wider circle. It is not the same as selling to the general public. So I don't have to try and build up local cliental (producer, Brinsbury focus group).

Others operate multiple market channels:

I also supply Tesco's, but it grieves me to do it, because your produce comes at certain times of the year you have got to get rid of it. So they are volume buyers. So every two weeks, I do about 15 lambs for the local people, but when I've got about 40 or -50 lambs they go to Ashford market or Tesco's. I use them as a backstop (producer, Chichester focus group).

Further confirmation of the distinct enterprise profile of organic farms with different market orientations is provided in Table 5.12, which indicates that farmers with a local market orientation are significantly more likely to operate horticultural enterprises (26.7% compared to just 10.1% of those with a national market focus). This may be at least partially explained by the nature of the produce of horticultural holdings and the relative perishability of that produce. Those with an orientation towards national markets on the other hand are significantly more likely to operate dairy farms (28.3% compared to 6.2% of those with a local orientation). Linked to some extent to the farm type profile of the different groups of farm, Table 5.13 shows that farmers pursuing a strategy of local sales are significantly more likely to operate very small farms (under 25 ha) compared to those with a regional or national orientation: 39.3% of locally orientated farmers operate farms of under 25 ha compared to 7.4% and 9.4% respectively of those with a regional or national orientation. Conversely, compared to those focusing on the local market, those with a strong national market orientation are significantly more likely to operate large farms of 200 ha or more. In discussing their market orientation, focus group farmers acknowledged that scale of production was an influence on marketing strategies:

I think it would be very difficult getting rid of the amount of animals we have locally, and because it's just a lot simpler. Vegetables that we produce just go to a vegetarian shop locally. It is basically the simplicity of it; I am busy enough as it is with the work I've got (producer, Tanygroes focus group).

Facilitator: *What makes you decide whether you are going to focus on supplying a local or national market?*

Producer: *Availability of help I would say, because if you haven't got help you would have very little time to go out to farmers' markets or do any processing, adding value on farm. I think that will be the determining factor. Also the scale of the operation. If you had other members of the family who wanted to come into the business or traditional access to paid labour, then you can think in terms of doing a lot of these other things if*

they were economic to do. As I said the scale of the operation is significant because there's only so much the local (market) will absorb whereas your scale of growing 10 acres of potatoes on the farm then that becomes a national scale because 10 acres cannot be absorbed locally. (Producer, Haverfordwest focus group)

Table 5.12: The association between main market orientation and farm type***

Farm Type	Main market orientation			
	Local %	**Regional %**	**National %**	**All farms %**
Dairy	6.2	23.5	28.3	19.3
Cattle & Sheep	37.0	31.9	23.3	30.4
Arable	4.1	5.9	5.0	5.0
Mixed	24.0	28.6	25.8	25.9
Horticulture	26.7	6.7	10.1	14.9
Other	2.1	3.4	7.5	4.5
All farm types	100.0%	100.0%	100.0%	100.0%

***The association between main market orientation and farm type is significant when P <0.001.

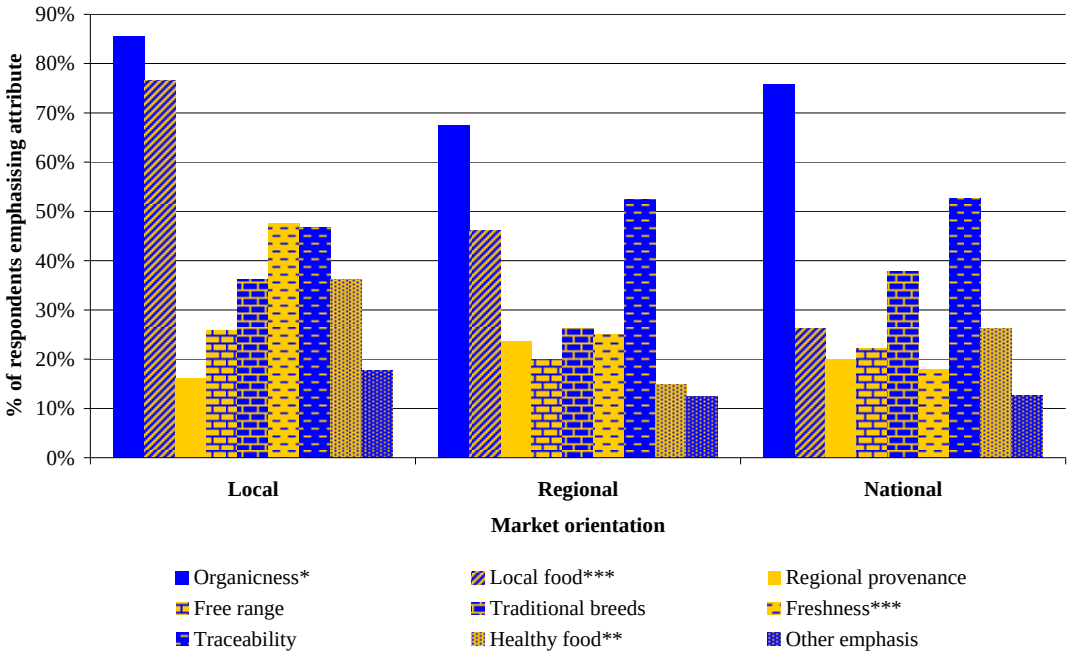
Table 5.13: The association between main market orientation and farm size***

Farm size	Main market orientation			
	Local %	**Regional %**	**National %**	**All farms %**
Less than 25 ha	39.3	7.4	9.4	19.3
25 to 49.99 ha	16.0	12.4	12.5	13.7
50 to 99.99 ha	13.3	27.3	20.0	19.7
100 to 199.99 ha	20.0	25.6	28.8	24.8
200 or more ha	11.3	27.3	29.4	22.5
All farm types	100.0	100.0	100.0	100.0

***The association between main market orientation and farm size is significant when P<0.001.

Turning to the qualities and characteristics of organic produce, the extent to which these are emphasised in the sales process, and the market orientation of farms, reveals further distinctions. As can be seen from Figure 5.9, farmers with a local orientation are significantly more likely to emphasise the organicness of their produce (85.5% compared to 67.5% for those with a regional focus and 75.8% of nationally orientated farmers). They are also much more likely to emphasise the freshness of their produce, with 47.6% citing this as something they emphasise compared to 25.0% of those with a regional orientation and just 17.9% of those predominately serving the national market. Of those with a local focus, 39.6% also emphasise the healthiness of their produce (although we do not know what specific health-related attributes these may be).

Figure 5.9: The association between market orientation and the characteristics of produce emphasised during sales



***P<0.001; **P<0.01; *P<0.05 indicates a statistical association between main market orientation and character of produce emphasized when selling.

Thus, those with a local orientation tend to emphasise a cluster of characteristics (such as the localness, freshness, organicness, healthiness and traceability) of the produce they supply whilst, in almost all instances, those with regional or national market orientations are less likely to place emphasis on any of the characteristics recorded in the survey. It is notable that 31.7% of those supplying the national market reported that they did not emphasise any particular quality or characteristic of their produce in their sales compared to only 13.9% of those with a local market orientation. This suggests that those with a local orientation are making more of an effort to differentiate their produce, both from other local producer/suppliers and from food available locally via national market channels. Indeed, in some instances it seems that the effort involved in direct local marketing, in terms of time and skills required, is encouraging a number of respondents to stick to more established routes with processors, wholesalers and marketing co-operatives[27] with several respondents remarking that:

> *Do not have the time to market myself* (dairy farmer, England).
>
> *Do not have time for direct marketing* (horticultural producer, Wales).

One operator of a 140 ha livestock farm explained that he sold all of his output through a marketing cooperative because it offered:

> *Convenience [and] security" and that he had "no time for direct marketing* (cattle and sheep farmer, Wales).

Similarly, a farmer at a focus group reported that:

[27] This issue is also considered in Chapter 6.

> *Our beef and lamb we sell nationally – they tend to go to Tesco's. The factor behind doing it this way was simplicity. So basically from my point of view, anything for a simple life. It is much better to just ring up so-and-so and organise a lorry and it's gone* (producer, Tanygroes focus group).

Others were equally clear in stating that they saw themselves as farmers and primary producers:

> *I'm a farmer not a salesman* (pig farmer, England).

> *See our selves as primary producers and look to organic cooperatives to do specialist marketing* (mixed farmer, England).

Another farmer (cattle and sheep farmer) located in Wales reported that his farm was:

> *Too remote for a "box scheme" and that "direct market" [is] too time consuming.*

Similarly, in the following example, although the farmer is attempting to supply organic meat to the local market, he suggests that the local area lacks a sufficiently affluent population to make his approach to marketing viable:

> *To supply a local market in this part of the country where you haven't got the affluent people, you cannot do it organically. We do it organically, through our local farm shop, but I must be honest with you, if the organic dead weight price is £3 per kilo I'm much better off putting it on that lorry and waving it goodbye. By the time I have taken it on an 80 mile round trip, then I have it delivered to a butcher or processor, who will charge me about £300 to have it cut up, vacuum packed and labelled. Then it comes back into the shop and then I have to sell it and sell about two thirds of it and recoup my costs. Then I will have the other third in the freezers. And I have about four freezers full (of what is left over). We have been open about three years, and we've taken the view that the shop is closed after Christmas and will not be open until Easter. And hopefully we will pick up a bit of holiday trade through the summer and come September and maybe October we will shut again. We couldn't think about employing anybody just to sit in that shop waiting for someone to turn up. Then we'll open again Christmas week and that is it. It's not worth it; we're taking a loss on it. If we were closer to Cardiff or London it would be a different story* (producer, Tanygroes focus group).

There were also a few examples of farmers withdrawing from certain types of direct sales. As this former operator of a box scheme, that had run for 14 years, explained:

> *Box scheme extremely labour intensive thereby distracting us from the most important side of our business which is growing. We are now able to supply the local community with more organic produce than we did before but through local shops rather than direct* (horticultural producer, England).

In addition, there was evidence of a number of 'would-be' local suppliers who, due to their perception of the regulatory burden of local or direct supply, have opted for a different approach:

> *Another thing is the regulations in place for killing and processing meat. The public don't understand, that we cannot just kill a beast and let them have it. The number of people, who come to us and say 'when you're killing a beast, just let us know'. It does not work like that, we cannot ignore the legislation. You have an absurd situation right now with poultry, the local abattoir cannot just kill poultry for other people, it has to buy it off you and then sell it back to you* (producer, Tanygroes focus group).

> *I would love to supply a local market. People are always asking me 'have I got a chicken?' It's costing me £2.50 to buy a 6-week-old chicken, I have to keep it for 10 weeks and feed it and process it. When you can buy a Tesco's chicken for £2.50. It is a non-starter* (producer, Tanygroes focus group).

In contrast there were also many farmers with very positive attitudes towards direct and local sales. In some cases this was primarily associated with the control it gave to the farmer and improved returns, as well as consumer contact, as the following examples illustrate:

> *It gives us control over the quality of the produce the local consumer receives, keeps us linked to our customers and gives us the best return for our produce* (horticultural producer, England).

> *The great attraction of a box scheme is that there is an outlet for every crop and the producer is in control of what is sold. But it is an administrative nightmare* … (mixed farmer, England).

> *By supplying local we can determine our price better. Also by supplying local, we are a well-known farming family in our area, so people know us and that has helped us establish our base. The moment we try to go regional or national we would lost all of that. We would just become a minnow* (producer, Brinsbury focus group).

> *Contact with customers important for communication of ideas/principles. Also direct sale prices important at this scale* (mixed farmer, England).

In explaining why they had developed specific local or direct marketing channels other respondents placed greater emphasis on ethical and environmental aspects:

> *Ethics of a box scheme. Harvesting and delivery on the same day* (horticultural producer, England).

> *Ethically and environmentally the best form of supplying organic fruit and veg* (horticultural producer, England).

> *Because I believe in taking wholesome food to [the] local community and in humane rearing and slaughter of livestock* (cattle and sheep farmer, England).

> *Like the idea of local/low miles/seasonal and being part of a community* (horticultural producer, England).

There were also some respondents who explained the importance of their local or direct marketing channel very much in terms of trying to provide an alternative to supermarkets:

> *Basically it's economics, you're dealing with two different things locally and nationally. For my own part one of the big considerations about going national would be the fear of dealing with the supermarkets. Because they have a universally bad reputation. Everybody I know who's dealt with them has not a kind word to say about them* (producer, Haverfordwest focus group).

Turning to what it is farmers are providing their consumers, in a broader sense than just milk or meat for instance, producers in the focus groups often mentioned a range of characteristics and attributes such as 'naturalness', residue free, healthy, improved welfare standards, environmental quality, etc. that, as we saw in Chapter 4, rank highly in terms of consumer expectations:

> *We keep tourists as well, that is the main enterprise on the farm - so I am in touch with visitors who visit us consistently and talking to them. They want a product that can be guaranteed, that is naturally grown, is healthy and guaranteed and they know where it comes from; because the pork I sell to my customers who stay with me, they know where the pork comes from. Really we are selling a guaranteed, natural, clean product* (producer, Haverfordwest focus group).

> *Naturally reared pesticide and chemical free produce. Produce grown naturally rather than forced with chemicals. The welfare of animals is much higher, we are very strictly controlled* (producer, Chichester focus group).

> *I think we are really contributing towards the local environment; people can drive down to our farm and have no fear of being sprayed or anything else nasty like that happening. And the birds, we have found with small birds on the farm, 20 years ago we used to have loads of Yellow Hammers, but they disappeared, but now they are back, for whatever reason, and the Red Kites. They are everywhere. We did not use to have them* (producer, Tanygroes focus group).

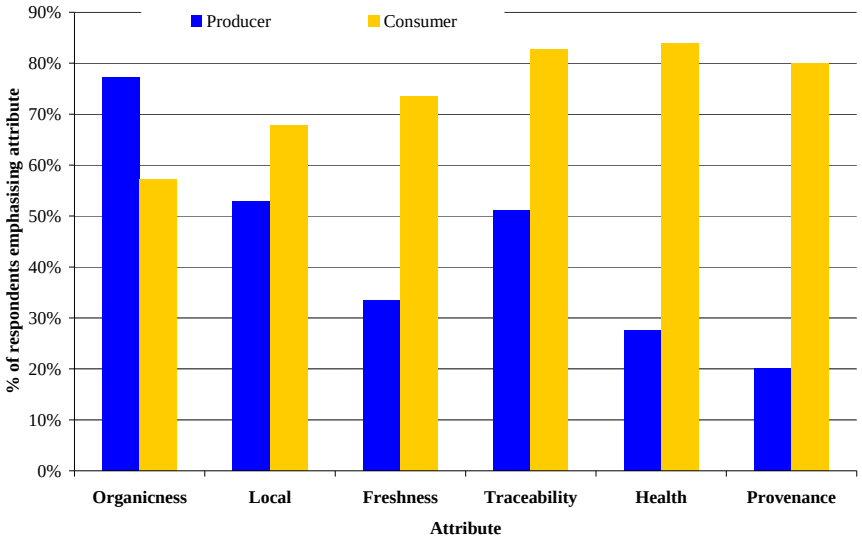
> *I think with my beef and cattle - I'm providing a guarantee that they are not loaded with antibiotics, or pesticides or anything of that nature. Those who buy organic products can know that the organic farming system is sustainable and that the land will be just as good when I die as when I started. If not better. Which I have to contrast with agri-business that does tend to take out more from the land than it puts in* (producer, Brinsbury focus group).

Comments along the lines of those included above were quite common. One farmer however, framed their response differently and argued that they were selling a 'story' of food production:

> *I think too, there is also an element of selling a story particularly when we are selling meat directly to the public. Townspeople are so ignorant about where their food is coming from, they haven't a clue and you are selling the story, a picture. That's what organic farming is about; presenting this idyllic picture of rural life - that's what organic farming is about, to encourage people to buy* (producer, Tanygroes focus group).

Despite the slightly patronising tone of some of these comments, there nevertheless appears to be some convergence between what farmers say they are offering their consumers and what consumers themselves say they expect from organic food. Having considered separately in Chapter 4 what it is that consumers expect from organic food, and having analysed here the characteristics and attributes that farmers claim to emphasise when selling their produce, Figure 5.10 compares the two sets of data, as far as is possible.

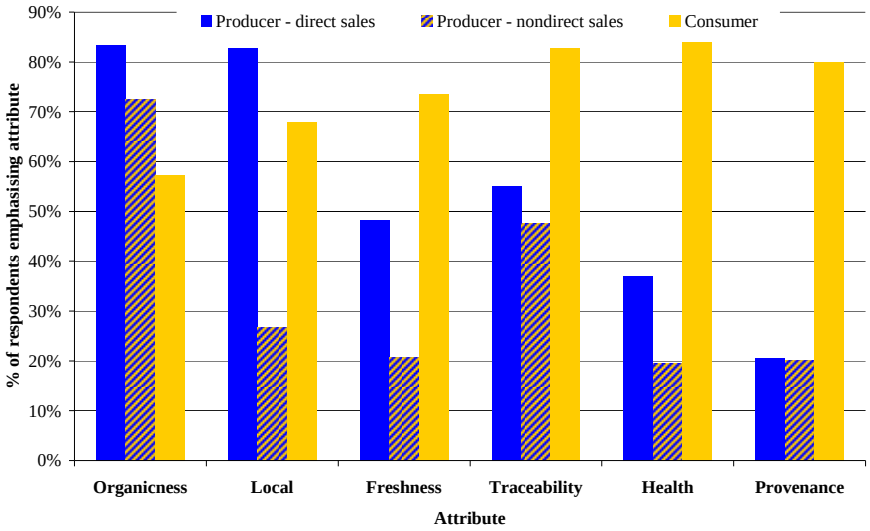
Figure 5.10: A comparison of the attributes emphasised by farmers, and consumer expectations



It is immediately apparent that fewer farmers tend to emphasise the importance of each attribute compared to the proportion of consumers stating that the attribute is an important part of their expectations of organic food. Ironically, the only exception to this is for the 'organicness' of the produce. Farmers are much more likely to emphasise this attribute compared to consumer expectations. However, it should be remembered that the consumer survey focused largely on consumers of organic food, and many will have taken the organicness of the food as a given. Turning to the 'localness' of organic produce, there is a relatively small gap between the proportion of consumers who identified this as an important expectation and the proportion of farmers who emphasise the local nature of their produce. For all other attributes the gap between consumer expectations and farmer behaviour appears quite considerable. That said, many farmers in the survey do not supply organic produce directly to the final consumer. Therefore it is arguably the responsibility of those further along the chain to market the final product in a manner likely to meet customer expectations. Consequently, Figure 5.11 presents the same comparison of producers and consumers, but this time distinguishes between producers engaged in supply end consumers, and producers supplying longer food chains. Disaggregating producers in this way has the effect of reducing the 'expectations gap' between what those producers supplying consumers directly emphasise about their produce, and the attributes that consumers expect to be associated with organic food. This is most noticeable for 'freshness' and

'health', although there is still a large gap between the number of direct supply producers that emphasise these attributes and the proportion of consumers who identified the attributes as important expectations.

Figure 5.11: A comparison of the attributes emphasised by farmers engaging in direct sales, and consumer expectations



Although there appears to be some divergence in the relative emphasis producers and consumers place on a number of attributes of organic food, farmers involved in direct and local sales frequently valued contact and dialogue with the consumer in much the same way as some locally orientated consumers valued the ability to interact with producers. As one respondent put it: "It is local and you sell direct to consumers, explaining and getting feedback". Respondents were asked about how they normally receive feedback from their customers. Fewer than 15% reported that they did not receive feedback from their customers. Of those that do receive feedback, face-to-face feedback is most common for those with a local orientation (see Table 5.14). This is not surprising given that many are involved in sales direct to the end customer and, as we have seen, value the personal interaction that they have with their customers:

> *I sell vegetables in the Fishguard farmers' market and I get very positive feedback from customers, mostly on taste and on the fact that they (the vegetables) are local* (producer, Haverfordwest focus group).
>
> *Well, I went and did two days at Marks and Spencer's at Camberley, standing in the store handing out organic steak, it was amazing some of the comments, 'you are a real farmer?' I was proving I was farming only 20 miles away from the store where the cattle are born and bred, selling with pictures of the cows. But it was really good; most of it was really positive feedback* (producer, Brinsbury focus group).

Other forms of personal feedback (mostly via the phone) are equally important to all groups of producers. Those with a national orientation are more likely than the others to receive feedback via the internet. Presumably this is a reflection of the greater

importance of internet sales to this group (see Table 5.14). Feedback via formal customer surveys is uncommon for all respondents, although slightly less so for those with a local market orientation. A number of other forms of feedback were also recorded by respondents including via abattoir returns, through marketing co-ops and via milk quality analysis.

Table 5.14: The association between main market orientation and feedback from customers (% of respondents reporting feedback type)

Feedback from customers	Main market orientation			
	Local %	Regional %	National %	All farms %
Face-to-face	80.6***	49.5	35.2	55.0
Other personal contact with customers	23.0	28.7	25.5	25.4
Via internet	13.7	13.9	23.5*	17.6
Customer survey	7.2*	2.0	2.0	3.8
Other source of feedback	5.0	18.8**	1.6	13.0

***P<0.001; **P<0.01; *P<0.05 indicates a statistical association between main market orientation and type of feedback.

Although it is always good to receive positive feedback, it is negative feedback that is arguably more important as this allows producers to fine-tune the presentation and delivery of their produce, or even to introduce new enterprises in order to meet customer demands. When asked what, if any changes had been made in response to customer feedback, one producer simply responded: "Lots. We call it progression at our business". The survey recorded over 60 instances of farmers making changes following feedback from customers. In some cases this was feedback from final consumers and in other cases from intermediaries such as supermarkets. In response to feedback, respondents had taken steps such as offering customers different cuts of meat, introducing new enterprises, changing packing and presentation of produce, and changing the breed of livestock or other changes to improve livestock quality. For instance, a number of lamb producers who had contracts with Waitrose had taken steps to produce heavier lambs by switching breeds. As one farmer put it:

> *[we] have changed breeds of sheep to obtain more lambs in the right grade. Waitrose don't like "O" grades of lambs or cattle* (cattle and sheep farmer, Wales).

Similarly, another reported that:

> *Waitrose need a heavier lamb so we purchased lambs with better conformation* (cattle and sheep farmer, Wales).

Changes to packaging to improve presentation and information were quite common, for instance: "constantly changing products and presentation" and "Labelling – organic emphasised now, weight shown". Respondents did not always agree with the preferences expressed by their customers, but still made changes as the following example from a horticultural business illustrates:

> *I have been asked to pack lettuce in plastic bags, which we did as the customer is always right, but I don't agree* (horticultural producer, England).

Some farmers had changed the cuts of meat they offered to better suit customer requirements, with one producer explaining that: “customer feedback on beef steers over recent years led us to have more steaks and less joints. Lamb shoulders are boned out and breast of lamb is now minced or made into sausages”. Other farmers have changed the enterprise structure of their business in response to customer feedback: “Customers want organic pork so we started a pig herd. Then they wanted organic bacon so we started to produce our own”.

As these examples show, organic farm businesses are responding to customer demand and exploiting new market opportunities. In some cases they are responding to feedback from buyers for major supermarkets and in other cases to the requests of individual end consumers. Many more farmers reported receiving feedback than those reporting making changes in response to such feedback. Further in-depth research is needed to explore why some farmers appear willing and able to adapt their business in response to feedback, while others are not. Some were clearly responding to the relationship that they had developed with their customers. For instance, one respondent candidly explained that even though he tries to offer all of his customers good quality, it was the local customers who got the best produce: “although we try to produce a uniform good quality product, local people get the best as I meet them often”.

5.5 Continuity of supply and adding value

A large proportion of the sample (39.5%) reported experiencing problems with continuity of supply due to seasonality. This was particularly marked amongst producers with a local orientation, with 55.8% reporting experiencing problems ensuring continuity of supply (compared to 30.1% and 28.8% of those with regional and national market orientations, respectively). Of those reporting experiencing continuity of supply problems due to seasonality issues, farmers with a local market orientation are the most likely to try to provide an alternative – 31.8% compared to 24.1% of those with a regional orientation and 26.5% of those with a national market orientation. A large proportion of locally orientated farmers will try to source local alternatives when faced with continuity of supply problems, although the majority take what might be termed as a pragmatic response and will source alternatives from wherever they are available. This latter result should be treated with some caution however, as the number of farms in this group (i.e. farms with a local market orientation who experience continuity of supply problems and try to provide an alternative) is small.

A large minority of farms (28.7%) also add value to their output through processing, retailing, packaging or distribution of their produce. While most of these farms (48.9%) only have one value adding activity, 25.9% have three or more. Furthermore, farmers that add value to their produce have a lower HHI score (0.60 compared to 0.82 for those that do not add value to their produce), suggesting a more diverse marketing approach to selling their organic produce. In terms of market orientation, it can be seen from Table 5.15 that farmers with a local market focus are more likely to

add value. Indeed, nearly half the farms that engage in any value adding activity have a local market orientation and there is a statistically significant association between processing own produce, packaging, retail and distribution and farms with a local market focus. However, the exact nature of the relationship is complex. Farm type and farm size are clearly factors influencing value adding activities. For instance, horticultural and mixed farms are much more likely to incorporate some form of processing, packaging, retailing and distribution activity on their farm, accounting for 62.0% of adding value activity. In addition, farms of less than 25ha are significantly associated with such activity. In terms of market orientation, it is more likely that farms of less than 25ha, as well as farms that have enterprises including vegetables, salad and fruit production are focused on the local market. Thus there is a complex interaction between farm size, type, market orientation and the propensity to engage in value adding activities. Interestingly, farms that are over 200ha with value adding activity are statistically significantly associated with serving the national market. This would suggest that scale in farm size and operation might be a factor in where value added production is marketed.

Table 5.15: The association between adding value to produce and main market orientation

Adding value activity	Local %	Regional %	National %	All farms %
Processing	22.4***	6.0	5.1	11.4
Packaging	27.9***	9.4	8.9	15.7
Retailing	23.1***	7.7	9.6	13.8
Distribution	17.7***	4.3	6.4	9.7
Other	2.0	0.0	1.9	1.4
Any added value activity	49.0***	16.2	19.1	28.7

***P<0.001 indicates a statistical association between main market orientation and type adding value activity.

5.6 Summary and implications

The organic farms taking part in the producer survey account for approximately one fifth of all registered organically farmed land in England and Wales. As this chapter has shown, the survey captured a wide diversity of organic farming situations, but it has also been demonstrated that production is dominated by a few large producers (in much the same way as the non-organic sector). The 'top' 10% of farms in the survey account for over half of all sales and approximately half of all full-time staff employed on survey farms. There are also many smaller organic producers who, whilst numerically important, contribute a relatively small proportion of total sales.

The farms participating in the survey produce a wide variety of organic produce, which is sold via an extensive range of market channels. The approach adopted here was to focus on the first destination of organic sales and not necessarily the final consumer. However, it has been shown that while marketing channels where the first destination is represented by an intermediary (such as processor, packhouse, etc) are common, so are more novel, direct and often local routes to the final consumer such as through farmers' markets and box schemes.

In order to begin to characterise national, regional and local markets for organic food, respondents were asked to indicate the main geographical focus of their sales efforts. This allowed us to identify three distinct market orientations, which subsequent analysis has shown to be associated with a different range of organic products, different routes to market, different types of farm and also different types of activity on the farms. Analysis of the geography of market orientation and market concentration revealed some interesting regional variations, none of which were significant in a statistical sense.

Farmers focusing predominately on the local market account for just under 35% of the sample, but a much smaller 13.7% of all sales. In part this is related to the distinct farm size and farm type profile of these businesses, as many are very small. Nevertheless, the operators of these farms manage a different and more diverse range of marketing channels compared to those with a regional and national market focus. Farmers with local orientation are also more involved in on-farming processing and adding value, frequently delivering food and food products to end consumers. Many clearly value the relationships developed through reconnecting with customers and there is evidence that, in some cases, they have adapted aspects of the business in order to respond to customer feedback.

Most organic farmers however, do not have an orientation to the local market. As we have seen, some feel the barriers to local and direct supply are too great, or are in locations that lack sufficient population to make a predominantly local marketing strategy viable. This is particularly the case for the operators of larger businesses who often find that they are producing too much for the local market to absorb. Others strongly identified themselves as farmers and producers with neither the time, skills nor the inclination to get involved in direct marketing, often preferring the ease and relative security of selling on contract to processors or via marketing cooperatives.

While the differences between farmers with a local market orientation and those with regional or national market orientations are quite distinct, and in many cases are statistically significant, the distinction between those with a regional focus and those with a national focus is more subtle. In contrast to those with a local orientation who frequently supply a food product to end consumers, those with regional and national orientations are more likely to be involved in the agricultural bulk commodity market, delivering raw materials, such as grain and milk, as part of a long food chain. Many operate dairy farms which tend to be associated with a high HHI value indicating that they market their output through few, possibly one, channel. Marketing cooperatives are much more important to these farmers and there is evidence from the survey that they make less effort to emphasise any particular qualities or characteristics of their produce (other than its organicness). They are also much less likely to receive face-to-face feedback from consumers, confirming that many are at least one step away from the end consumer. That said, farmers with regional and national market orientations account for most sales recorded by the survey, and by earning income

from beyond their local area they are bringing additional funds into their local economies (See Chapter 7 for a consideration of economic multiplier effects).

This chapter has identified distinct local, regional and national market orientations amongst organic producers, but this is not the same as identifying distinct local markets. Local markets will involve a mixture of produce delivered by farmers with local market orientation as well as produce delivered via regional and national food chains. The complexity of the chain that delivers organic food via local, regional and national market channels is explored in the next chapter.

Chapter 6: Organic food chains

6.1 Introduction

So far we have concentrated on consumers and primary producers. The latter do not exist in isolation but are part of sometimes complex webs or chains of linkages, both up and downstream of the farm business. The objective of the whole chain approach adopted for this part of the research, therefore, was to examine the upstream and downstream linkages of organic businesses in order to develop a detailed analysis of their relationships with different retail outlets which sell organic produce, and those that supply the production process. More specifically, the identified linkages were assessed in terms of their marketing concentration (proportion of output sold through each marketing channel) and their geographic dispersion (proportions of inputs bought and outputs sold at local, regional, national and international scales). In addition to quantifying these linkages, the nature of the up/down stream relationships was also explored in a more qualitative sense. Thus, this chapter adds a significant degree of depth and detail to some of the concepts and issues identified earlier in the report. Moreover, it begins to offer some explanations for the descriptive results discussed so far.

6.2 Characteristics of the farm sample

Echoing the results of the postal survey of producers, one of the first, and key, features to emerge from the 61 interviewed organic farms in the three study areas (south-west Wales, Sussex and the Devon, Somerset and Gloucestershire (DS&G) study area[28]) was their sheer diversity in terms of farm size and business history. The size of business varied from 1.1ha to a massive 4,500ha, with the largest farms occurring in Sussex and the smallest in DS&G (Table 6.1). In terms of farm type, 60% described themselves as mixed organic farms; this figure rose to 76% in south-west Wales and fell to 46% in Sussex. Dairy farming and horticulture (fruit and vegetables) were the other two main farm types. Most of the businesses had been established for some time when they converted to organic production, especially in Sussex. Businesses surveyed in the DS&G study area and south-west Wales were thus both younger and with fewer years in organic production (Table 6.1). The vast majority of businesses (74%) were fully organic and only three (2 in Sussex and 1 in Wales) had more conventional than organic land. Thus relatively little land was currently in organic conversion among the sampled farms, especially in the DS&G study area.

A second key feature characterising the farm sample related to the reported motivations for going organic. Some producers from each study area reported that they were motivated by an underlying organic philosophy. However, the vast majority of producers were acutely aware of the necessity to be economically viable, with other motives, such as a range of environmental, health, welfare and food quality

[28] This study area includes two interviews conducted in Dorset.

issues, as well as deeply-held family traditions, only being practised if the business was making a profit. This was summarised in the following quote from a tenant farmer in East Sussex:

> *Market opportunity and a lot of support for organic produce was one reason, but landscape protection was another. We have got a lot of water courses, a lot of springs and a lot of woodlands that really needed protecting'* (producer, Sussex study area).

A common response was that 'organic is basically following on from what we have always done'; in some instances, this reflected a philosophy of non-intensification. Yet for others, ethical motivations were important, linked to such notions as providing fresh and quality produce for local markets rather than multiple retailers.

Table 6.1: Size (ha) and age of business, and years in organic production for total farm sample, by study area

Study areas	Farm size (ha)	Age of business (years)	Years in organic production
Sussex	395	56	14
Devon, Somerset and Gloucestershire	86	20	7
South-west Wales	113	26	10
Total sample	207	35	11

The third key feature of the farm businesses demonstrated that change was the general order of the day. Many businesses had either added new enterprises and/or changed their enterprise mix, and a large number had used different input suppliers and new marketing channels (see below). However, expansion was not always planned and various problems confronted many of the organic producers (see below). Some had scaled down their farming operations because of factors such as the foot and mouth epidemic, impending retirement (often without a successor), other business opportunities (e.g. diversification) and competition from other businesses – especially in terms of the marketing of organic produce.

6.3 Organic marketing channels

A detailed analysis of the sampled organic businesses demonstrated that different and complex marketing arrangements were used to sell produce, often through individualised marketing chains. Some organic commodity producers sold their raw products directly to supermarkets, processors and organic cooperatives such as OMSCo (Organic Milk Suppliers Cooperative) and OLMC (Organic Livestock Marketing Cooperative) and were not trying to either add value and/or sell their produce locally. For some of these, it was a case of "scale and simplicity" (producer, Sussex study area) or "we were always set up to deal with Tesco because continuity of supply and quality are key considerations" (producer, Sussex study area). A few larger-scale organic producers had been approached, either directly by supermarkets or intermediary companies, to supply them with organic produce. In contrast, many smaller organic growers (with notable exceptions) were attempting to produce for the local economy and to sell their produce either directly to the final consumer (via farm

gate sales, farm shops, box schemes and farmers' markets) or to independent retailers, a range of catering establishments and other local farmers.

Confirming the results of the postal survey of producers, the face-to-face survey results indicated that there was some 'blurring' in the use of national/commodity and local/alternative marketing chains, with those focusing on the former occasionally selling small amounts of produce locally, just as the latter sometimes had to use conventional channels to dispose of surplus produce. Yet others deliberately used a combination of national commodity channels and local 'alternatives' such as box schemes, farmers' markets and independent retailers. Nevertheless, some producers gave the impression that local markets were becoming saturated and so deliberately sought to complement these with more distant marketing channels.

6.3.1 Index of marketing concentration

The results for the index of marketing concentration can be used to demonstrate the complexity of marketing arrangements within and between the three study areas and the role of place in determining the dominant types of marketing. An overall (mean) index of marketing concentration of 0.76 for the 61 farms indicated a quite high level of concentration in the use of the different distribution channels. However, this varied between the study areas, rising to a high of 0.83 in the DS&G study area and falling to 0.74 for Sussex and 0.71 for south-west Wales (Table 6.2). Nineteen of the 61 farms had a marketing concentration index of 1.0, indicating that all of their produce was sold through just one of the 10 types of distribution channel.[29] Just over a half of these highly concentrated farms (10) were in DS&G, nine of which sold all of their produce to either a processor or marketing cooperative. By way of contrast, in Sussex and south-west Wales, four of the nine producers had a marketing concentration index of 1.00 selling all of their produce to independent retailers, through direct marketing channels or to other farmers. These results begin to hint at some notable differences in the marketing behaviour of organic farmers between the study areas.[30]

The index of marketing concentration also demonstrates the dominance of three particular marketing channels among the sampled businesses: marketing cooperatives (0.28), direct marketing (0.21) and abattoir/processor (0.20) (Table 6.2). Again, this is in line with the results of the postal survey presented in Chapter 5. Indeed, there were again some differences between the study areas, with marketing cooperatives (0.45) accounting for a high proportion of the overall index in south-west Wales, but much less in the DS&G study area and, especially, in Sussex. Thus in south-west Wales many organic milk and meat producers were cooperative members who tended to sell their products to OMSCo, Calon Wen (an organic marketing cooperative in Pembrokeshire) and Graig Farm (Organic cooperative meat producer group in

[29] This chapter uses ten marketing channels including: direct marketing, independent retailers, supermarkets, wholesalers, abattoir/processor, marketing cooperative, catering, public sector procurement, other farmers, and livestock markets. By collating the channels in this manner, enables brevity in the analysis.

[30] While differences were found between study areas in the marketing behaviour of organic farmers, because of the purposive sampling techniques used, these should not be used to make broad generalisations at a regional or national level.

Powys). In addition, marketing locally in south-west Wales was often thought to be very difficult, due to distances from the main population centres and the relatively low demand for organic food; this in turn restricted opportunities for adding value to produce.

Table 6.2: Indices of marketing concentration, by distribution channel and study area

Study area	1	2	3	4	5	6	7	8	9	10	Overall index
Sussex	.27	.10	.08	.08	.11	.14	.07	.00	.13	.01	0.74
Devon, Somerset and Gloucestershire	.19	.08	.02	.02	.38	.23	.01	.00	.07	.00	0.83
South-west Wales	.16	.01	.00	.10	.14	.45	.06	.00	.03	.04	0.71
Total sample	.21	.07	.03	.07	.20	.28	.05	.00	.08	.02	0.76

1. Direct marketing
2. Independent retailers
3. Supermarkets
4. Wholesalers
5. Abattoir/processor
6. Marketing cooperative
7. Catering
8. Public sector procurement
9. Other farmers
10. Livestock markets

Direct marketing to local consumers was dominant in Sussex, where it accounted for 0.27 of the index of marketing concentration. This relative concentration reflected the more prosperous nature of its regional economy and the demand for local/organic food from such outlets by relatively wealthy consumers. Nevertheless, given the importance of tourism to the economy in both the DS&G study area and south-west Wales, and the link between tourism and local/organic foods, one may have expected a greater proportion of produce to be marketed through local distribution channels.

Although three marketing channels dominated the overall sales of organic produce among the 61 producers, considerable variation in the use of specific and different combinations of marketing channels could be found in each study area. This is portrayed in Table 6.3 which shows the proportions of produce sold through different marketing channels for five organic businesses in each study area. While the vast majority of the 15 examples (13) marketed over 50% of their produce through one particular marketing channel, this was rarely the same channel and the table demonstrates the varied, often complex and individualised ways in which organic products were marketed.

6.3.2 Index of geographic dispersion (outputs)

Focusing on where, rather than how, the organic produce was sold, an overall index of geographical dispersion of 0.84 indicated a relatively high concentration of distribution across the three main distance zones (less than 30 minutes, 30-60 minutes, and rest of the UK). The figures were similar for all three study areas (Table 6.4), and 33 of the 61 businesses (55%) had a maximum geographic dispersion index of 1.00 – meaning that all of their produce was sold within one particular time distance zone from the farm (16 locally, 5 regionally and 12 nationally). Thus some producers, as well as using just one main type of marketing channel, also sold their products within just one time distance zone.

The sampled farm businesses placed considerable reliance upon selling organic produce either locally (within 30 minutes of the farm) or nationally, with much less being sold regionally; indeed, the index of geographic dispersion (outputs) revealed a clear division between local (42%) and national (42%) sales of organic produce (just 16% regionally). This varied between the three study areas (Table 6.4). Overall, a picture emerged whereby greater use was made of 'alternative'/direct marketing channels in Sussex to sell a significant proportion of organic produce locally, whereas in the DS&G study area and south-west Wales marketing cooperatives and/or processors dominated as more produce was sold regionally and, especially, nationally.

Table 6.3: The complexity of organic marketing channels

Study area/farm	1	2	3	4	5	6	7	8	9	10	Index
Sussex											
Example 1	.00	.00	.00	.08	.00	.00	.00	.00	.91	.01	0.83
Example 2	.00	.50	.00	.00	.24	.24	.00	.00	.02	.00	0.37
Example 3	.95	.00	.00	.05	.00	.00	.00	.00	.00	.00	0.91
Example 4	.01	.07	.00	.07	.85	.00	.00	.00	.00	.00	0.73
Example 5	.00	.07	.70	.23	.00	.00	.00	.00	.00	.00	0.55
Devon, Somerset and Gloucestershire											
Example 6	.05	.70	.00	.00	.25	.00	.00	.00	.00	.00	0.56
Example 7	.70	.00	.30	.00	.00	.00	.00	.00	.00	.00	0.58
Example 8	.00	.03	.00	.30	.30	.15	.00	.00	.22	.00	0.25
Example 9	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	1.00
Example 10	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	1.00
South-west Wales											
Example 11	.02	.20	.00	.00	.00	.20	.58	.00	.00	.00	0.42
Example 12	.00	.00	.00	.00	.03	.90	.00	.00	.00	.07	0.82
Example 13	.33	.00	.00	.00	.33	.00	.34	.00	.00	.00	0.33
Example 14	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00	1.00
Example 15	.00	.00	.00	.00	.80	.00	.00	.00	.20	.00	0.68
Total sample	.21	.07	.03	.07	.20	.28	.05	.00	.08	.02	0.76

1. Direct marketing
2. Independent retailers
3. Supermarkets
4. Wholesalers
5. Abattoir/processor
6. Marketing cooperative
7. Catering
8. Public sector procurement
9. Other farmers
10. Livestock markets

Table 6.4: Indices of geographic dispersion (outputs), by study area

Study area	0-30 minutes	30-60 minutes	Rest of UK	Overall index
Sussex	0.53	0.09	0.38	0.81
Devon, Somerset and Gloucestershire	0.38	0.30	0.32	0.89
South-west Wales	0.33	0.13	0.53	0.83
Total sample	0.42	0.16	0.42	0.84

Despite these general findings, examples of the use of a wide and complex range of marketing channels and different time distance zones were found in each study area. What was clear from the surveys, especially in Sussex, was that some producers originally committed to different forms of direct marketing were now struggling. In

practice, it is not easy to develop and maintain these chains. One of the reasons offered for this was the competition from the large, scale 'alternative' forms of direct marketing such as Riverford and Abel and Cole. The issue of competitiveness was often most clearly expressed in the case of box schemes in Sussex. The following quote summarises some of the issues:

> *Boxes have hit the big time, everyone is doing boxes. The milk delivery service, our local greengrocer, the supermarkets, so the concept of boxes is now out there in the market place. Boxes used to be a direct relationship between the people who bought it and the farmer. Now boxes are operated by big, you know, national operators and the supermarkets. The concept has become a product, subject to the whims of the fickle consumer'* (producer, Sussex study area).

The rise and power of these large scale 'alternative' and often organic businesses further contests straightforward divisions between 'commodity' vs. 'alternative' markets. In some cases, the analysis actually revealed a retrenchment away from some forms of direct marketing and a tendency to orientate towards certain types of marketing channel.

Similar findings emerged in terms of adding value. While there were examples of adding value in each study area, it was often seen as involving much more work; a number of respondents simply did not have the time and/or capacity to consider adding value to their produce. For example, an organic dairy business in Sussex decided to complement a 'simple' milk chain (selling raw milk to OMSCo) with a 'complex' yogurt chain on the basis that there was a potential opening for drinking yogurt in the local market. However, as the producer explained:

> *It hasn't been a great success….making it is easy, selling it is not. It's another whole world, the retail business, and we were starting from knowing nothing. I think it's a world that I slightly regret getting involved in because both our backgrounds are farming and land management; we don't fit into retailing and it's blumming hard work* (producer, Sussex study area).

It is not surprising, therefore, that it was often cheaper and more efficient not to add value and to sell organic produce directly to marketing cooperatives and/or processors, usually outside the study area.

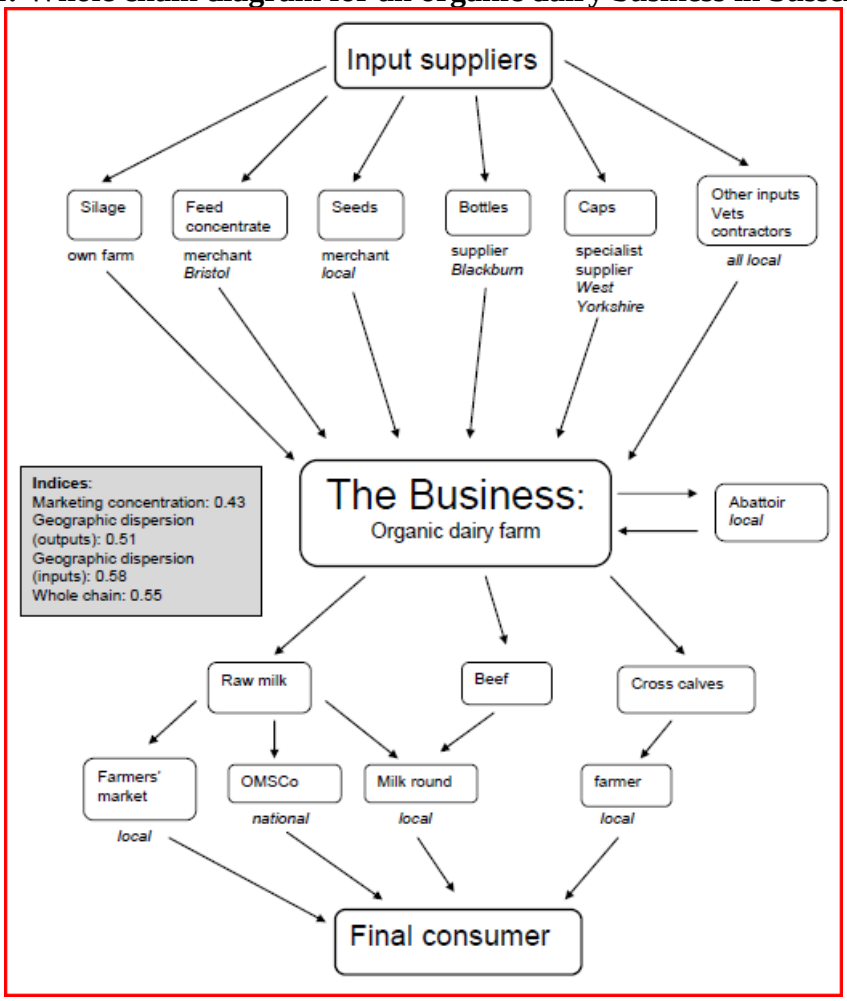
6.3.3 Case study examples

The rest of this section focuses on three specific examples of organic businesses that demonstrated different indices of marketing concentration and geographic dispersion. They have also been selected to reflect different types of farming and sizes of business. The first, a 105 ha totally organic farm business in East Sussex, is a good example of a hybridised whole chain making use of both national and local marketing channels (Figure 6.1). In this case, 90% of the milk, in terms of volume, was sold to OMSCo; this was worth 42% of their sales. The business had recently started selling bottled raw milk through its own delivery round. As the farmer explained "that is about 10% of our milk but it is for a higher value. Instead of 34p per litre we get paid

about 140p a litre" (producer, Sussex study area). The bottled milk was sold locally to 380 customers. A local farmers' market was used to promote the sale of the milk and attract new customers. The business also sold veal (slaughtered and processed at a local certified abattoir) to customers and cross-bred calves to a local farmer. Indices of marketing concentration and geographic dispersion (outputs) of 0.43 and 0.51 respectively indicated fairly low levels of concentration. Significantly, nearly 60% was sold within 30 minutes distance of the farm, with the remainder being sold nationally. The farmer explained the relationship between the two supply chains as follows:

> *I'd say the two milk chains are fairly even (in terms of importance) because obviously the milk round is massive in terms of the relative price per litre, but having said that the way organic milk is going we need to pump out volume and get income that way as well* (producer, Sussex study area).

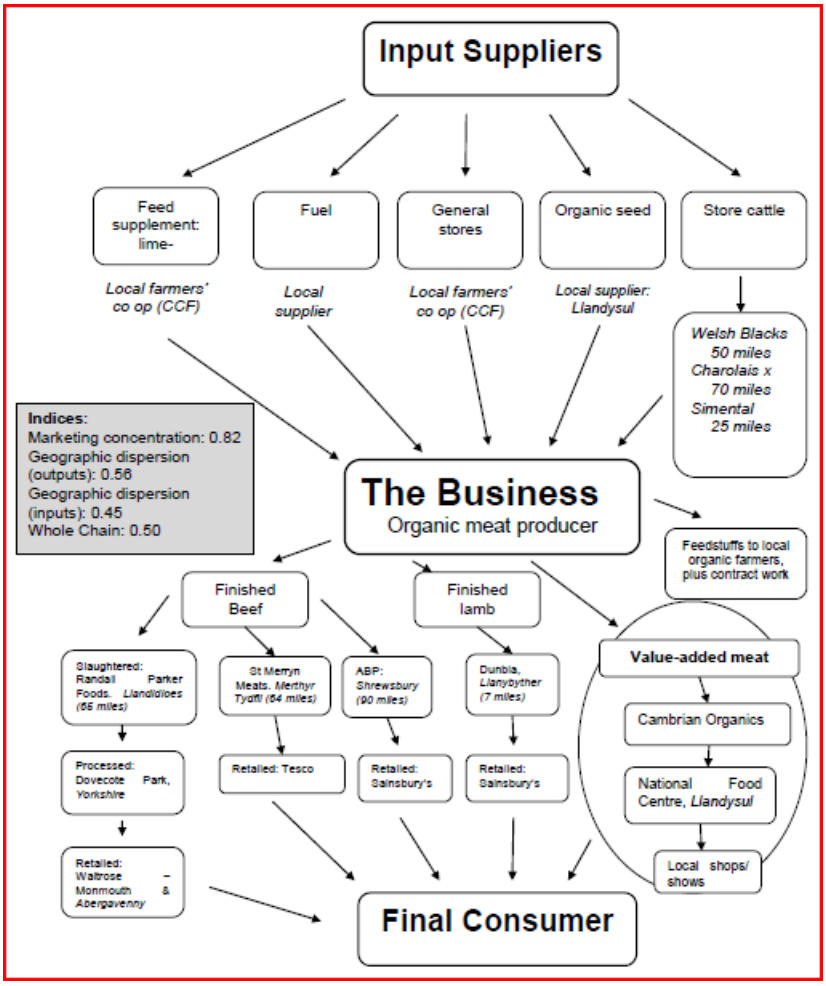
Figure 6.1: Whole chain diagram for an organic dairy business in Sussex



The second example, a 202 ha totally organic livestock (beef and lamb) farm in south-west Wales, tended to market a large proportion of produce through processors, both locally and nationally (Figure 6.2). All of the finished beef and lamb was sold to processors (90% of business) and the farmer also sold some of his own-grown feedstuffs to other local organic farmers (10%). The index of marketing

concentration, at 0.82, was quite high; however, the index of geographic dispersion was lower (0.56) because there was a deliberate attempt to ensure that around one-third of outputs were sold locally. Demonstrating his entrepreneurial spirit, he managed to establish Cambrian Organics, a cooperative consisting of 30 local organic farmer members, with processing conducted at the National Food Centre in nearby Llandysul. Cambrian Organics had been moderately successful in producing a range of meat products for local consumption, most notably beef burgers that were sold at local agricultural events. The facility was now effectively dormant because the overheads, relative to the throughput, meant that it was uneconomic to continue production. This demonstrates the difficulty of trying to process and add value in an area with limited demand.

Figure 6.2: Whole chain diagram for an organic livestock business in south-west Wales



By way of contrast, in the third example, a 385 ha organic mixed farm (beef, oats and cereals) in the DS&G study area, the farmer was more interested in economies of scale than in producing organic food for the local market. The business was a good example of an organic commodity production system that sold all of its produce to three different processors, one each for the different products (Figure 6.3).

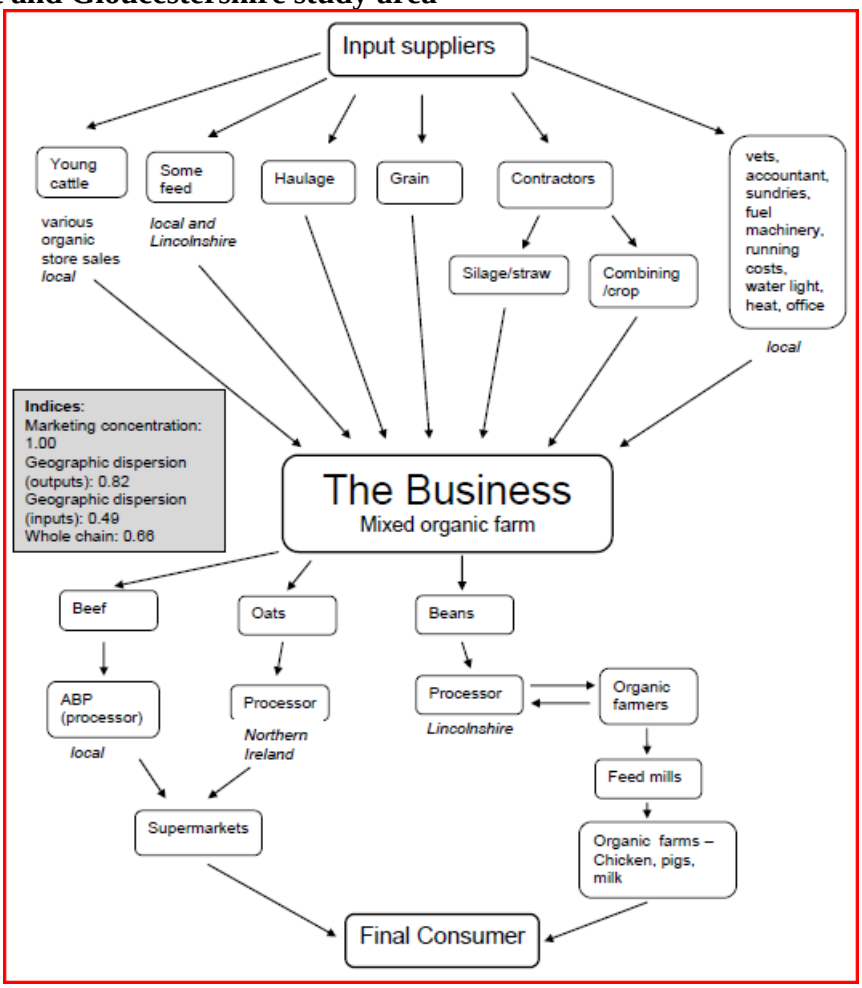
Most of the produce was destined for supermarkets outside the south-west study area and, not surprisingly, the index of marketing concentration was 1.0 (everything sold

through abattoirs/ processors) and the index of geographic dispersion was 0.82, with just 10% sold regionally and none sold within 30 minutes of the farm. Explaining what he did, the farmer said:

> *I deal with producer groups like ABP, which has around 400 members, and an agent who is good. The producer group allows economies of scale and helps to keep my costs down; it also helps to get the cattle in and arranges haulage to Shrewsbury* (producer, DS&G study area).

For this producer, there was little point in trying to add value and market produce locally; instead, viability came from selling as much 'raw' organic produce as possible to large-scale producer groups/processors.

Figure 6.3: Whole chain diagram for an organic mixed farm in the Devon, Somerset and Gloucestershire study area



6.4 Organic inputs

Although there was a desire by a majority of the 61 farmers to either produce their own inputs and/or purchase them from local suppliers, many were forced to buy some of their primary inputs such as seed and feed from outside their own area and even from abroad. This 'problem' seemed particularly acute for organic livestock feed (especially proteins) and cereal/grass seeds and plants, but was also noticeable in some study areas for other inputs such as packaging, labels, bottles, boxes and

polythene. Some organic producers did purchase inputs (in the form of organic and non-organic products) from other local organic businesses at certain times of the year, especially those who sold through direct marketing channels such as their own farm shop and/or box scheme. An important distinction needs to be made between intermediate input suppliers (e.g. agricultural merchants, wholesalers) and primary input suppliers (e.g. growers, primary manufacturers). Some businesses made use of local suppliers, but the product may have come from much further afield. The dearth of local primary organic input suppliers was particularly noticeable in Sussex.

6.4.1 Index of geographic dispersion (inputs)

Results for the index of geographic dispersion (inputs) again demonstrated considerable variety within and between the three study areas. An overall index of 0.69 for inputs indicated a reasonably high level of concentration across the main distance zones, but this was much lower than the figure of 0.84 obtained for outputs. This reflected a genuine desire to source locally if possible. There was some variation between the study areas, rising to 0.70 in Sussex and 0.76 in the DS&G study area and falling to 0.61 in south-west Wales (Table 6.5). Far fewer businesses (10) had a maximum geographic dispersion index for inputs of 1.00, compared to 33 businesses with an index of 1.00 for outputs. Thus only 10 businesses sourced all of their input needs from within just one distance zone (4 locally, 4 regionally and 2 nationally). The four sourcing all inputs regionally were shared between Sussex and the DS&G study area.

Table 6.5 Indices of geographic dispersion (inputs), by study area

Study area	0-30 minutes	30-60 minutes	Rest of UK	Outside of UK	Overall index
Sussex	0.36	0.20	0.40	0.05	0.70
Devon, Somerset and Gloucestershire	0.52	0.35	0.12	0.00	0.76
South-west Wales	0.51	0.08	0.42	0.00	0.61
Total sample	0.46	0.20	0.32	0.02	0.69

The sampled farm businesses sourced most inputs locally (including from own farm) (46%), with 20% being sourced regionally and just over one-third (34%) coming from national or international sources. Yet again, there were notable differences between the study areas, with the DS&G area sourcing 88% of its inputs from within 60 minutes of the farm as compared to 56% for Sussex.

Despite these general trends, examples of the use of different distance zones for sourcing inputs could be found across the study areas. Thus in each study area there were those farmers who either produced their own inputs and/or purchased the vast majority of their inputs locally, just as there were those who tended to source more national than local/regional inputs. Producers were often forced to go beyond their local area and region, especially to source more specialised inputs. One good example of this included the purchase of vegetable plants and seeds by horticultural growers in both Sussex and south-west Wales from specialist providers in Eastern England. These providers produced what was perceived to be a far superior seed and,

as well as price, quality, reliability, availability, trust and an efficient service were important considerations for the choice of input suppliers for many organic businesses.

The situation was also dynamic in that change in input suppliers was quite common as producers chased down the best offers in order to counter generally spiralling input costs. In this case, there was decreasing use of local supplies, either because they were not available or because they were too expensive. Another response was to reduce dependence on 'bought in' inputs and to produce more requirements on the farm itself; good examples included home-grown cereals, lupins and increasing the red clover content of grass (to increase the protein content of their hay and silage). The rising cost of, and difficulty in obtaining, feed was a major issue for livestock farmers in the three study areas. Overall, while there was evidence of attempts to obtain inputs locally in each area, differences were apparent in terms of the proportion of inputs sourced from outside the area. While the reasons for such differences were not immediately apparent, it became clear that producers in Sussex and south-west Wales were often forced to seek necessary primary inputs from sources at considerable distances from the farm. While producers in Sussex tended to act individually and differently from the often group buying behaviour in south-west Wales, the outcome was virtually the same.

6.4.2 Case study examples

The rest of this section focuses on the input supplies of three organic businesses, again selected to demonstrate different sourcing patterns and contrasting farm sizes and types of organic production. The first example, which had always been totally organic, ran a vegetable box scheme within the local area of East Sussex. Not surprisingly, it had indices of marketing concentration and geographic dispersion (outputs) of 0.98 and 1.00 respectively. However, it sourced more national/international (70%) than local/regional farm inputs (30%), leading to a low index of geographic dispersion (inputs) of 0.34 (Figure 6.4). Thus, while expressing a desire to either use their own farm inputs or to source locally, they often had to source primary inputs from outside the area. The major input cost was bought-in vegetables, with some produce (e.g. broccoli, peppers) coming in from international growers. Crucially, the level of bought-in vegetables relative to their own grown produce varied over the growing season; at certain times, it was as little as 20% and at other times as high as 80%. As the proprietor explained:

> *This is a very seasonal thing. In November and July we will be down to 10% or maybe 20% of bought-in veg in terms of what we are selling, whereas at this time of year (May) we are probably about 15-20% own grown and the rest is bought-in. We try and keep it local, so the majority comes from a local nursery; the rest comes from a local wholesaler who provides stuff from all over* (producer, Sussex study area).

The second example, an 1133 ha, 300 years old mixed farm business, had been certified organic for just five years. On its website, it was claimed that the farm is:

‘The only completely self-sustaining organic farm in Europe, which means that all our animals only ever eat food that has been organically grown on the estate’.

Figure 6.4: Whole chain analysis for an organic horticultural business in Sussex

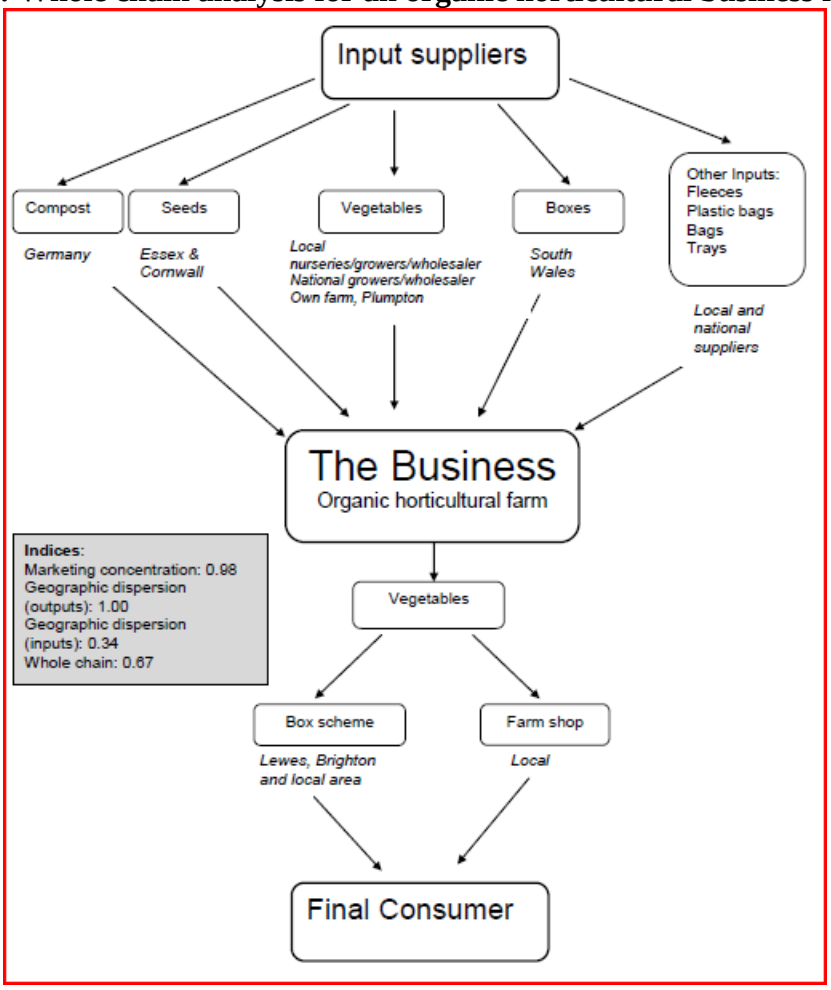
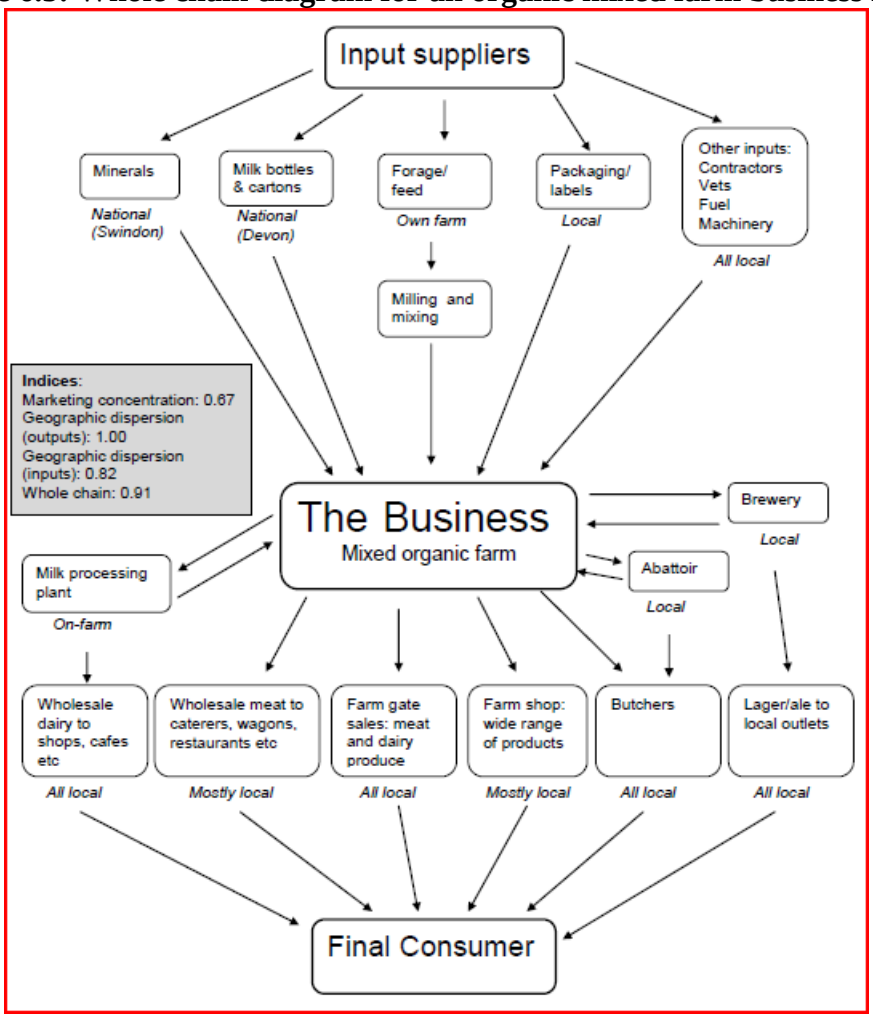


Figure 6.5 indicates that the animal feed (from the farm) was actually mixed and milled by a company in Dorset (over one hour away) and that the bottles and plastic containers for milk were obtained from a supplier in Devon; likewise, vital minerals (based on seaweed) came from a company in Wiltshire. Nevertheless, 97% of all inputs were purchased within one hour’s travel time (local/regional) from the farm. This led to an index of geographic dispersion (inputs) of 0.82. All outputs were also sold locally (index of geographic dispersion for outputs is 1.00 and index of marketing concentration is 0.67). As the manager suggested: “local is the key to everything for the future”, but he acknowledged that “too many small companies are disappearing, meaning we have to go further afield – this needs to be reversed” (producer, Sussex study area).

The third example, a 91 ha potatoes and vegetables farm in south-west Wales, could not purchase seed potatoes locally; they were obtained from a processor/wholesaler in Shropshire – where most of the potato output was also sold, for onward transmission to supermarkets (Figure 6.6). The other primary inputs were also purchased from outside the area; however, an index of geographic dispersion (inputs) of 0.52 was obtained because 40% of all inputs were local. The producer said:

I would like to sell more in Wales, but selling to local shops is 'bitty' – they charge what they want. It is difficult because the processor takes the best products and pays low prices (producer, south-west Wales study area).

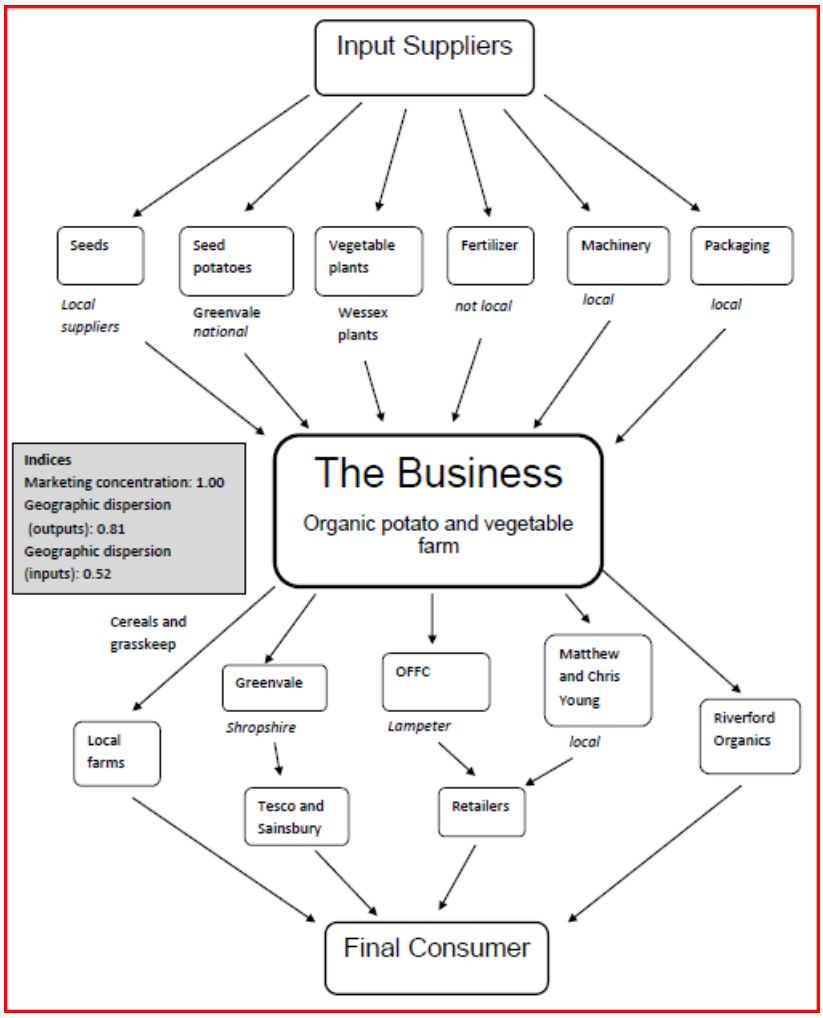
Figure 6.5: Whole chain diagram for an organic mixed farm business in Sussex



6.5 The whole chain

While many of the surveyed organic businesses expressed a preference for buying and selling locally, it was almost impossible for any one business to purchase all or most of their inputs from, and sell all or most of their outputs within, their local area. While attempts were also made to reduce the quantity of off-farm inputs, it was often the case that the most important, primary inputs had to be sourced from outside the local area. Likewise, the desire by some to sell organic produce locally was thwarted by such factors as an inadequate demand, lack of processing capacity, difficulties in adding value and competition from much larger, often national, direct marketing schemes, supermarkets and other retailers in the area who sold organic food ranges.

Figure 6.6: Whole chain diagram for an organic potato and vegetable business in south-west Wales



Results for the whole chain index showed that a majority of surveyed organic producers had some local connections, but only one was entirely 'local'. An overall whole chain index of 0.77 (comprising 0.69 for inputs and 0.84 for outputs) suggests that there was a tendency for many producers, perhaps not intentionally, to source their inputs from and sell their outputs within one particular time distance zone from the farm (but not necessarily the same distance zone for inputs and outputs). There was little real variation between the study areas but, significantly, the number of organic producers with an index value of 1.00 fell from 33 for the geographic index of dispersion (outputs), to 10 for the geographic index of dispersion (inputs) and just four for the whole chain index. So, while it was reasonably easy for producers to sell all of their organic produce within one time distance zone, it became increasingly difficult to do the same when sourcing their inputs and almost impossible when combining both outputs and inputs. The four businesses with a maximum whole chain index appeared to be relatively new and small businesses. They bought all of their inputs and sold all of their produce either locally or within one hour's travelling time from the farm. Only one business operated totally within 30 minutes of the farm (Dorset area of the DS&G area). However, the owner was previously a conventional dairy farmer who had been severely affected by the foot and mouth outbreak in 2001.

A year before, he purchased a new and small farm (12 ha) to breed organic, pedigree Aberdeen Angus stock to sell to other local organic livestock producers. This was not yet a full-time occupation and the other part of the owner's income came through acting as a feed advisor and salesman to dairy farmers.

The business that came closest to operating a 'localised' whole chain (index value of 0.91), in terms of both inputs and outputs, was the large, mixed organic farm in West Sussex that described itself as "the only completely self-sustaining organic farm in Europe" (Figure 6.5). The vast majority of inputs came from the farm itself and most of the farm's products were sold within the local area via wholesale dairy and meat channels, direct sales to butchers and the farm shop. The farm manager saw the business as "an integrated system, where the different chains complement each other" (producer, Sussex study area). In 2007, an on-farm milk processing plant was built to add value to milk through bottling and making butter and cream. In collaboration with a local brewery, the farm had also started to develop a beer (lager and bitter) chain, which the manager predicted would grow from 3% to 15% of business turnover in the next few years. The intention was to sell everything locally and, while recognising that "other local producers are a local threat, it is better to bring them in rather than compete with them" (producer, Sussex study area).

The two case studies with the lowest whole chain index, at 0.55 and 0.50 respectively, represented attempts to both connect with the local economy and also use commodity chains for significant proportions of their output (Figures 6.1 and 6.2). They were good examples of hybridised supply chains and both sourced their inputs from, and sold their products to, a range of suppliers and customers at different distances from the farm. Thus the milk producer in East Sussex sold 90% of his milk to OMSCo (42% of value) and the remaining 10% (58% of value) as raw bottled milk to 380 local customers (Figure 6.1). While sourcing 70% of his inputs from either the farm itself or locally, some of the key primary inputs had to be sourced from further afield. Likewise, the lamb and beef producer in south-west Wales (Figure 6.2) attempted to source necessary inputs from, and sell outputs within, the local area. However, local sourcing and selling were necessarily complemented by the purchase of some store cattle (a key input) from considerable distances and the selling of approximately two-thirds of beef and lamb to distant processors. Clearly entrepreneurial and keen to increase the amount of produce sold locally for philosophical reasons and to add value to his produce, this was a good example of a producer who had been confronted with numerous difficulties while attempting to establish some local processing capacity (Cambrian Organics).

Overall, the whole chain diagrams for the six selected case studies were quite different and influenced by varying factors. While for some there was a deliberate attempt to engage with the local economy and community, for others this was either not possible or desirable. In each case, the supply chain was specifically customised to satisfy both the particular circumstances of an organic farm in a specific location and the preferences of individual farmers. Thus, while the whole chain index is a

useful quantitative measure for describing and comparing organic farm businesses in different study areas, it cannot capture and explain the often complex supply chain arrangements that have evolved over time on individual farms.

6.6 Summary

The whole chain analysis highlighted a number of illustrative, rather than representative, findings and demonstrated both the complexity of supply chain dynamics and the importance of place in helping to determine the different types of marketing channels used and where products were sold and inputs sourced. A number of key findings emerged from the analysis. The first relates to the diversity of organic businesses within the overall sample. Large differences in terms of scale, farm size, farm type, entrepreneurial background, marketing channels used and selling/purchasing strategies confirmed that there was no one dominant category of organic producer.

Secondly, an increasing hybridisation of organic marketing channels was occurring in a market that was becoming more competitive and pressured by external economic forces. The type of marketing channel used was influenced by place, both in terms of where and how producers sold their outputs and purchased their inputs. Thus, while marketing cooperatives, direct marketing and abattoirs/processors were the dominant channels used, their importance varied quite significantly between the three study areas (Table 6.2). So, marketing cooperatives were easily the most dominant channel used in south-west Wales, whereas direct marketing, independent retailers and other farmers dominated sales by organic businesses in Sussex. Here, producers preferred to work more independently and tried to 'tap into' the relatively prosperous nature of the local and regional economy, and the increasing demand from wealthy consumers to buy local and/or organic food (local and organic preferably). Falling in between these two extremes was the DS&G study area, where especially abattoirs/ processors but also marketing cooperatives accounted for a majority of all produce sold, with relatively little interest in forms of direct marketing.

Thirdly, the main type(s) of marketing channels used influenced whether organic businesses tended to sell their produce locally (within 30 minutes of the farm), regionally (30-60 minutes) or nationally (over 60 minutes). Thus the dominance of marketing cooperatives in south-west Wales ensured that just over a half of all produce was sold outside the area and mainly in England, just as the preoccupation with direct marketing and local marketing channels in Sussex meant that the same proportion was sold within just 30 minutes of the farm. In contrast, in the DS&G study area there was a fairly even distribution of selling across the three time distance zones, including 30% regionally.

Fourthly, and complicating the general continuum of marketing activities from 'local' in Sussex, to 'regional' in the DS&G study area and 'national' in south-west Wales, were the patterns of input supply. Businesses in Sussex suffered from a relative dearth of local organic input supplies and often had to source important primary

inputs (e.g. feed and seed) from national sources. South-west Wales was in a similar position, but its sourcing of national supplies was also complemented by a much higher proportion being sourced locally. Again, the DS&G study area was different, obtaining the vast majority of its inputs from local/regional sources. However, one has to distinguish between intermediate (e.g. wholesalers, merchants) and primary (e.g. growers, farmers) suppliers because using a local merchant, for example, could mean that inputs were being sourced from much further afield. Putting buying and selling strategies together, the DS&G study area proved to be the more self-contained in comparison to the more national activities of south-west Wales and the local activities of Sussex. However, one has to be careful with such generalisations given the small size of the sample and because each study area demonstrated a number of important exceptions to these general patterns.

Fifthly, the survey work identified some very real challenges for direct marketing and adding value activities. Certain types of direct marketing in particular, such as farmers' markets and box schemes, were under increasing pressure and competition from large scale box schemes, supermarkets and other retailers who were exploiting the demand for local food. In a similar fashion, adding value and farm retailing were experiencing real difficulties, especially in south-west Wales where the demand for organic food was quite low and where there was a lack of local processing capacity and local skilled labour. Finally, rising costs for essential organic inputs and the economic downturn were a major concern for a number of farmers. In response, some were trying to increase their use of on-farm inputs, while a few others were thinking of reverting to conventional farming methods.

Both quantitative and qualitative methods were used to illustrate the whole chain analysis. Quantitative analysis, by means of indices of marketing concentration and geographic dispersion, allowed a description and comparison of whole chain characteristics between individual businesses and both within and between the three study areas. The indices helped to highlight a relative concentration in the use of particular marketing channels and to demonstrate the bi-polar nature of organic sales between local and national outlets. However, qualitative analysis was needed to help 'unpack' what the different quantitative results meant and to understand the complexity and hybridisation of the supply chain arrangements of individual businesses.

Chapter 7: Economic implications of organic farming

7.1 Introduction

This chapter adopts a number of approaches to examining the economic implications of organic farming. First, a benchmarking exercise is reported on, which compares organic farms of different types, sizes and locations with a set of benchmark data from a sub-sample of farms from the postal survey of producers. In addition (although not formally included in the benchmarking data), environmental aspects of organic farms, such as the existence of environmental management plans, recycling practices and energy self-sufficiency are considered. While the benchmarking exercise sets the scene, examining Simple Value Chains (SVC) of the main 'commodities' produced on organic farms, in particular cattle, lambs, cereals and milk, provides considerable additional detail of the quantity and value of organic commodities leaving the farm through various marketing channels. The chapter then moves on to consider the potential contributions that organic farming can make to the wider rural economy. Economic multiplier effects generated for the organic sector are analysed using an adapted LM3 model. This allows estimates of the local direct, indirect and induced impacts of organic farming on rural incomes and employment to be computed. The analysis also considers the potential multiplier effects of organic farms oriented towards local markets compared to those orientated more towards national markets.

7.2 Benchmarking organic farms

The benchmarking exercise was based on a subset of 199 organic farmers for which all relevant data were present. In order to explore the extent to which the 199 benchmark farms are representative of the full sample, the subset was tested for statistically significant differences in means (see Chapter 2 for details) and it was concluded that, while the benchmarking sample over-represented longer established and larger organic farms, it serves as a reasonably robust data set against which other organic farms can be compared. It was initially anticipated that environmental factors, such as the existence of environmental management plans and level of recycling, would be included in the benchmark data. However, to do so would have reduced the size of the benchmark dataset still further due to missing data. Consequently, environmental issues are discussed later in the chapter as part of the SVC analysis and do not form part of the suite of benchmark data.

The benchmarking exercise compares differences between farms on the basis of farm type and size as well as considering differences in the characteristics of organic farming in different regions. Not all tables are presented in this chapter and the interested reader should consult Appendix 5 for the relevant tables. Instead, the remainder of this section focuses on the benchmarking of farm types, although more general comments are made with respect to farm size and regional differences.

Table 7.1, representing all farms in the benchmarking sample, indicates the data used for the benchmarking exercise. It can be seen that the benchmark data is divided into

various sections, namely overall parameters, output characteristics, financial data, labour use, and marketing channels:

Overall parameters. This section indicates the number of farms in the sample, data on farm size, the area of organic land farmed and the number of enterprises. Together these variables establish the parameters of the sample.

Output characteristics. This section details the volume of outputs from organic farms. It is these variables, alongside the financial data, that form the cornerstone of SVC analysis considered later in this chapter.

Financial data. Information here is given on a per ha basis and is divided into that for the whole farm and that produced by the organic proportion of the farm.

Labour. Data on labour use on organic farms is sub-divided between actual numbers of family and non-family employed labour and FTEs per ha.

Marketing channels. The average number of marketing channels utilised is shown as the marketing concentration index value. Each marketing channel is described by the % of value sold and the value per ha associated with the relevant marketing channel. Finally, an aggregate figure is included for those channels that can be considered to reflect direct sales.

While the data presented in Table 7.1 is of interest in itself, it is far more instructive to consider the statistical differences that occur between the benchmark values for the sample, and farms of particular types, as well as variation by the size and regional location of organic farms (see Tables 7.2 to 7.7).[31]

Considering the overall parameters for farms of different types, it can be seen that the area of organically farmed land varied significantly. For example, the total area of organic land was by far the greatest (in absolute terms) on mixed farms, with a mean of 255ha compared to the average for all farms of 166ha. However, in relative terms, cattle and sheep farms have a greater proportion of land in organic production; 95% compared to an average of 88% and just 39% in the case of horticultural farms. Turning to physical output, it can be seen that dairy farms, for example, sold nearly 800,000 litres of milk, while arable farms sold 125 tonnes of cereals and 143 tonnes of vegetables. Specialist horticultural units produced slightly less vegetables and fruit, at 106 tonnes. Not surprisingly, cattle and sheep farms focused on sales of cattle and lambs. The only farm type that sells all of these outputs is the mixed category.[32]

[31] The means between farm types, size and region were analysed using the one-way ANOVA, a procedure that is used to test the hypothesis that several means are equal.

[32] This validates the procedure for cross checking variables that was conducted to ensure the correct assignment of individual farms to the farm type categories.

Table 7.1: Benchmarking data for all organic farms

All farms		**Number in sample: 199**		
Farm size:	189			
Organic Area:	166			
% under organic production:	88%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	24	Number of channels:	2	
Calves:	3	Market concentration:	0.75	
Lambs:	116			
Sheep:	7		***% sold***	***£ per ha***
Pigs:	29	Own meat box scheme:	2.7%	15
Poultry:	1,271	Own veg box scheme:	5.2%	1,131
Cereal (tonnes):	65	Farmers' market:	3.5%	321
Fruit and Vegetables (tonnes):	23	Internet sales:	0.7%	2,586
Milk (litres):	249,085	Own farm shop:	3.5%	374
Boxes:	260	Farm gate sales:	0.2%	0
Dozen eggs:	16,892	Supply coop/company veg box:	2.6%	92
		Locally owned private shops:	2.4%	48
Financial	***£ per ha***	Restaurants and private caterers:	1.3%	25
All farm sales:	6,157	Public caterers:	0.0%	0
All purchases:	4,144	Sold to another farmer:	6.5%	42
Gross margin†:	2,013	Supermarket:	6.0%	832
		Processor/abattoir:	21.4%	431
Organic Sales:	6,598	Livestock market:	2.3%	12
Purchases for organic production:	2,765	Marketing coop:	28.6%	296
Gross margin for organic production:	3,836	Wholesaler:	7.2%	124
		Packhouse:	3.1%	258
Labour	***Number***	Grain merchant:	1.6%	8
Total family labour:	2	Other channel:	1.1%	3
Total employee labour:	3			
	per ha	Direct sales only:	15.9%	4,431
Family FTEs:	0.075			
Employee FTEs:	0.125			
Total FTEs:	0.201			

†Gross margins are simply sales less purchases (excluding labour, rents, etc.). As these are not calculated accounting for all outputs values and variable costs, they should be treated as indicative.

In Tables 7.1-7.7 the financial characteristics of organic farms are divided into that of the farm as a whole and that which specifically focuses on organic sales and purchases. Horticultural farms in the benchmarking sample grew the highest value produce per ha at £37,586,[33] while cattle and sheep farms were much lower at £415

[33] Five of the 28 farms in the horticultural benchmarking sample yield a value of sales per hectare greater than the average of £37,586. Three of these were growing herbs, while another specialised in mushrooms. If the median is considered, value per hectare is lower at £4,234.

per ha. These figures reflect both differences between farming systems and the potential for adding value to produce. Differences in values for input purchases also reflect differences between farming systems.

Turning to labour use, organic dairy farms employ more family members than any other farm sector in the survey, whilst horticulture employs the least. According to the benchmarking data, arable farms employ the highest number of non-family workers closely followed by horticulture. However, it is important to note that the relatively small number of arable farms recorded in the sample includes one very large estate (nearly 900 ha), which skews the mean values for the sample. Therefore, it is more instructive to consider the number of FTE jobs per ha. This indicates that horticultural farms, as would be expected, employ the greatest number of FTEs per ha (1.61), whereas arable farms are associated with much lower labour rates, at just 0.013 FTE per ha. Cattle and sheep farms, however, provide the lowest level of employment on organic farms at 0.011 FTEs per ha.

Finally, turning to the benchmarking data for marketing channels, it can be seen that different farm types are significantly associated with different marketing concentration values. Arable, 'other' farm types (these are typically poultry) and dairy farms have the highest marketing concentration values at 0.93, 0.89 and 0.87, respectively. Mixed farms, on the other hand, have a much lower marketing concentration index value of 0.62. This reflects the broader range of produce that mixed farms raise and grow, which requires the utilisation of a variety of marketing channels for delivery to the market.

The proportion of the value of sales and the value of sales per ha associated with the different marketing channels largely reflects typical patterns that might be expected for the different types of farm being considered here. For example, dairy farms sell 63.0% of their produce, by value, through marketing co-operatives (equating to £874 per ha). For horticultural farms on the other hand, 33.5% of the value of their sales is from their own vegetable box schemes, grossing £8,031 per ha. Furthermore, horticultural farms are far more likely to sell direct to consumers, with 54.9% of sales, by value, occurring through such channels.

Detailed analysis of benchmark data on England and Wales, farm size and by region is presented in Appendices 5a, 5b and 5c. An interesting feature of the farm size analysis is the reliance on direct sales to the public by small farms of under 25 ha. Indeed, nearly 60% of the value of sales are through direct marketing channels, particularly box schemes but also via farmers' markets and own shop sales. Furthermore, these farms have the highest density of FTEs per ha at 1.046 compared to 0.201 for all farms.

In examining the benchmarking data for Wales and the English regions, the differences revealed are not unexpected. For instance, the area of organic land per farm in England is much greater, at an average of 185 ha, compared to 101 ha for Welsh organic farms. In terms of sales, only 7.9% of the value of produce from Welsh farms is sold through supermarkets compared to 21.6% in England. Greater

differences occur between the English regions.[34] For instance, in the Eastern region only 46.0% of the land on farms in the sample is registered organic compared to over 90% in the North East, North West, South West and the West Midlands. In terms of marketing channels and market concentration, little difference exists between the regions with the exception that in the East Midlands and the Eastern region the majority of sales are through packhouses. Finally, while the marketing concentration index for the North East is 0.63, suggesting a more diverse marketing pattern, many regions such as the South East (0.76), South West (0.77) and North West (0.72) lie close to the English average (0.75).

This brief exploration of some of the benchmarking data demonstrates the distinctive character of each of the organic farming sectors that have been explored in this research. The data presented here provide a baseline that can be used to compare against individual farms and their performance. Having established benchmark values for a subsample of farms, this analysis can now be built on to develop simple value chains.

[34] Benchmarking data for the English regions should be interpreted with care as sample numbers are low for many regions.

Table 7.2: Benchmarking data for dairy farms

Farm type: Dairy		**Number in sample: 51**	
Farm size:	167		
Organic Area:	155		
% under organic production:	93%		
Number of enterprises:	2		

Output	***per farm***
Cattle:	17
Calves:	4
Lambs:	13
Sheep:	0
Pigs:	0
Poultry:	0
Cereal (tonnes):	2
Fruit and Vegetables (tonnes):	2
Milk (litres):	789,569
Boxes:	0
Dozen eggs:	147

Financial	***£ per ha***
All farm sales:	1,457
All purchases:	837
Gross margin:	620
Organic Sales:	1,415
Purchases for organic production:	731
Gross margin for organic production:	684

Labour	***Number***
Total family labour:	2
Total employee labour:	2
	per ha
Family FTEs:	0.019
Total employee FTEs:	0.010
FTEs:	0.029

Marketing Channels		
Number of channels:	2	
Market concentration:	0.87	
	% sold	***£ per ha***
Own meat box scheme:	0.1%	1
Own veg box scheme:	0.0%	0
Farmers' market:	2.9%	5
Internet sales:	0.0%	0
Own farm shop:	0.2%	0
Farm gate sales:	0.0%	0
Supply coop/company veg box:	0.4%	6
Locally owned private shops:	0.8%	2
Restaurants and private caterers:	1.1%	33
Public caterers:	0.0%	0
Sold to another farmer:	2.1%	37
Supermarket:	2.6%	51
Processor/abattoir:	21.3%	333
Livestock market:	1.3%	17
Marketing coop:	63.0%	888
Wholesaler:	3.9%	38
Packhouse:	0.0%	0
Grain merchant:	0.0%	0
Other channel:	0.2%	3
Direct sales only:	3.3%	6

Table 7.3: Benchmarking data for cattle and sheep farms

Farm type: Cattle & Sheep		**Number in sample: 52**		
Farm size:	199			
Organic Area:	188			
% under organic production:	95%			
Number of enterprises:	2			
Output	***per farm***	**Marketing Channels**		
Cattle:	35	Number of channels:	2	
Calves:	3	Market concentration:	0.71	
Lambs:	245			
Sheep:	22		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	7.1%	21
Poultry:	0	Own veg box scheme:	0.2%	0
Cereal (tonnes):	8	Farmers' market:	2.9%	13
Fruit and Vegetables (tonnes):	0	Internet sales:	0.1%	0
Milk (litres):	0	Own farm shop:	4.2%	54
Boxes:	1	Farm gate sales:	0.7%	2
Dozen eggs:	28	Supply coop/company veg box:	0.0%	0
		Locally owned private shops:	5.0%	15
Financial	***£ per ha***	Restaurants and private caterers:	0.8%	7
All farm sales:	414	Public caterers:	0.0%	0
All purchases:	282	Sold to another farmer:	11.5%	35
Gross margin:	132	Supermarket:	9.9%	21
		Processor/abattoir:	27.8%	119
Organic Sales:	415	Livestock market:	4.5%	12
Purchases for organic production:	186	Marketing coop:	16.0%	55
Gross margin for organic production:	229	Wholesaler:	5.5%	52
		Packhouse:	0.1%	0
Labour	***Number***	Grain merchant:	0.0%	0
Total family labour:	2	Other channel:	3.8%	8
Total employee labour:	1			
	per ha	Direct sales only:	15.2%	91
Family FTEs:	0.029			
Total employee FTEs:	0.007			
Total FTEs:	0.035			

Table 7.4: Benchmarking data for arable farms

Farm type: Arable		**Number in sample: 7**		
Farm size:	216			
Organic Area:	134			
% under organic production:	62%			
Number of enterprises:	2			
Output	***per farm***	**Marketing Channels**		
Cattle:	1	Number of channels:	2	
Calves:	0	Market concentration:	0.93	
Lambs:	0			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	0.0%	0
Poultry:	0	Own veg box scheme:	0.0%	0
Cereal (tonnes):	125	Farmers' market:	0.0%	0
Fruit and Vegetables (tonnes):	143	Internet sales:	0.0%	0
Milk (litres):	0	Own farm shop:	0.0%	0
Boxes:	0	Farm gate sales:	0.0%	0
Dozen eggs:	0	Supply coop/company veg box:	0.7%	15
		Locally owned private shops:	0.3%	6
Financial	***£ per ha***	Restaurants and private caterers:	0.0%	0
All farm sales:	601	Public caterers:	0.0%	0
All purchases:	285	Sold to another farmer:	16.4%	10
Gross margin:	316	Supermarket:	0.0%	0
		Processor/abattoir:	0.0%	0
Organic Sales:	479	Livestock market:	0.0%	0
Purchases for organic production:	218	Marketing coop:	28.6%	81
Gross margin for organic production:	261	Wholesaler:	25.7%	72
		Packhouse:	13.3%	274
Labour	***Number***	Grain merchant:	14.3%	20
Total family labour:	2	Other channel:	0.7%	2
Total employee labour:	8			
	per ha	Direct sales only:	0.0%	0
Family FTEs:	0.011			
Total employee FTEs:	0.007			
Total FTEs:	0.018			

Table 7.5: Benchmarking data for mixed farms

Farm type: Mixed		**Number in sample: 54**		
Farm size:	290			
Organic Area:	255			
% under organic production:	88%			
Number of enterprises:	4			
Output	***per farm***	**Marketing Channels**		
Cattle:	39	Number of channels:	3	
Calves:	4	Market concentration:	0.62	
Lambs:	180			
Sheep:	5		***% sold***	***£ per ha***
Pigs:	106	Own meat box scheme:	2.9%	30
Poultry:	2,830	Own veg box scheme:	1.6%	13
Cereal (tonnes):	215	Farmers' market:	1.7%	15
Fruit and Vegetables (tonnes):	8	Internet sales:	0.7%	6
Milk (litres):	172,222	Own farm shop:	5.2%	98
Boxes:	61	Farm gate sales:	0.0%	0
Dozen eggs:	12,591	Supply coop/company veg box:	5.0%	51
		Locally owned private shops:	2.3%	28
Financial	***£ per ha***	Restaurants and private caterers:	2.6%	27
All farm sales:	1,261	Public caterers:	0.0%	0
All purchases:	931	Sold to another farmer:	8.2%	75
Gross margin:	330	Supermarket:	2.5%	143
		Processor/abattoir:	22.7%	328
Organic Sales:	1,256	Livestock market:	3.0%	16
Purchases for organic production:	808	Marketing coop:	25.9%	155
Gross margin for organic production:	457	Wholesaler:	9.8%	186
		Packhouse:	1.5%	62
Labour	***Number***	Grain merchant:	4.2%	28
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	4			
	per ha	Direct sales only:	12.1%	162
Family FTEs:	0.018			
Total employee FTEs:	0.011			
Total FTEs:	0.029			

Table 7.6: Benchmarking data for horticulture

Farm type: Horticulture		**Number in sample: 28**		
Farm size:	41			
Organic Area:	16			
% under organic production:	39%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	0	Number of channels:	2	
Calves:	0	Market concentration:	0.75	
Lambs:	0			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	0.2%	5
Poultry:	4	Own veg box scheme:	33.5%	8,011
Cereal (tonnes):	0	Farmers' market:	11.1%	2,222
Fruit and Vegetables (tonnes):	106	Internet sales:	3.6%	18,367
Milk (litres):	0	Own farm shop:	6.5%	2,318
Boxes:	1,727	Farm gate sales:	0.0%	0
Dozen eggs:	36	Supply coop/company veg box:	7.2%	433
		Locally owned private shops:	0.6%	19
Financial	***£ per ha***	Restaurants and private caterers:	0.9%	50
All farm sales:	35,647	Public caterers:	0.0%	0
All purchases:	24,422	Sold to another farmer:	0.7%	19
Gross margin:	11,225	Supermarket:	10.4%	5,185
		Processor/abattoir:	7.0%	37
Organic Sales:	37,586	Livestock market:	0.0%	0
Purchases for organic production:	13,977	Marketing coop:	1.8%	66
Gross margin for organic production:	23,609	Wholesaler:	8.4%	338
		Packhouse:	8.3%	515
Labour	***Number***	Grain merchant:	0.0%	0
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	6			
	per ha	Direct sales only:	54.9%	30,923
Family FTEs:	0.385			
Total employee FTEs:	0.827			
Total FTEs:	1.212			

Table 7.7: Benchmarking data for other farm types

Farm type: Other		**Number in sample: 7**		
Farm size:	58			
Organic Area:	36			
% under organic production:	62%			
Number of enterprises:	2			
Output	***per farm***	**Marketing Channels**		
Cattle:	4	Number of channels:	2	
Calves:	0	Market concentration:	0.89	
Lambs:	0			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	0.0%	0
Poultry:	14,286	Own veg box scheme:	0.0%	0
Cereal (tonnes):	0	Farmers' market:	0.0%	0
Fruit and Vegetables (tonnes):	0	Internet sales:	0.0%	0
Milk (litres):	0	Own farm shop:	1.4%	212
Boxes:	0	Farm gate sales:	0.0%	0
Dozen eggs:	381,667	Supply coop/company veg box:	2.9%	424
		Locally owned private shops:	6.4%	953
Financial	***£ per ha***	Restaurants and private caterers:	0.0%	0
All farm sales:	8,435	Public caterers:	0.0%	0
All purchases:	4,474	Sold to another farmer:	0.0%	0
Gross margin:	3,961	Supermarket:	17.6%	1,292
		Processor/abattoir:	42.3%	6,267
Organic Sales:	13,675	Livestock market:	0.3%	16
Purchases for organic production:	9,532	Marketing coop:	0.6%	6
Gross margin for organic production:	4,143	Wholesaler:	0.0%	0
		Packhouse:	28.6%	4,505
Labour	***Number***	Grain merchant:	0.0%	0
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	2			
	per ha	Direct sales only:	1.4%	212
Family FTEs:	0.105			
Total employee FTEs:	0.040			
Total FTEs:	0.145			

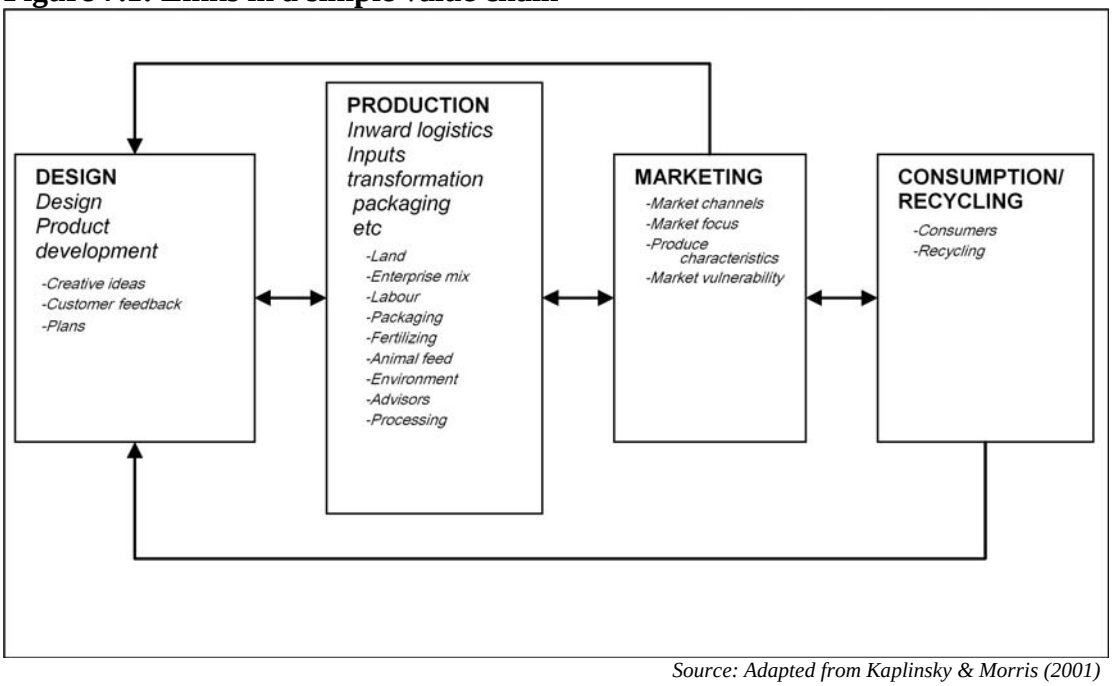
7.3 Value chain analysis

There are several competing concepts regarding value chains, but this report follows the approach developed by Kaplinsky and Morris (2001): value chains emphasise activities that are required to bring a product or service from conception, through different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and finally to disposal after use. This enables the term 'chain' to be understood in its broadest sense rather than as a linear construct (Roduner 2004). In its simplest form, as depicted in

Figure 7.1, production *per se*, is only one of a number of value added links that are often two-way in nature (Kaplinsky and Morris, 2001). For example, the design process is not only influenced by production and marketing but is, in turn, constrained by links further down the chain.

The analysis presented here will focus on the link between marketing and production, detailing volumes that are both produced and sold through particular marketing channels.[35] In addition, unit prices are provided for cattle sales, lambs, milk, cereal and horticultural produce for each relevant channel. Other aspects of the SVC, for example, the decisions behind using particular market channels, are examined, as are the services that farmers engage with in operating their business.

Figure 7.1: Links in a simple value chain



Source: Adapted from Kaplinsky & Morris (2001)

7.3.1 Simple value chains: sources of creative ideas

Working from left to right in Figure 7.1, the design box considers sources that farmers draw on to develop business ideas. Table 7.8 demonstrates the importance of family, other organic farmers and, to a lesser extent, the farming press and organic certification bodies when seeking information to develop ideas to inform decision-making. It is clear that certain sources of advice are more likely to be associated with particular value chains. For instance, farms selling milk are statistically more likely to be associated with seeking advice from paid consultants and discussion groups. Similarly, farms selling cereals are also more likely to seek information from paid consultants. However, farms that sell lambs are less likely to seek advice from this source. Around one-fifth of farmers in the SVC subset use the internet as a source of advice, although only 3.0% use web-based discussion forums. Finally, the number of farmers that do not seek any advice to develop their ideas is less than 5%.

[35] The analysis is based on a subset of 210 farms for which the unit costs could be calculated. The means of this subset were tested for significant differences from those excluded. The data set was found to be robust (see Methodology chapter for more details).

Table 7.8: The association between sources of advice sought to develop ideas and value chains

Source of advice	Value chain					All chains%
	Cattle %	Lamb %	Milk %	Cereals %	Vegetables & Fruit %	
Family	51.4	59.3	59.6	55.9	60.0	57.1
Other organic farmers	55.6^{†,1}	51.9	73.1†	70.6	70.0	63.1
Friends (not farmers)	27.8^{*,1}	29.6	28.8	38.2	46.7	36.5
Paid consultants	22.2	11.1^{†,1}	38.5*	50.0**	20.0	25.1
Farming press	47.2	40.7	53.8	44.1	40.0	46.3
Discussion groups	36.1	14.8^{*,1}	51.9**	38.2	30.0	33.0
Internet pages	18.1	22.2	21.2	17.6	16.7	21.2
Internet discussion forums	2.8	3.7	5.8	0.0	0.0	3.0
Organic certification bodies	44.4^{†,1}	37.0^{†,1}	46.2	44.1	60.0	52.2
Other sources	5.6	14.8†	1.9	5.9	13.3	6.9
No advice is sought	4.2	3.7	3.8	2.9	0.0	3.9

***P<0.001; **P<0.01; *P<0.05; †P<0.1 indicates a statistical association between participation in value chain and source of advice.

[1]Farmers using these value chains were statistically less likely to seek advice from a particular source.

7.3.2 Simple value chains: production

There are potentially many ways farmers may combine resources in the production process. In terms of the value chains explored in this chapter the following influences have been considered: the use of animal feed, environmental plans, the use of soil improvers, externally employed services and added value activities.

The use of animal feed is confined to the SVCs of cattle, lambs and milk. Over 90% of animal feeds (such as silage, hay, haylage and forage root crops, was home grown). On the other hand, as might be expected, 86% of concentrate feed was purchased. Figures 7.2 to 7.4 compare the aggregate percentage of home grown animal feed with that bought from other farmers or merchants. From these, it can be seen that farms which sell cattle used the most home grown feed (90.6%) whereas milk producers use less. This is likely to reflect the different intensities of the farming systems. In all three value chains, purchases of animal feed tended to be from merchants (7.8% for the cattle value chain, 14.6% for the lamb value chain, and 17.6% for the milk value chain).

In order to boost the production of forage and crops, soil improvers are added to the land. Table 7.9 shows that farmyard manure (FYM) was the most important source for cattle, lamb and milk producers, and to a lesser extent for cereals producers. Green manures however, were more important for cereal and vegetable growers. Vegetable growers were also more associated with other forms of soil improver such as potash, municipal green wastes or homemade composts.

The majority of farmers had some form of management plan in place such as for manure, soil and nutrient management as well as for wildlife (see Figures 7.2 to 7.6). Manure management plans were clearly associated with milk and livestock value chains. For instance, 98.0% of farms selling milk and 90.0% of farms selling cattle had a manure management plan. Farms involved in the milk and cereal value chains

were more likely to have soil and nutrient management plans. The need for these plans perhaps reflects the technical requirements to ensure that these environmental resources are managed effectively so not to impair production.

Table 7.9: The association between the addition of soil improvers to boost the production of forage and crops and value chains

Soil improvers	Value chain					All chains%
	Cattle %	Lamb %	Milk %	Cereals %	Vegetables & Fruit %	
Own FYM	97.2***	100.0	100.0***	76.5	48.1	84.3
Another farm's FYM	16.9	4.2	7.5^{†,1}	26.5†	37.0	17.3
Organic fertilizer	14.1^{†,1}	12.5	24.5	14.7	25.9	19.9
Green manures	23.9^{*,1}	20.8^{†,1}	20.8^{*,1}	55.9*	77.9	35.1
Other improver	15.5	8.3	3.8^{**,1}	20.6	40.7	16.2

***P<0.001; **P<0.01; *P<0.05; †P<0.1 indicates a statistical association between participation in value chain and use of soil improver.

[1]Farmers using these value chains were statistically less likely to add particular soil improvers to their land.

The role of various service providers in the SVCs is shown in Table 7.10. This reveals a distinctive pattern of services associated with particular value chains. The cattle SVC was particularly associated with the use of conventional vets, livestock hauliers and agricultural contractors. The milk value chain shares many of the same services but was also associated with the services of organic consultants, agricultural engineers (to repair and maintain machinery) and feed advisors. The cereal SVC, on the other hand, was associated with the use of agronomists, as is the vegetable and fruit SVC. Given that farmers in different value chains may have enterprises in other chains, for example a farmer producing both cattle and cereals, it is not surprising that cereal and vegetable growers used services more associated with livestock producers, such as the 58.8% of cereal growers that use livestock hauliers.

Turning to value added activity, adding value to production through processing, retailing, packaging or distributing was clearly associated with the vegetable and fruit value chain (see Table 7.11). Indeed, the cattle, lamb and milk chains were statistically more likely *not* to be associated with adding value. The packaging of vegetable and fruit was a particularly common activity with 45.2% of farms in this value chain engaged packaging.

Table 7.10: The association between the use of service providers and value chains

Service providers	Value chain					All chains%
	Cattle %	Lamb %	Milk %	Cereals %	Vegetables & Fruit %	
Accountant	84.7	81.5	94.1†	91.2	80.0	86
Financial advisor (not accountant)	9.7	7.4	11.8	5.9	8.0	8.3
Organic consultant	15.3	3.7^{†,1}	29.4**	26.5†	28.0	16.1
Agronomist	8.3	3.7	5.9	23.5*	32.0	11.9
Agricultural contractors	77.8*	37.0^{**,1}	86.3***	82.4*	52.0	65.3
Machinery maintenance/repair	61.1	51.9	72.5*	67.6	48.0	58.0
Feed advisor	23.6	14.8	54.9***	23.5	12.0	24.9
Vet (conventional)	84.7**	92.6*	92.3***	70.6	24.0^{**,1}	71.5
Vet (homeopathic)	11.1	11.1	21.6	20.6	8.0	16.6
Livestock hauliers	59.7**	33.3	66.7***	58.8	24.0^{*,1}	45.6
Other service	0.0	3.7	2.0	0.0	4.0	1.6

***P<0.001; **P<0.01; *P<0.05; †P<0.1 indicates a statistical association between participation in value chain and service provider.

[1]Farmers using these value chains were statistically less likely to use services from a particular provider.

Table 7.11: The association between the adding value to production and value chains

Value added activity	Value chain					All chains%
	Cattle %	Lamb %	Milk %	Cereals %	Vegetables & Fruit %	
Adds value	21.6^{†,1}	11.5^{*1,}	9.6^{***1,}	27.3	48.6*	29.5
Processing	5.4	0.0	1.9^{*,1}	9.1	9.7	9.7
Retailing	8.1	0.0	5.8^{†,1}	15.2	12.9	12.6
Packaging	10.8^{*,1}	7.7	3.8^{***,1}	12.1	45.2***	19.3
Distribution	4.1^{*,1}	11.5	3.8^{†,1}	3.0	9.7	11.1

***P<0.001; **P<0.01; *P<0.05; †P<0.1 indicates a statistical association between participation in value chain and value adding activity.

[1]Farmers using these value chains were statistically less likely to add value to their produce.

7.3.3 Simple value chains: marketing

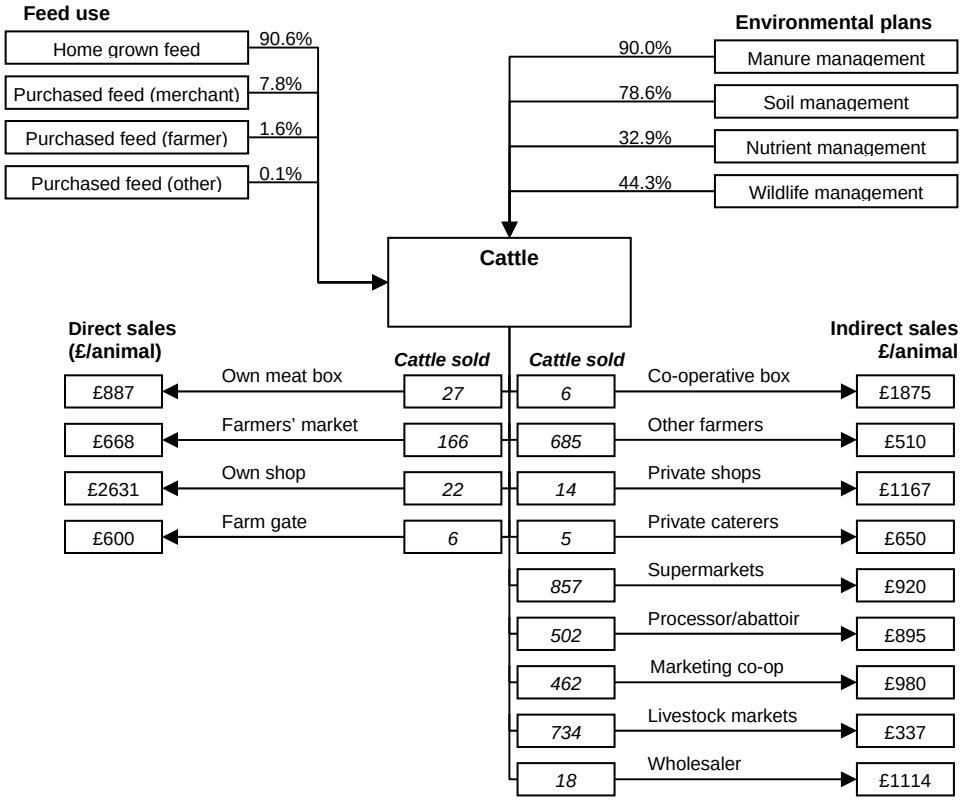
The marketing section of the SVC considers the unit prices associated with different marketing channels. In all, 279 individual unit prices have been calculated for the five value chains of cattle, lambs, milk, cereals and vegetables and fruit[36] (see Figures 7.2 to 7.5).

The total revenue in the cattle value chain illustrated by Figure 7.2 was £2.5million which accrued from the sale of 3,504 cattle. However, unit prices and volumes differ considerably between marketing channels. For instance, sales via a farm's own shop commanded a unit price of £668 but were associated with the sale of only 22 animals a year. Conversely, many more cattle were sold through livestock markets but the unit price was much lower at £337. Clearly, from the information collected in the postal survey, it is not possible to know the type and condition of the cattle sold (or

[36] This excludes those in the value chains not explicitly reported here such as pigs and poultry, juices, tonnes of meat and boxes sales. In total 373 unit prices were calculated but for brevity, only the five most important in terms of the remit of this project are commented up on.

butchered when selling direct) and while Figure 7.2 is indicative of the values that each channel commands, it is likely that much variation will exist within channels.

Figure 7.2: Simple value chain of organic cattle production and sales



The value chain for lamb is illustrated in Figure 7.3. The total number of lambs sold was 8,586, with a total value of approximately £0.5 million. It is interesting to note the relative uniformity of lamb prices in the indirect marketing channels. With the exception of marketing cooperatives, the price tended to be around £60 dropping to £46 for processors and abattoirs. However, own meat box sales command a greater value of £125 per lamb, although few lambs were sold through this channel.

The total revenue associated with the milk value chain illustrated by Figure 7.4 was approximately £16.4 million, generated from the sale of nearly 50 million litres of milk. Given that milk is a bulk commodity, fewer marketing channels were recorded in this value chain. In terms of volume, nearly 90% of milk was sold to a processor or marketing cooperative, the average unit prices for which were 30.7 pence per litre (ppl) and 33.3ppl respectively. Interestingly, one farm was processing its milk to produce cream. This sold eight tonnes of cream to private caterers with a unit price of £15,000 per tonne. This equates to £1.50 per 100 grams.

Figure 7.3: Simple value chain of organic lamb production and sales

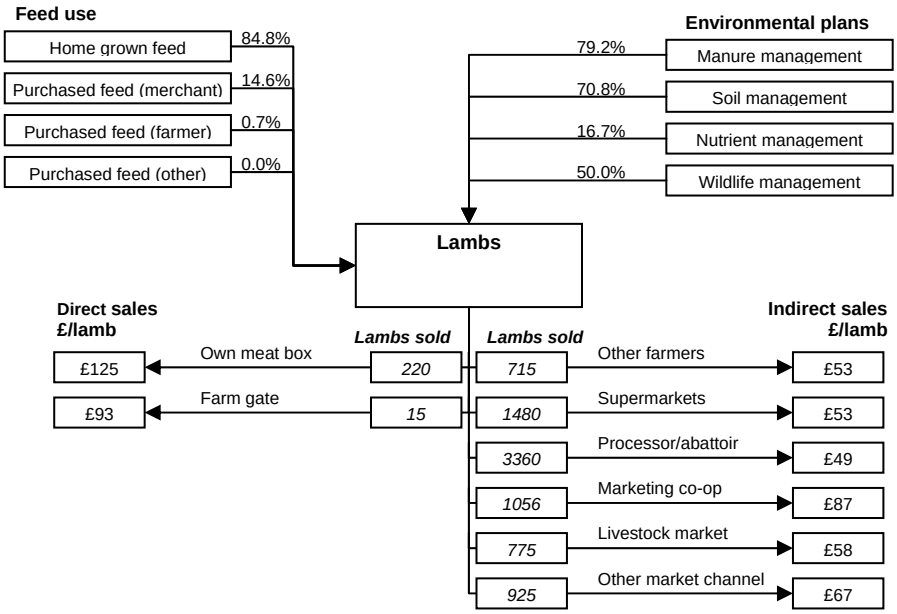
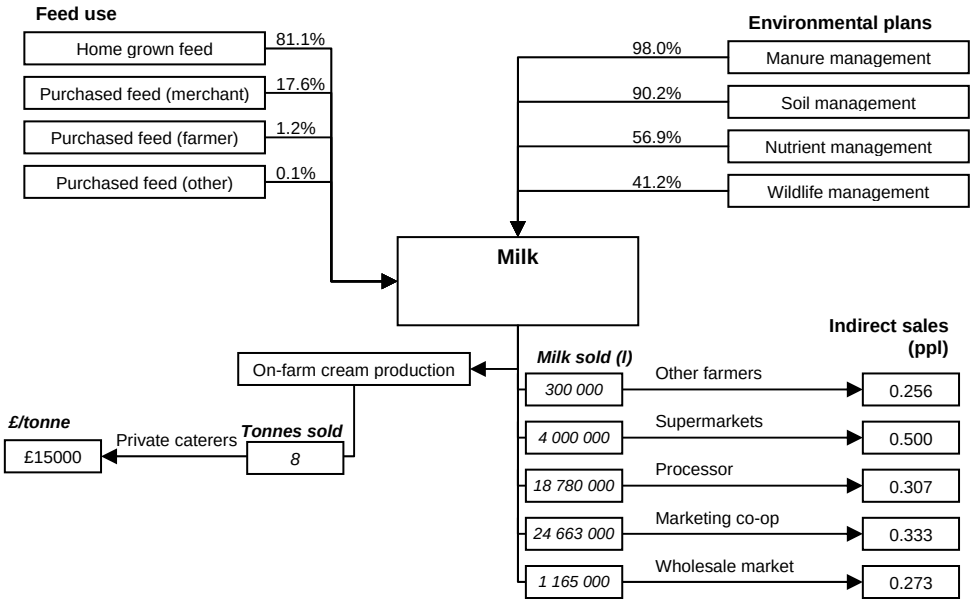


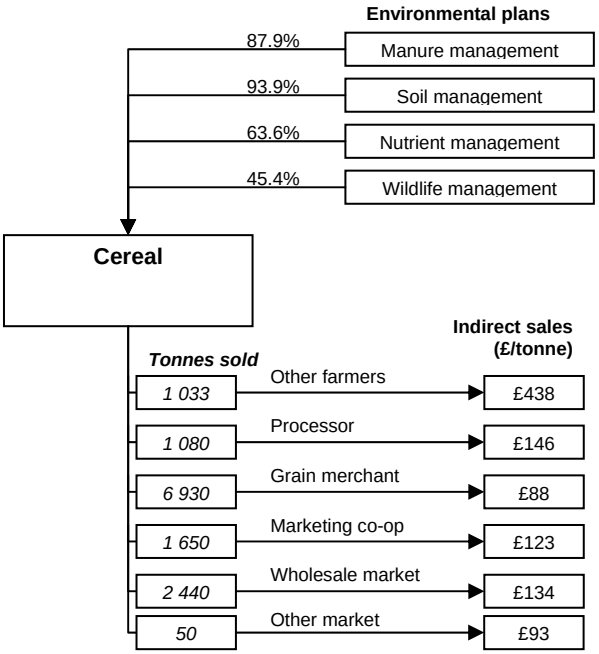
Figure 7.4: Simple value chain of organic milk production and sales



In the cereal value chain (see Figure 7.5) all sales are indirect. A total of 13,183 tonnes were sold through six marketing channels, accruing an aggregate value of just over £17.5million. Over half of the cereal (52.6%) was sold to grain merchants, despite this channel having the lowest unit price. On the other hand, the highest unit price occurred through sales to other farmers.[37]

[37] It is likely that the unit price for cereals to other farmers is skewed due to one farmer selling a particularly high value grain.

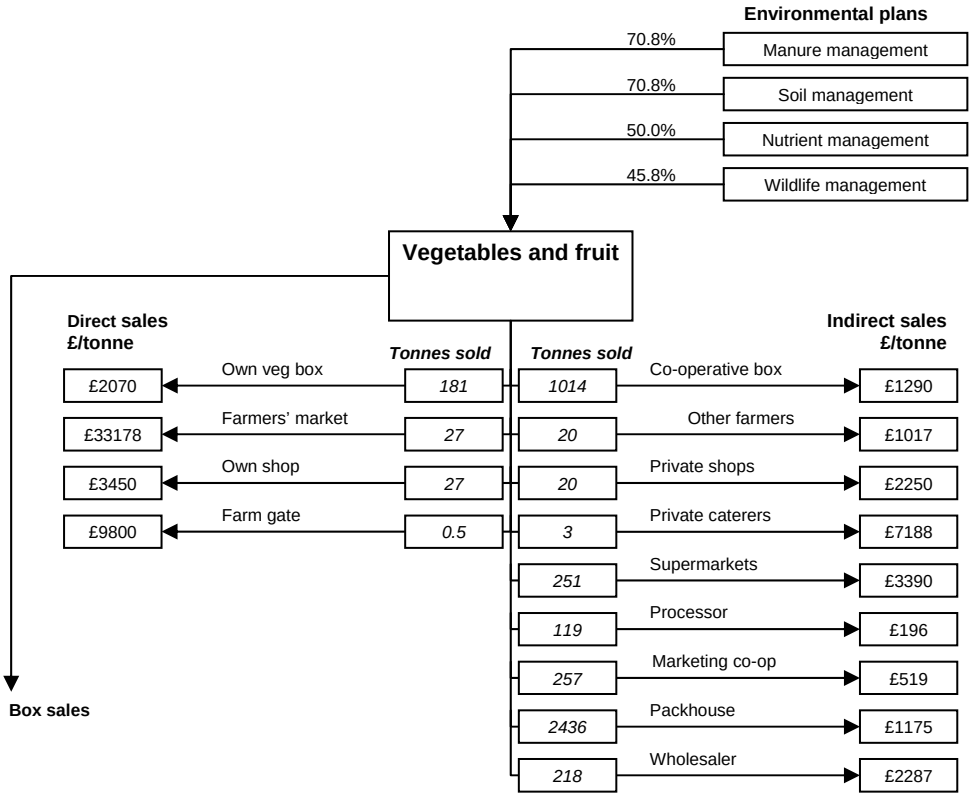
Figure 7.5: Simple value chain of organic cereal production and sales



The final SVC illustrated here is that of vegetables and fruit (see Figure 7.6). Unit prices have been calculated for four marketing channels that are direct to end consumers and nine that are indirect. Ideally individual value chains are needed for each separate crop, given the range of different vegetables and fruits sold (i.e. from apples to herbs to salads to cauliflowers). Therefore, the unit prices reflected in Figure 7.6 are likely to reflect to a greater or lesser extent differences between particular crops that are sold via particular channels.

In total 4,573 tonnes of vegetables were sold, generating an aggregate revenue of approximately £13.7million. It is interesting to note the difference in the marketing channels of this value chain. For instance, over half of vegetable and fruit sales were through packhouses (51.5%), while 21.4% were sold to co-operative or company run box schemes. Only 3.8% was sold through farmers own box scheme. However, as Figure 7.6 indicates, sales of vegetables and fruit were also recorded as box sales. Indeed, just over 10,000 box sales were recorded, 64.6% of which were sold through a box scheme owned by the farm. The average price of these boxes was £8.60.

Figure 7.6: Simple value chain of organic vegetable and fruit production and sales



7.3.4 Simple value chains: recycling and consumption

Customers of the vegetables and fruit value chain were most likely to be engaged in recycling resources back to the farm. Indeed, 67.9% of producers in the vegetable value chain said that they had some form of customer recycling facility in place. This was in stark contrast to 5.9% of producers in the milk value chain. Clearly, there is more scope for customer recycling in some value chains over others.

Farmers were asked whether they recycle waste resources on-farm, off-farm or not at all. These waste resources included cardboard, metal, wood, tyres, oil, plastics, slurry and manure, crop residues and water. In terms of on-farm recycling, dairy farms were particularly associated with recycling tyres (probably for use on silage clamps) and waste water, which can be sprayed on to fields. Indeed, 97.9% of producers in the milk value chain recycled their waste water. In the vegetable value chain, 45.8% of producers were associated with recycling cardboard on-farm. Clearly, some waste resources, such as crop residues, slurries and manures, and waste water are more easily recycled on-farm with over 90% in most cases being recycled back into the production process. Other resources however, such as oils, metal, plastics and tyres (with the exception of farmers in the milk value chain, although 46.3% of these also recycled them off-farm) are generally recycled off-farm by most producers in the different value chains. Indeed, most farmers were involved in some form of recycling with only between 10 and 15% not engaging in such activity. There are exceptions though, particularly for more difficult to use waste resources such as tyres and oil.

For example, 34.1% of cattle producers do not recycle tyres, while 20.0% of cereal producers do not recycle oil.

7.4 The LM3 modelling exercise

The method used here for estimating local economic impacts of the organic farming sector is an adapted LM3 model. This is a simplified version of Keynes' original multiplier model, deriving income and employment multipliers and effects from the first three rounds of transaction in the economy. Despite its usefulness as a tool for estimating local multiplier effects, it is important to acknowledge that it serves only as an *indicator* and that there is the potential for inaccuracy at various stages of its estimation. The reader is directed to Chapter 2, section 2.5.2 for further information about the limitations of the modelling presented here, all of which should be borne in mind when interpreting the findings.

7.4.1 Estimates of income and employment effects from the aggregate LM3 models

The headline findings are the two sets of income and employment multipliers for the 30 minute and 60 minute travel times respectively (see Table 7.12), which are based upon the spatial patterns of farm, employee and supplier expenditure and are thus constant for both the aggregate and rural development models. The derived coefficients indicate that, for every £1 of income, organic farms in England and Wales have the ability to generate a further 97p through indirect and induced effects within a 30 minute travel time of the farm, and a further £1.62 within a 60 minute travel time. Similarly, for every FTE job created on organic farms, a further 0.35 FTEs and 0.46 FTEs will be created through indirect and induced effects within 30 minutes and 60 minutes of the farm respectively. Put another way, an organic farm will indirectly generate 1 additional FTE job within a 30 minute travel time for every 2.9 FTEs created on the farm, and an additional FTE within a 60 minute travel time for every 2.2 on-farm FTEs.

Across the three study areas (southwest Wales, Sussex, and Devon, Somerset and Gloucestershire (DS&G) employment multipliers are fairly constant with the exception of the 60 minute employment multiplier for the DS&G study area, which is 1.57 compared to a mean of 1.46 for England and Wales as a whole. This reflects the fact that expenditure on goods and services by suppliers is considerably more self-contained in the 60 minute boundary compared to that in the 30 minute. Organic suppliers were found to source only 1% of supplies within 30 minutes of the business but 26% within 60 minutes, in turn generating a greater proportion of FTE jobs through indirect and induced effects. This also helps to explain the above average income multiplier of 2.89 for the 60 minute boundary connected to the study region, and the relatively low income multiplier of 2.22 for south-west Wales where suppliers were found to source only 9% of inputs from within the 60 minute travel time.

At 2.21, the 30 minute income multiplier for the Sussex study area is considerably higher than the average for the three study areas. Examining the data further reveals that this is also largely due to the sourcing patterns of suppliers (i.e. third and

subsequent round impacts) as opposed to the farms themselves. On average, suppliers in the study area were found to source 18% of goods and services within the 30 minute travel time, compared to only 3% for suppliers in south-west Wales.

Table 7.12: LM 3 Aggregate LM3 Models (Indicative estimates) LM 3 Aggregate LM3 Models (Indicative estimates†)

Study area	**30 Minute drive time**		**30 Minute drive time**	
	Income multiplier	**Employment multiplier**	**Total income generated £m**	**Total jobs supported (FTEs)**
Sussex	2.21	1.37	121.8	1,334
DS&G study area	1.88	1.34	300.3	3,795
South-West Wales	1.86	1.34	162.3	2,073
All study area farms	1.97	1.35	904.5	10,961
Study area	**60 Minute drive time**		**60 Minute drive time**	
	Income multiplier	**Employment multiplier**	**Total income generated £m**	**Total jobs supported (FTEs)**
Sussex	2.60	1.44	143.7	1,406
DS&G study area	2.89	1.57	461.7	4,452
South-West Wales	2.22	1.42	193.7	2,192
All study area farms	2.62	1.46	1,201.5	11,855

†Using data from the producer survey: mean farm turnover from organic sales: £135,605 (all study areas); mean FTEs associated with farms involved in 100% organic production is 2.78 (all study areas). Reduced to 2.40 to help account for potential displacement effects in the local labour market (1.54 non family FTEs reduced by 25% to 1.16). And from the Defra database: Number of organic farm holdings in Defra database (reduced by 5% to help factor out non-farm holdings such as educational and research establishments): England and Wales: 3379; South East region (including London): 407; South West region: 1180; Wales: 644.

The relative differences between the 60 minute income multipliers for the DS&G study area and south-west Wales can also be attributed to the differences between patterns of farm business and household expenditure, with the DS&G study area exhibiting a more self-contained local economy for the organic sector when measured in terms of a 60 minute travel time from the farm. Indirect effects arising through farm expenditure on inputs amount to 76% of direct effects in the DS&G study area compared to only 66% in south-west Wales. The income effect is then exacerbated by patterns of consumption expenditure which yield considerably greater levels of third and subsequent rounds of expenditure through induced effects in the DS&G study area compared to south-west Wales, simply because farm (and farm employee) households shop more locally in the former. In fact, at both levels of the local economy studied, consumption expenditure was found to be less self-contained in south-west Wales than in the other two study areas, with the two local economies accounting for 76% and 88% of household expenditure compared to 82% and 93% respectively for the three study areas combined.[38] Of course, the fact that a significant proportion of household shopping is likely to be carried out in supermarkets, thus leading to potentially greater leakages of income further down the chain, needs to be borne in mind when interpreting these findings. In this way,

[38] Consumption expenditure patterns, and thus estimates of induced effects, may also be skewed in this case by the fact that the vast majority of household data was derived from farmers only. Farm employees may well have exhibited less spatially proximate expenditure patterns, although the vast majority were found to reside within a 30 minute drive time of the farm.

estimates of subsequent expenditure through induced effects may be artificially inflated by the model; the greater retention of consumption expenditure in the two English study areas may be due to a greater density of supermarkets which will ultimately lead to higher income leakage through patterns of national and international sourcing.

7.4.2 Estimates of income and employment effects from the LM3 rural development models

Table 7.13 provides estimates of local income and employment generated by sales to non-local markets only, in each of the three study areas. As opposed to all-farm income, these estimates are based only on income derived from outside the 30 minute and 60 minute drive times respectively and therefore have more relevance in terms of the role of organic farming in rural development. Income and employment multipliers, which are derived from the constant patterns of sourcing by farms, suppliers and consumers, remain the same as those in Table 7.12.

For England and Wales as a whole it can be seen that the organic sector generates a total of £515.6m and 6,248 FTE jobs through direct, indirect and induced effects when externally derived (or export) income is considered within a 30 minute travel time of the farm. Examining the data further reveals that 50% of this income and 73% of the FTE jobs are derived through direct effects, indicating that, as a driver of rural development the organic farming sector is fairly efficient at obtaining external income through non-local marketing, and generating further income through local sourcing and employment. Indeed, with a mean 97% of employees residing in the 30 minute travel time, and 11% of total income generated through third and subsequent rounds of consumption expenditure (induced effects), the importance of organic agriculture as a rural employer is also reinforced.

Table 7.13: LM3 'Rural Development' LM3 models (Indicative estimates)

Study area	**30 Minute drive time**		**60 Minute drive time**	
	Additional income generated (£m)	**Additional jobs supported (FTEs)**	**Additional income generated (£m)**	**Additional jobs supported (FTEs)**
Sussex	48.7	534	44.5	436
DS&G study area	186.2	2,353	147.7	1,425
South-West Wales	108.8	1,389	104.6	1,184
All study area farms	515.6	6,248	480.6	4,742
Income source				
Direct from consumers	35.3	428	36.1	356
Retailers	15.9	193	15.4	152
Wholesalers	147.7	1,790	143.7	1,418
Processors	241.1	2,922	204.9	2,021
Caterers	11.3	137	0.0	0.0
Public sector organisations	16.8	204	18.0	178

Income and employment estimates for the 60 minute travel time are useful both as an indicator of relative self-containment of the organic sector and of the relationship

between ‘local’ and ‘national’ markets, with the majority of income being drawn from outside this boundary, indicating ties to the latter. The first point to note is that gross income and employment effects at this level are necessarily smaller; that is because a lesser proportion of total farm income is derived from outside the 60 minute drive time. The difference is partially compensated for by the fact that income and employment multipliers are higher (see Table 7.13) for the 60 minute travel time because self-containment at this wider geographical level is greater. Through sales to national markets, organic farms in England and Wales are shown to generate a total of £480.6m through direct, indirect and induced effects and (directly and indirectly) support 4,742 FTE jobs. These figures are especially indicative of the extent to which organic farms tend to export their produce to the national economy, with 40% of sales by value coming from beyond the 60 minute travel time. The equivalent figure for the 30 minute travel time is 57%, which in turn illustrates that 17% of all organic farm income is derived from customers located between 30 and 60 minutes of the farm.

Income and employment estimates for the three study areas are of course indicative not only of the patterns of sourcing and marketing but also of the number of organic farm holdings found in the respective study areas. As such, the organic sector in the DS&G study area generates the greatest amount of income and supports a greater amount of jobs. However, the difference between the two sets of estimates indicates the relative impacts on the local economy. Again, the DS&G study area stands out, with a significantly greater number of income and jobs (126% and 165% respectively) generated in the 30 minute compared to the 60 minute travel time. This compares to 107% and 132% for England and Wales as a whole. The reason for this difference lies in the fact that compared to the other two study areas; organic farms in the DS&G study area are considerably more tied to markets in the 60 minute travel time than they are in the 30 minute boundary. Whereas 68% of all sales receipts are derived from customers located within 60 minutes of the farm, only 38% come from within the 30 minute boundary. This compares to 69% and 60% respectively for the Sussex and 46% and 33% respectively for farms in south-west Wales.

The final set of figures within Table 7.14 examines the potential for the various marketing channels of organic farms to generate rural development benefits. These indicative figures highlight not only the significance of marketing to wholesalers and processors in the organic sector, which account for around half of all sales receipts across the sample, but also the potential impacts of this characteristic on rural development. Because these two forms of marketing are largely export orientated, with around half of all income derived from national markets outside the 60 minute zone, they account for a fairly high proportion of income and employment effects generated in the local economy. Marketing to processors is especially orientated towards external markets at the 30 minute level, with 86% of income coming from outside the zone. Through direct, indirect and induced effects, this is shown to result in income and employment effects of £241.1m and 2,922 FTE jobs at the local level; significantly higher than other forms of direct marketing which by their very nature are not orientated towards non-local markets. No catering establishments, for

example, were found outside the 60 minute travel time, thus yielding no income and employment benefits through export activities at this level. Of course, direct marketing to consumers and other local establishments, such as catering, will itself generate further local benefits through the self-containment (and resulting indirect and induced multipliers) of household incomes, a fair proportion of which will be earned outside the local area anyway. With its focus on farm sales and expenditure the present model, however, does not pick this up.

7.4.3 Testing the accuracy of the models

As set out in Chapter 2, it is important to recognize that the LM3 model is only an ***indicator*** of economic impact, and that each of the three spending rounds is open to interpretation. As such, it is important to reflect this by modifying the final LM3 indices through incorporating a suitable margin for error at each of the three rounds of spending. In terms of assessing the scale of margin for error, the evidence from this research is that the data from round one are likely to be the most accurate, whereas the round three data are likely to be most prone to inaccuracy. The question then becomes: what level of margin for error needs to be adopted. Thatcher and Sharp (2008) were advised by the New Economics Foundation (who originally developed the LM3 model) to use figures of between 5-10%, in their investigation of the Cornwall Food Programme.

In this case, it was felt that the final LM3 indices would be most practically useful if they reflected both a higher and lower level of margin for error, in that a single figure may give a misleadingly precise indicator. Furthermore, that the margins for error of each of the three rounds should reflect the respective levels of accuracy between the different rounds. As such, two different scenarios have been run, resulting in a lower and a higher figure of LM3, based on the following assumptions:

- Round 1: Lower margin of error 5% Higher margin of error 10%
- Round 2: Lower margin of error 7.5% Higher margin of error 15%
- Round 3: Lower margin of error 10% Higher margin of error 20%

In other words, in the lower margin of error scenario, the collected LM3 data are modified by 5% (round 1 data), 7.5% (round 2 data) and 10% (round 3 data). Likewise, in the higher margin of error scenario, the collected LM3 data are modified by 10% (round 1 data), 15% (round 2 data) and 20% (round 3 data). In each case, these figures can then be used to adjust the initial LM3 figure either upwards, or downwards. However, in this context, bearing in mind the provisos associated with the data collected in this study, it seems likely that any errors are more likely to be associated with an inflated LM3 index (e.g. buying 'local' food in supermarkets), resulting in an overly optimistic picture of the contribution that organic farming can make to local economies. As such, the two 'margin of error' scenarios used here have only been used to adjust the initial LM3 figure downwards, which should produce figures that are more representative of the underlying reality. The results of this exercise are given in Table 7.15.

The revised estimates in Table 7.15 illustrate the impact of imposing some precautionary reductions at each of the three rounds of transaction in the model. Imposing the higher margin of error on the aggregate LM3 model for all farms reduces the income multipliers for the 30 and 60 minute drive times by 16% and 19% respectively. Similarly, income generated is reduced by a margin of 24% for the 30 minute drive time and 27% at the 60 minute level. The magnitude of employment multipliers are affected by a lesser margin. This is because the indirect and induced employment effects are driven to a greater degree by the spatial patterns of expenditure and income containment at the second, third and subsequent rounds, as opposed to their magnitude.

Table 7.15: Testing the aggregate LM3 results according to lower and higher margins of error (all farms)

Margin of Error for 30 Minute drive time				
	Income multiplier	**Employment multiplier**	**Total income generated (£m)**	**Total jobs supported (FTEs)**
Lower margin of error	1.81	1.32	787.4	10,150
Higher margin of error	1.66	1.28	685.1	9,374
Original estimate	1.97	1.35	904.5	10,961
Margin of Error for 60 Minute drive time				
	Income multiplier	**Employment multiplier**	**Total income generated (£m)**	**Total jobs supported (FTEs)**
Lower margin of error	2.36	1.41	1,029.2	10,874
Higher margin of error	2.13	1.36	879.2	9,955
Original estimate	2.62	1.46	1,201.5	11,855

The above results indicate that it would be prudent to quote the local economic impacts of organic farming in terms of multipliers and economic effects that fall within a range of possible magnitudes, as opposed to quoting them in absolute terms. Thus, for example, given the limitations of the model along the lines of those described above, we can conclude with a greater degree of confidence that, on aggregate, all organic farms in the sample were found to have income and employment multipliers which ranged from 1.66 to 1.97 and 1.28 to 1.35 respectively. Furthermore, that they generated between £685.1m and £904.5m of income and supported between 9,374 and 10,961 FTE jobs through direct, indirect and induced effects at the 30 minute level. In the case of models for which we have not applied the accuracy testing, it is clearly prudent to state derived income and employment effects in terms of them being at their maximum level, assuming that any degree of inaccuracy (for example through purchasing in supermarkets) would tend to over-inflate the coefficients as opposed to under estimate them.

7.5 Summary

In some respects, this chapter takes organic farming on a journey from a micro through to a macro perspective. Beginning with the benchmarking exercise, differences between alternative farming systems have been highlighted and compared and it is now possible for individual farmers to compare how their personal situation

compares to the benchmark averages. The SVC analysis described in section 7.3 takes this journey a stage further in order to consider how farmers buy in resources and services as part of the production process. Furthermore, by considering the principal commodities of cattle, lamb, milk, cereals and horticultural produce, differences in market prices between commodities and between different marketing channels have been revealed. However, while some farmers may be able to exploit channels that offer better unit prices (as was explored in Chapters 5 and 6), geographical or personal constraints may prevent more profitable channels from being utilised. Others, such as the dairy farm that processes its milk into cream (see Figure 7.4), add value to their outputs and have developed marketing channels that ensure the surplus value from production is returned to the farm.

Broadening the contribution of organic farming into a macro perspective, the LM3 modelling exercises indicated the multiplier effects that the industry has on the three study areas (examined in Chapter 6) and in England and Wales as a whole. Two types of model were specified: 'aggregate' models which used total farm sales as direct effects and 'rural development' models which factored in only income from outside the local economy as direct effects. The aggregate models indicate that, for every £1 of income, organic farms in England and Wales have the ability to generate between 66p and 97p through additional indirect and induced effects within a 30 minute travel time of the farm, and between £1.13 and £1.62 within a 60 minute travel time. Similarly, for every FTE job created on organic farms, between 0.28 and 0.35 additional FTEs and between 0.36 and 0.46 additional FTEs will be created through indirect and induced effects within 30 minutes and 60 minutes of the farm respectively. Turning to the rural development models, these indicated that, for England and Wales as a whole, the organic sector generates a total of up to £515.6m and up to 6,248 FTE jobs through direct, indirect and induced effects when externally derived (or export) income is considered within a 30 minute travel time of the farm. Therefore, as a driver of rural development the organic farming sector appears to be fairly efficient at obtaining external income through non-local marketing and generating further income through local sourcing and employment. While the aggregate and rural development LM3 models give an ***indication*** of the impact of organic farming on the wider economy, a realistic assessment of the degree to which organic production displaces other forms of economic activity in the local economy is impossible without undertaking similar surveys of other farm and non-agricultural sectors. The models do, however, go some way towards accounting for displacement effects by factoring in the potential for some non-family employment to displace other jobs elsewhere in the local economy.

Chapter 8: Organic futures

8.1 Introduction

It is a cliché, but the world has changed from when the research described in this report was being designed. During the two years of the project, commodity prices, including food, have increased and then declined, credit has become increasingly hard to obtain, unemployment (and the fear of unemployment) is increasing and food security has re-emerged as a policy concern. Even the most prescient of commentators failed to predict the speed with which these developments occurred and continue to occur. Such changes present a challenge to research of this nature. We are not in a position to predict or map out the future of the organic sector in England and Wales, but we can identify behavioural intentions of both consumers and producers, identify a number of concerns revealed by organic producers and also point to evidence of some optimism and in the words of a focus group farmer even "a confident, bullish attitude". In considering organic futures, this chapter draws on all of the empirical strands of the research from the postal survey of producers in 2007, the survey of consumers in the summer of 2008, face-to-face interviews with farmers in 2008 and the focus groups with consumers and farmers in January 2009.

8.2 Consumer intentions regarding organic food purchases

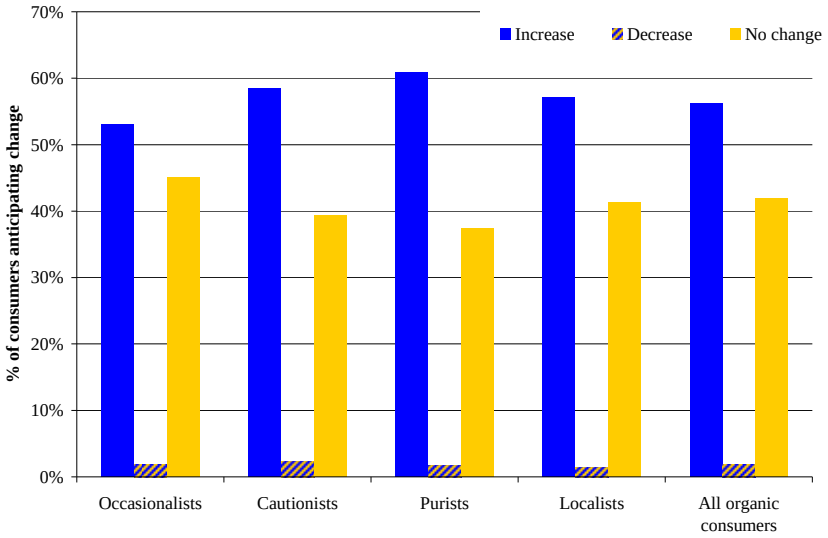
Participants in the consumer surveys were asked about their intentions regarding the purchase of organic food in the near future. It must be remembered that many can probably be regarded as committed organic consumers in that a large proportion were members of box schemes. That said, 46.9% have been described as only occasional purchasers of organic food (see Chapter 4). It is interesting to note therefore that 55.4% of consumers surveyed expected to increase the amount of organic food that they buy, while 42.7% expected to make no changes, and only 1.9% expected to reduce the amount that they buy.[39] Since so few consumers indicated an intention to reduce their purchase and consumption of organic food, most of the analysis presented here concerns intentions to increase consumption or to make no changes.

In terms of the survey branches, for all organic box schemes, over half of the customers responding to the survey anticipated increasing the amount of organic food that they buy. For the River Swale scheme, 61.5% of respondents reported intending to increase the purchase of organic food. As this is a relatively new box scheme (the first River Swale boxes being delivered in January 2007) it is possible that a number of customers had been trying out the organic box experience and, after a period of some months, were prepared to increase their organic food purchases. Customers of Planet Organic and consumers in the national branch of the survey, on the other hand,

[39] The survey of organic consumers was carried out in the summer of 2008 before the worst of the economic crises became apparent, and this may explain the very low numbers of consumers planning to cut back on purchases of organic food. That said, the latest Organic Market report published by the Soil Association suggests that 36% of committed organic consumers expect to spend more on organic food in 2009, while and only 15% expect to spend less (Soil Association, 2009).

appeared more content with the amount of organic food that they were purchasing, as 62.6% and 55.1% respectively anticipated no change in the near future. Turning to the consumer cluster groups identified in Chapter 4, 60.8% of *purists* expect to increase the amount of organic food that they buy, compared to 53.1% of *occasionalists*. *Occasionalists* were the most likely to be planning to make no change to the amount of organic food that they buy (see Figure 8.1).

Figure 8.1: Consumers' future intentions regarding the purchase of organic food‡



‡No significant association exists between purchasing intentions and consumer clusters.

The widespread commitment to maintaining or increasing organic food consumption revealed in the consumer survey was reflected in the comments of consumers (and some producers) during the focus groups in January 2009. Indeed, some consumers indicated that they would make cuts elsewhere in order to maintain spending on organic food:

> *When money is tight we will have a cheaper cut of meat or less meat. But I am going to continue to try and buy as much organic as possible, or organic milk from the farmer next door because it is important to me* (consumer, Brinsbury focus group).

> *We will just keep buying organic food; we would just cut back on other things. I think most people would put their food first, the people I know* (consumer, Brinsbury focus group).

Organic producers also recognised the existence of a group of particularly committed organic consumers:

> *The press says people are going to be buying cheaper cuts. I guess the people who are buying organic, will still buy organic. It is a lifestyle thing; people are not going to go down to Tesco's to buy value meat. I think there is a rump of customers that will be with us through thick and thin* (producer, Chichester focus group).

The reasons offered by consumers for deciding to increase their consumption of organic food largely mirror their motivations for consuming organic food at present. When considering the branches of the national survey, additional income and food safety scares were not particularly important in decisions to increase organic food consumption. That said, for the 40.0% of Planet Organic customers that intended to increase their purchasing of organic food, there was a statistically significant association between the intention to increase organic food purchases and the expectation of having more income in the future. This contrasts with 45.1% of consumers from the national survey who disagreed strongly that their future increased consumption of organic food is associated with an expectation of more income.

Many consumers 'agreed' or 'agreed strongly' that factors such as concern over chemical residues on vegetables and fruit (92.4%), genetically modified organisms in food (84.1%), support for high animal welfare standards (87.4%), support for British farmers (89.6%), buying more vegetables and fruit in season (92.6%), and reducing food miles (86.1%) were all influencing decisions to increase the amount of organic food purchased. Clearly these were all important in driving plans for increased consumption for most organic consumers, although Growing with Nature consumers were generally more likely to 'agree strongly' with these factors compared to other organic consumers in the survey.

Table 8.1 presents a ranking of the reasons why some consumers expected to increase their consumption of organic food. Important drivers included concerns over pesticides on vegetables and fruit; the desire to buy more vegetables and fruit in season; support for British farmers; and improved animal welfare. It is positive, from a farming point of view, that the wish to support British farmers featured strongly amongst the reasons for increasing the purchase of organic food. Furthermore, seasonality seems to be becoming a more important motivator, as 'buying vegetables in season' tended to be more highly ranked as a reason for increasing the future consumption of organic food, than it is as a motivator for existing levels of purchases.

Interestingly, it is only *localists* who did not rank seasonality concerns in their top three reasons for increasing organic food purchases. Predictably though, they were more concerned with supporting British farmers and reducing food miles than most of the other consumer clusters (see Figure 8.2). For instance, 73.7% of *localists* agreed strongly that supporting British farmers was a reason for their intention to increase organic food purchases, whereas only 54.9% of *occasionalists* strongly agreed with this as a reason for increased spending on organic food.

A consumer at one of the focus groups summed up the 'localist' attitude:

> *Seeing the farmers' market at Arundel, I think the more that farmers can connect with the public, the better. Because I live in the suburb, now I have a personal commitment to it, (organic) but I'm an oddball. Food is generally something that comes pre-packaged from the supermarket. People need to get to know the producer and have a personal commitment to the supplier. Every farmers' market is valuable. I think it's the one*

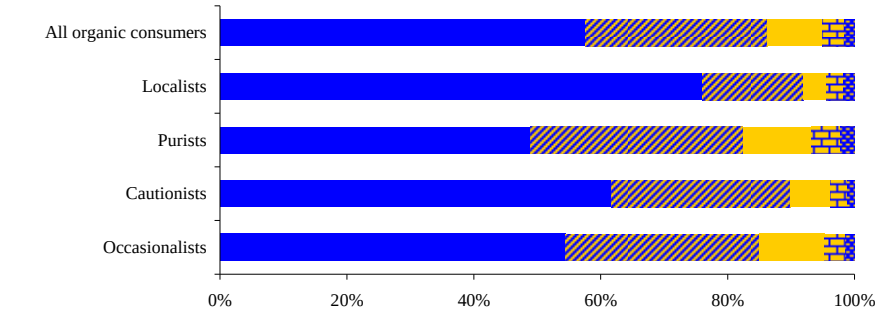
way where you can bypass the supermarkets and break that chain (consumer, Brinsbury focus group).

Table 8.1: Ranking specific reasons for increasing purchases of organic produce[†]

Statement tanking	All organic consumers	Occasionalists	Cautionists	Purists	Localists
1	Pesticides concerns	Buy vegetables in season	Pesticides concerns	Pesticides concerns	Pesticides concerns
2	Buy vegetables in season	Pesticides concerns	Buy vegetables in season	Genetically modified food concerns	Support British farmers
3	Support British farmers	Support British farmers	Improve animal welfare	Buy vegetables in season	Reduce food miles
4	Improve animal welfare	Reduce food miles	Support British farmers	Improve animal welfare	Buy vegetables in season
5	Genetically modified food concerns	Improve animal welfare	Genetically modified food concerns	Support British farmers	Genetically modified food concerns
6	Reduce food miles	Genetically modified food concerns	Reduce food miles	Climate change concerns	Climate change concerns
7	Climate change concerns	Climate change concerns	Climate change concerns	Reduce food miles	Improve animal welfare
8	Food scare concerns	Food scare concerns	Food scare concerns	Food scare concerns	Food scare concerns
9	More Income	More Income	More Income	More Income	More Income
10	Buy non-organic for less	Buy non-organic for less	Buy non-organic for less	Buy non-organic for less	Buy non-organic for less
11	Less income	Less income	Less income	Less income	Less income

[†]A significant difference (P<0.001) in score values exists between the organic consumer groups and the following reasons: concerns about pesticides on vegetables and fruit, and concerns about genetically modified organisms in food. A significant difference (P<0.01) in score values exist between the organic consumer groups and the following reasons: to support improving animal welfare, and reducing food miles. Finally, a significant difference (P<0.05) in score values exists between the organic consumer groups and wishing to support British farmers.

Figure 8.2: The association between plans to increase purchases of organic food in order to reduce food miles and consumer cluster[**]

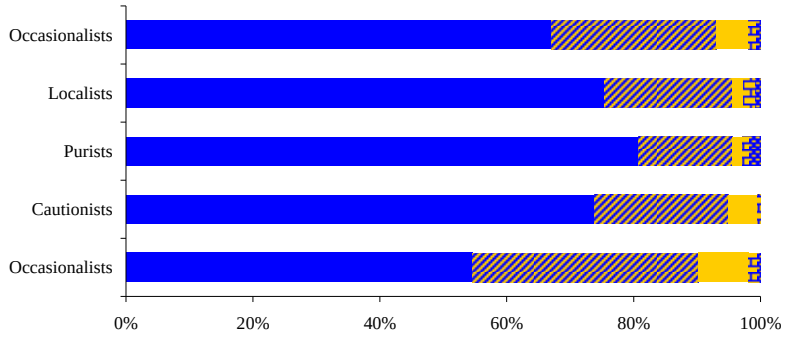


	Occasionalists	Cautionists	Purists	Localists	All organic consumers
Disagree strongly	1.4%	1.1%	2.3%	1.8%	1.6%
Disagree	3.3%	2.8%	4.5%	2.7%	3.4%
Neither agree nor disagree	10.4%	6.2%	10.8%	3.5%	8.7%
Agree	30.5%	28.2%	33.5%	15.9%	28.7%
Agree strongly	54.4%	61.6%	48.9%	76.1%	57.7%

[**]The association between consumer clusters and plans to increase consumption to reduce food miles is significant when P <0.01.

In contrast, *purists* were more concerned with buying more organic food because of worries about chemical residues on vegetables and fruit, (see Figure 8.3) and GMOs, with 78.4% of *purists* citing this as a reason for increasing organic food purchases compared to 49.2% of *occasionalists*. As with their attitudes towards their existing purchase and consumption of organic food, *occasionalists* were less likely to 'strongly agree' with any motivating factors and were frequently the most likely to neither agree or disagree.

Figure 8.3: The association between plans to increase purchases of organic food because of concerns about pesticide residues and consumer cluster‡



	Occasionalists	Cautionists	Purists	Localists	Occasionalists
Disagree strongly	0.5%	0.0%	1.7%	0.9%	0.7%
Disagree	1.4%	0.6%	1.1%	1.8%	1.2%
Neither agree nor disagree	7.9%	4.5%	1.7%	1.8%	5.0%
Agree	35.5%	21.0%	14.7%	20.2%	25.9%
Agree strongly	54.6%	73.9%	80.8%	75.4%	67.1%

‡No significant association exists between consumer clusters and plants to increase consumption because of pesticide concerns.

8.3 Reducing consumption of organic food

Few consumers responding to the survey (31 individuals or just under 2%) said that they intended to reduce the amount of organic food that they buy. In contrast to current expectations regarding the price of organic food (as we have seen, most consumers did not expect organic food to be as cheap as non-organic food), those anticipating a reduction in their organic food purchases appear quite strongly motivated by a mixture of price and income issues. For instance, 64.3% of those intending to reduce consumption agreed or agreed strongly that they could buy non-organic food for less, and 59.2% agreed or agreed strongly that they would have less income in the future.

8.4 Organic producer intentions

The analysis of consumer intentions indicates that the majority of surveyed consumers will continue to purchase organic food at current levels, or increase the amount of organic food that they buy. Even among *occasionalists*, who are the least frequent purchasers of organic food and who tend not to have strongly held views towards organics, few expressed an intention to reduce consumption of organic food. Clearly, the consumer sample is biased towards committed organic consumers, but equally it

points to a degree of stability in demand from this committed core. To what extent that demand can continue to be met by domestically produced organic food however, depends on the future intentions of British organic farmers. As we have seen in Chapters 5 and 6, many of the farmers in the survey have been actively changing and developing their businesses over recent years. A significant proportion had increased the focus of their marketing efforts on local or regional markets and a number have reported making changes in response to customer feedback. It cannot be simply assumed however, that the future will see a continuation of the trends of the recent past.

As Table 8.2 shows, at the time of the survey few farmers (3.6% of the sample) indicated that they planned to leave organic farming. Evidence from the postal survey of producers and from face-to-face interviews later in 2008 indicates that, for a few, the combination of rising input prices and reduced producer prices was stimulating thoughts of reverting to non-organic production. Not unreasonably, many more (56.8%) intended to continue in organic production as long as they can continue to make a profit. Significant proportions also reported that they would only ever farm organically, suggesting either that they would not quit or that it was a question of farm organically or not farm at all. In these terms, those with a local market orientation appear to be the most committed to farming organically. Over half (54.5%) report that they will only ever farm organically compared to 30.3% of those with a national market orientation. Conversely, 67.1% of those with a national market orientation indicated that their future in organic farming was dependent upon their ability to make a profit. Importantly, the area of land farmed by those intending to leave organic farming either immediately or in the next five years is only 1.3% of the total area covered by the survey (see Table 8.2). The majority of land (69.6%) is farmed by those that will only farm organically if they can make a profit (40.9% if only those with a national marketing orientation are considered). This suggests that, at the time of the survey, most land was not likely to move out of organic registration in the very short term, but that the capacity of organic farming to meet market demand is vulnerable to both farmers' determination to make a profit and prevailing market prices (which could, in turn, be influenced by market demand). To put these figures in context, when asked the same question in 2004, the response of a sample of 302 organic farmers in England was that 12.3% said they planned to leave organic farming as soon as possible, or within five years, and 30.5% stated that they would only ever farm organically (Lobley *et al.* 2005). That fewer farmers in the current sample plan to leave organic farming, and more say that they will only ever farm organically, may be seen as an indication of increasing commitment amongst organic farmers.

One possible explanation why so few farmers were planning a very rapid exit could be linked to the lagged effect of the economic downturn and a variable impact on different organic sectors:

> *At the moment the recession hasn't hit the amount of pork we sell. But we are on quite a small scale and perhaps it would take quite a bit for our customers to fall away. We don't buy any feed in, we grow it all ourselves*

> *so we are self maintaining. I know a neighbour of ours who does a lot of lambs; he has had some difficulty because there has been a downturn in the market for organic lamb. A lot of the lambs have been going into the conventional market, because there wasn't enough market there* (producer, Haverfordwest focus group).
>
> *There are very few pork producers, you can't say it amounts to much, the market as such hasn't been so affected at the moment. But we are on the start of this recession, I think we should discuss this in a year's time; I think there will be dramatic changes* (producer, Haverfordwest focus group).
>
> *The experience in the last six months; I have not suffered, output has not suffered, to the contrary at the last farmers' market at Christmas, which was an extra farmers' market, we had a record sale of produce, by a long way. Other traders were doing well. We have had no trouble selling organic lamb, at good prices. Our egg enterprise has expanded to supply a growing market and we have doubled production in the last six months.* (producer, Haverfordwest focus group).

Only one focus group farmer voiced the opinion that the future would see a significant shake out of organic farmers:

> *I think there will be a mass exit from organic farming in the next year. It's just not worth it, it is impossible. This applies to producers of milk, vegetables and meat. - milk and meat in particular. The organic premium on milk is disappearing…* (producer, Chichester focus group).

These responses are not unexpected. It is not uncommon, for instance, for farmers to 'talk down' the future of their industry. Equally, it is well known that agriculture tends not to restructure rapidly in response to external stimuli (Lobley and Potter 2004). Interestingly however, not only are organic farmers with a local market orientation more likely to state that they will only ever farm organically in the future but, as Table 8.2 indicates they are by far the most likely to have only ever farmed organically, with 37.5% stating that they have only ever farmed organically compared to 27.6% and 22.7% of those with a regional or national market orientation, respectively. In addition, there is little difference between the average (mean) length of organic production between farmers of different market orientation, suggesting that the businesses in the different groups are equally well established (in terms of longevity), but that farmers with a local market orientation have a stronger commitment to organic farming: they are less likely to have farmed in any other way in the past and are less likely to change their farming system in the future.

Focusing on those farmers who expect not to continue in organic production, including those who would end organic production if it was not profitable, Table 8.3 reports the expectations of what farmers might do instead. As can be seen, most plan to either return to non-organic production (44.7%), or to semi-retire (26.4%), although there is a large minority (20.4%) that did not know what they would do if their farm was not making a profit from organic farming. There is little difference in this pattern according to market orientation.

Table 8.2: The association between main market orientation and attitude towards future in organic farming (% of respondents) and organic farming history‡

Attitude to future in organic farming	Main market orientation							
	Local		Regional		National		All farmers	
	% respondents	% land	% respondents	% land	% respondents	% land	% respondents	% land
I will only ever farm organically	54.5	7.8	33.3	11.0	30.3	10.3	39.6	29.0
I will farm organically as long as I make a profit	42.0	13.2	61.5	15.8	67.1	40.6	56.8	69.6
I will stop farming organically in the next five years	1.4	0.2	5.1	0.7	2.6	0.4	2.9	1.2
I will stop farming organically as soon as possible	2.1	0.1	0.0	0.0	0.0	0.0	0.7	0.1
All Farmers	100.0%	21.3%	100.0%	27.4%	100.0%	51.3	100.0%	100.0%
% who have only ever farmed organically	37.5%		27.6%		22.7%		28.3%	
Mean years of organic production	9.4		7.7		9.9		9.1	

‡No significant association exists between respondents' attitude to future in organic farming and main market orientation.

Table 8.3: The association between main market orientation and future expectations‡

Future plans if not making a profit from organic farming	Main market orientation			
	Local %	Regional %	National %	All farms %
Continue farming and return to conventional methods[1]	41.3	41.1	49.5	44.7
Retire or semi-retire from farming	23.8	21.9	17.2	20.4
Sell the farm as an organic farm	1.6	1.4	0.0	0.9
Sell the farm but not as organic	3.2	0.0	1.0	1.3
Other (including back to landlord)	6.3	9.6	4.0	6.4
Don't know	23.8	26.0	28.3	26.4

‡No significant association exists between any of the future plans if not making a profit and main market orientation.

[1]This includes farms that would return to conventional methods in order to grow energy crops.

Finally, for many of those planning to continue to farm organically, the future will be characterised by a degree of dynamism. Table 8.4 reveals little difference between those with different market orientations. Instead there is a general trend towards increasing the area farmed, adding more marketing channels, increasing on-farm processing and, probably as a consequence, increasing labour.

Table 8.4: The association between main market orientation and planned future changes

Future changes to organic farm that are planned:		Main market orientation			
		Local %	Regional %	National %	All farms %
Area of land farmed*	Increase	24.8	22.6	39.2*	29.6
	Decrease	6.6	7.0	5.9	6.4
	No change	68.6	70.4	54.9	64.0
Number of marketing channels‡	Increase	39.7	35.8	40.9	39.0
	Decrease	4.6	3.8	2.9	3.7
	No change	55.7	60.4	56.2	57.2
Processing operations†	Increase	33.9	17.6	25.2	26.4
	Decrease	7.0	4.7	3.9	5.3
	No change	59.1	77.6	70.9	68.3
Level of employed labour*	Increase	39.8*	24.3	27.4	30.6
	Decrease	5.1	11.2	14.1	10.3
	No change	55.1	64.5	58.5	59.2
Level of family labour*	Increase	6.1	15.6	14.0	11.7
	Decrease	13.6	17.4	20.3	17.2
	No change	80.3*	67.0	65.7	71.1
Level of environmental management‡	Increase	43.7	39.6	34.0	38.9
	Decrease	0.0	3.6	3.5	2.4
	No change	56.3	56.8	62.4	58.7

*P<0.05; †P<0.1; indicates a statistical association between main market orientation and future changes to organic farm that are planned.
‡No significant association exists between the future changes to organic farm that are planned and main market orientation.

Some farmers also indicated that they are attempting to survive by selling organic produce into the conventional market, although it is not clear how long such a strategy could last:

> *The three of us who are in an organic milk co-op have got cheese producers who are taking the absolute minimum. I'll give you an example, [name of cheese company] who the three of us have shares in with [name of milk co-op] - they should be taking 10 million litres of organic milk this year to put into cheese. They are going to be taking 2 million and so that 8 million litres has to be bounced back at the market, it has to be sold. As it is at the moment it was going into the conventional market. With a conventional spot price of 16 pence* (producer, Tanygroes Focus group).

> *The beef and sheep price has been pretty poor this year. Most of the beef and sheep has just gone in to the conventional market because the book-in time for organic is too long. …… The bank did tighten things up a bit, but*

> *I think it is beginning to relax a bit now. The farm is not having any problems with the bank, but we are not going to be extravagant. It is just the consumers, the customers who are cutting their spending a bit* (producer, Tanygroes Focus group).

Despite the dynamism and variability in future plans among the producers, a number of general concerns were worrying them. A key concern was the escalating cost and availability of primary organic inputs such as feed and seed. Not only were these inputs often not available locally, but the necessary proteins/soya needed by organic livestock were in short supply both nationally and internationally. The rapidly rising cost of fuel and electricity was also of concern and a situation had been reached where the cost of inputs was reducing the significance of any premium prices paid for organic produce; this was especially the case at a time of rising conventional food prices. It was not surprising, therefore, that a number of producers mentioned the possibility of reducing off-farm inputs through growing their own feedstuffs, for example. This was seen as one way of increasing the 'sustainability' of the farm, and was often part of a general strategy of 'belt tightening' that has served many farmers so well in the past:

> *The Marks and Spencer's price is £3.50 kilo deadweight. Just before Christmas, we had a meeting and we were told that we would have to drop the price to £3. That is now below the cost of production. Every animal, we're going to lose money on. Nine months ago you would be getting about £3.40 a kilo. With an animal making about £1,000, so you are talking about £800. So you are losing about £150- £200. So it's making a hell of a difference, but I think it's worth sitting tight. The hard thing is the costs, the feed costs; I am not so affected because I grow my own barley. You just have to tighten your belt, and ride it through, that is all we are doing* (producer, Brinsbury Focus group).

> *We sell once a year, every December. This year we were lucky, we got a good sale, next year is looking grim. We won't know until we get right round the clock to next December. But I don't think it's going to be quite as good as it was last year. We have room to tighten the belt a bit; we have a commitment to stay organic whatever, so we will just ride it out. I've been organic for such a long time, and for many years we never got a premium, you just 'chock' on really, we call it old-fashion farming* (producer, Brinsbury Focus group).

> *We are trying to survive by cutting costs. With my enterprise I'm trying to cut down on straw, I have cut out buying in a protein that I mix with my barley. I'm just buying in an organic Soya oil to mix in with the barely which will finish the animals off a bit slower. I wasn't pushing them fast but it will be a bit slower. I think if we can survive it, it will be good, because there is going to be a worldwide shortage of beef* (producer, Brinsbury Focus group).

Some of the identified dynamism related to the marketing, as well as production, of organic products. For example, although 35.2% of the sample do not expect their sales orientation to change over the coming five years, farmers with a local orientation are significantly more likely to focus even more effort on the local market with 42.0%

reporting that the focus of their sales' activities will become 'more local' compared to 26.6% of the whole sample, 15.7% of those with a national orientation and 23.4% of those with a regional market focus. A significant proportion (24.8%) of the latter group also reported that they would increase the regional focus of their sales.

There seemed to be a genuine desire by some to sell more locally and/or direct to the consumer, but it was recognised that this was not always easy. Some producers hoped to increase their sales at the farm gate, in farm shops, to local butchers and wholesale to local catering establishments and retail outlets; this was often at the expense of farmers' markets, which did not figure in the future plans of many organic producers. Nevertheless, problems with direct marketing and/or adding value activities were recognised. A good example of this has been the appropriation of the box scheme concept by supermarkets and the likes of Riverford and Abel and Cole, rather than competition between the smaller, independent box schemes. Another example was the difficulty of adding value locally in regions with limited demand for organic food and a shortage of processing capacity. For some producers, therefore, the future seemed to be about producing more for the main organic commodity markets, with a national rather than local sphere of influence.

Three other concerns were expressed by some organic producers, particularly during face-to-face interviews. The first, which seemed to be quite specific to Sussex, related to the availability and cost of land for rental – a problem compounded by the fact that many organic farmers rented some or much of their land. The cost of land for rental seemed to be escalating in this area and was a genuine concern for some of the smaller farmers, because they were easily getting outbid by one large-scale organic grower, in particular. This situation related to a second concern among some organic farmers in all areas where face-to-face interviews were conducted - that organic farming should not 'scale up' too much. A view was expressed that organic production should remain a niche market, with a need to keep small farms and families on the land. As one producer in Sussex said: "local and organic are the future and organic needs to be a niche because there will be no premium if it becomes more mainstream" (producer, Sussex study area). Similarly, a focus group farmer argued that: "organic is a niche market; I don't know why the government wants to expand the market. Organic can only survive with a premium" (producer, Brinsbury focus group). The social and community dimension of organic farming was mentioned within this context. Of course, the scaling up issue was not a universal concern, because some producers felt that the only way forward was to expand and work with large-scale, national cooperatives, processors and retailers. Indeed, as we have seen, close to 30% of the respondents to the producer postal survey expressed the intention of expanding the area that they farm over the coming years.

The third concern related to the regulation of organic farming and a perceived negative attitude of the government towards the industry. Quite a few farmers had much to say about the certification bodies, especially the Soil Association. Not only was there a perception that the Soil Association was expensive and in competition

with other certifying bodies, but many complained that organic production was 'bureaucratic and over-regulated', and that standards 'are tough' and 'tightening all the time'. Comments like: "they are only good at marketing and have lost sight of the reality of farming, with no real interest in the economics of organics" (producer, Sussex study area), and: "we are paying for the label and they do little for livestock farming" (producer, Sussex study area), summarised what many were thinking. However, others commented that, with the growing number of certifying bodies, there was a danger that organic standards would actually fall. The views about certification spilled over into organic farmers' attitudes towards the government. Again, comments such as: 'the government is not interested', 'the government should stop listening to the Soil Association, who is just empire building' and 'there is no real policy for the future of organic farming', seemed to represent the current view of the government's attitude towards organic farming.

Finally, amid the worries and concerns about adapting to changing market, regulatory and economic conditions, a number of farmers expressed optimism in their ability to withstand the worst of the economic downturn and to come out the other side still producing organic food:

> *Everybody seems to be saying that the credit crunch will last about 18 months. It's going to take careful planning and not too many new converters coming in, not too much milk splashing around. If we can survive the next 18 months and not see the organic market really drop off, we will be better off after it* (producer, Tanygroes focus group).
>
> *If we can keep those consumers buying organic through a credit crunch, because of taste, the goodness and wholesomeness of our product, that means we've got committed consumers who will stick with us through anything* (producer, Tanygroes focus group).
>
> *I think it will come back. At the end of the day, we have very low costs, and that is part of the attraction of organics, to be as independent and to be as self-sufficient as possible. The high feed prices we've not been affected by. Our production costs have not gone up so we can take a bit of a cut in price* (producer, Tanygroes focus group).

Chapter 9: Conclusions and Implications

9.1 Socio-economic implications of organic farming

Advocates of organic farming have long argued that there are strong grounds for its further expansion on rural development grounds. According to the somewhat stylised view of the sector that still tends to dominate public debate, the typically local market orientation of organic producers, the labour intensive nature of their production methods and the contribution they make to rural tourism through environmental management, amongst other things, suggests that there is both an 'organic jobs dividend' and a more general boost to local rural economies to be had from an expansion to the sector. With renewed interest in the economic centrality of agriculture within many (if not all) rural economies and the role that farm businesses can make to rural development, particularly those that are orientated to local economics and well embedded in short supply chains, the organic sector might seem to be a suitable case for treatment. Hence Midmore and Dirks (2003) call for greater emphasis to be given to organic production within the context of rural development policies. While it is true that policymakers have traditionally justified any government support for the sector in terms of its environmental contribution and in the interests of widening consumer choice (Defra, 2004), there is a growing awareness of its (apparently) complementary rural development potential. A recent paper discussing the public good justification for organic production, for instance, notes the employment and 'other local economic benefits' of organic farming alongside its contribution to climate change mitigation, animal welfare improvements and biodiversity protection (Defra, 2008).

The evidence base supporting these claims is surprisingly patchy, however, and a motivation for this study has been to take a fresh look at the nature of organic production, consumption and marketing in England and Wales in order to better assess its current and likely future rural development contribution. The picture that emerges is inevitably more complicated and multi-dimensional than the generalised descriptions of 'organics' that prevails in public debate. Large differences in terms of the scale of production and how it is marketed, in the size and make-up of businesses and in the background, outlook and market orientation of operators themselves means that organic production cannot be collapsed into a single category. At the same time, organic consumption and organic consumers emerge from our analysis as complicated and not always internally consistent categories. As a result the category 'organic' needs to be deployed with care in future public debate.

What is often lacking in policy commentary and debate about organics is a sense of the overall significance of the sector. While there has been significant growth in recent years, this has been from a low base. In 2007, gross sales of organic produce in the UK were worth £2 billion. There were 5,500 certified producers, together with an estimated further 2,500 processors, importers and other connected businesses (Soil Association, 2009). In terms of land use, by the end of 2007 there was a total of

613,470 ha of land in organic production in the UK. This represents just 3.5% of the total agricultural area. It is important to bear these proportions in mind during the discussion below. Compared to other sectors in UK agriculture, organic production is still small. It is also geographically very unevenly distributed, with much larger concentrations in South West England and in south-west Wales than elsewhere. The producer survey carried out for this study shows that, in proportional terms, twice the area of land in Wales is in conversion compared with England and significant variations within England itself.

Our analysis of the organic farming sector and how it is constituted combined a postal survey of operators, a simple value chain analysis of their marketing channels and outlets and in-depth interviews with individual farmers. The results show a somewhat bifurcated sector in production terms, with the top 10% of the largest farms in the sample accounting for over half of sales and half of all full-time staff employed. These businesses are more orientated towards national markets, tend to be engaged in the production of bulk commodities and hence more likely to be integrated in longer supply chains in the way the so-called 'conventionalisation thesis' predicts. They are also more likely to be concentrated in particular regions (our survey indicates that producers in the East and West Midlands and in the North East are more likely be orientated towards national markets than elsewhere) and to be operating cereals and dairy enterprises. The other side of the equation is the large number of smaller, more locally orientated producers in the sample. These producers account for a much smaller proportion of total organic sales (just under 14%) but sell most of their output through local marketing routes such as farm shops, farmers' markets and cooperative ventures. They also tend to be more concerned with the 'organicness' of their products and to present themselves as committed organic producers They are the type of producers consumers appear to think they are buying from when they purchase organic produce, either in the supermarket, through direct sales or via box schemes.

Clearly, this is not the case (according to the Soil Association (2009), on average 44% of primary organic produce sold by UK multiples is imported and self sufficiency in organic cereals is less than 50%) and organic consumers emerge from our study with complex (and not always internally consistent) assumptions and expectations about the sources and nature of the products they are buying through various marketing channels. Strongly expressed, but somewhat non-specific, health and environmental reasons for buying organic were widely reported and this translates into a concern with the freshness of the products themselves and an expectation by at least one group of consumers that they are (should be) locally produced. Overall, organic consumers emerge as a distinctly well educated but ethnically monolithic group, being significantly more likely to be educated to degree level compared to non-organic consumers in the sample (70% compared to 25%) and to describe themselves as white in ethnic terms. Box scheme consumers appear especially self-selecting, with a profile that emphasises the niche nature of the organic market nationally. Our distinction between *purist*, *localist*, *cautionary* and *occasional* organic consumers further

emphasises this point. Infrequent, ad hoc purchasers of organic food (our 'occasionalists') are, as might be expected, much more agnostic on questions of provenance and brand purity compared to those who regularly buy organic. People belonging to this latter grouping can be further differentiated, however, and our analysis reveals some important differences between the deeply committed, 'purist' consumers and their concerns with diet, what their food contains and the trust they can place in the organic brand with the more complex motivations of the 'localists' and the priority they give to connecting with local suppliers and the land. Certainly regular organic consumers tend to hold strong assumptions about the attributes they expect organic food to possess, though some groups were more relaxed about the distance their food had to travel than might have been expected. Brand loyalty appears strong amongst most of our organic consumers, however, and the majority expect to continue to consume organic food in future. As the Soil Association has recently reported (Soil Association, 2009), 'organic enthusiasts' seem to be dedicated to the brand, many expressing a preference to buying cheaper organic cuts of meat, for instance, rather than comprising on their organic principles. Our comparison of the buying intentions of organic and non organic consumers confirms this brand loyalty, with those already buying organic food on a regular basis emerging as less price sensitive than those who do not. The strength of commitment to organics amongst our sample, together with findings from other studies, suggests further differentiation in future between the organic and non-organic consumer. This further implies that, while there may be a floor to any further decline in organic sales (due to 'organic enthusiasts' sticking to the brand), it could also be difficult to bring large numbers of 'organic virgins' into the market within a short period.

Making an assessment of the current and possible future rural development contribution of the domestic organic sector is difficult and has both an empirical and an analytical component. Empirically speaking the small extent of the organic sector (both in terms of producers and the networks of processors and retailers associated with them) means that as a system of farming it is currently unlikely to be making a large contribution to employment, income or wealth in absolute terms. This may seem an obvious point but it is surprisingly rarely made in public debate and academic commentary on organics (equally, it means that in policy terms, organic farming as an economic activity and type of land use does not offer policymakers a very broad platform from which to launch future rural development policies). The geographically uneven distribution of organic farming also means that its contribution locally is inevitably much stronger in some locations than others and is likely to remain so. For instance, our research indicates that the South West region accounted for approximately one third of all organic farms, organic land and land in conversion in 2006. Yorkshire and Humberside, on the other hand account for less than 5% of organic farms, land and land in organic conversion (see Chapter 2). Moreover, by showing the differences in the way organic produce is marketed between regions, our study suggests that the present and likely future local connectedness of organic production will continue to be highly geographically specific. Nevertheless, organic

production, at least of the kind involving large numbers of small, locally embedded producers, is likely to be beneficial to rural economies and to be just the sort of 'alternative food businesses' that government is anxious to promote. Previous studies that have compared the contribution of organic and non-organic farmers (Lobley, *et al.*, 2005, 2009) to local rural development, however, suggest that it is not organic production systems as such that explain any differences. Rather, it is the self selecting nature of the organic producers themselves which means that, as business people, they are more likely to be willing to diversify their operations and enter into innovative marketing arrangements in ways which not only generate more employment overall but also a greater proportion of non-family FTEs on their farms. This study showed that the organic direct sales sector is composed of very different people to those following more conventional marketing routes. The present survey confirms this impression by identifying a group of highly committed, typically small scale, and locally orientated, organic producers who manage a different and much more diverse range of marketing channels compared to their colleagues with a more national and regional market focus. The benchmark study conducted here confirms that such operators are more likely to operate farms of less than 25 ha in size, with 60% of output being sold directly to consumers. While they are a minority of all organic producers, they are heavily involved in on-farm processing and adding value. They also maintain short supply chains, selling directly to their customers through farm shops, box schemes and farmers' markets. Many conduct some basic processing of their produce, ranging from simple washing and packaging of vegetables to forms of butchery which result in cuts of meat that may be hung longer or meat that is processed into sausages and burgers. All of which results in a distinctive socioeconomic footprint, with higher levels of employment generation on the farm and the development of more extensive and interconnected local networks of producers and consumers.

The importance of this local connectedness as a predictor of the contribution a business can make to rural development is only partly reflected in our estimates of the aggregated income and employment effects of organic production. Our finding suggests there are significantly greater benefits for the local economy in the South West region since the organic sector tends to be more self-contained than elsewhere. Overall, however, it is the national orientation of larger organic operators engaged in bulk commodity production which enables them to draw income into the rural economy through their marketing to wholesalers and processors and which accounts for much of the estimated £515 million in income and the 6,248 FTE jobs the organic sector is able to generate annually. Indeed we estimate that around half of all income is derived from national markets outside the 60 minute zone.

All of which has implications for the rural development case for an expansion of organic farming and the way in which it is justified and framed. Policy commitment to the organic sector has steadily increased in recent years, though until recently this support has largely been justified in terms of the sector's perceived environmental

benefits. The Curry Commission, for instance, argued that organic production should be further supported as part of the government's sustainability agenda and the subsequent *Strategy for sustainable farming and food* (Defra, 2002) identified organic farming as a key sector whose further expansion would facilitate the reconnection of food production with consumers. As Tomlinson (2008) has argued, the history of public policy towards organics is one of a coevolving environmental and consumerist agenda, with an initial view of organic production as a niche market product requiring appropriate certification and production standards (leading to the establishment of the UK Registry of Organic Food Standards in 1987) giving way to a view of organic farming as an environmental public good (justifying the EU's Organic Farming (Aid) Regulation of 1994 and, subsequently, implementation of the UK's Organic Entry Level Scheme in 2005). The Organic Action Plan (OAP) of 2002, however, reinforces the concern with the consumer with its justification of the promotion of organic farming "in line with consumer demand" and the need "to maintain consumer confidence in the integrity of organic food" (Defra, 2002, p1). Policy interest in the wider rural development contribution that organics can make, evidenced in the commissioning of this study, reflects a wider awareness of the role of so-called 'alternative food producers' like organic farmers in sustaining the rural economy.

These agendas were widely debated during the Policy Forum that was convened during the closing stages of the current project. This brought together key stakeholders to be briefed on the headline findings of the study and to debate some of their main policy messages. The audience initially considered whether there is a case for continuing (or even, increasing) government support to the sector and, if so, on what grounds it should be made. The environmental public good contribution of organics was strongly advocated amongst the group but there was also recognition of the intersecting sustainable food production, consumer choice and rural development agendas outlined briefly above. The general point was made, however, that any support which may be seen to be privileging organic production must be set within the broader, evolving context of agricultural policy. This is ever more sensitive to the wider trade implications of agricultural protection and special treatment, making it increasingly difficult to justify support for particular farming sectors and systems of production as such. Rather, the emphasis is increasingly on the decoupled environmental outputs (and rural development benefits) that operators of businesses can achieve. If there is a public benefit from organic land management, it may be better incentivised through enrolment into generic agri-environmental schemes than organic aid measures as such, even ones integrated within Environmental Stewardship. Equally, the employment benefits that many organic businesses seem able to generate are actually more a reflection of the way these businesses are run and connected into the local rural economy than because they are organic as such. It was commented that it may be the model of small-scale, locally embedded production which needs to be nurtured, regardless of whether or not the production methods themselves are organic.

The extent to which the category 'organic' is a particularly helpful basis for policymaking and the facilitation of consumer choice was a theme of the subsequent discussion. The lack of clarity about what constitutes the organic brand was discussed and many break out groups identified better and more standardised product information as an important contribution government and its agencies could make to the long term development of the organic sector. Notwithstanding the commitment in the OAP to improve the setting and control of organic standards, it was observed that the major organic accreditation bodies in the UK do not currently share the same definitions or follow the same procedures. At the same time, food labels have proliferated and it was argued that there is widespread consumer confusion about food labels and what they represent.

9.2 Recommendations

The subsequent breakout group discussions considered what policy measures could (or should) be implanted at local, regional and national levels. These can be summarised as follows:

1 Improved support for organic businesses and the easing of bottlenecks in the system;

Several groups identified a prior need for better business support, particularly for those embarking on conversion. If Defra regards organic production as a useful vehicle for rural development, then systems of advice, training and application systems for financial support must be better integrated. At the same time, switching some support away from individual farms to fund local initiatives to link up processors, retailers and consumers was mentioned. Experience with the German Federal Organic Scheme, for instance, modelled on this approach, suggests that integrated support encourages farmers to be more responsive to their markets and in the development of their businesses. Promoting links with processors and retailers had led to improvements in product quality and enabled cooperation. Echoing earlier research on the organic sector, it was argued that policymakers need to give more attention to the manner in which organic businesses are *configured* in order to maximise their rural development benefits. Making it easier for organic producers to develop short supply chains through direct sales could be one approach. Meanwhile, there is a need to address some of the bottlenecks to organic expansion which many respondents to the project mentioned, including the difficulty of sourcing organically certified animal feed and seed.

2 Increased (and redirected) central government funding for the organic sector and direct public procurement of organic products;

There was limited discussion of the organic aid scheme and its future development, though there was agreement that the future will (should) see on-going organic aid increasingly delivered through agri-environmental measures with an explicit public

good rationale. Additional funding could be levered into the organic sector through the RDPE and its successor but Defra may also need to consider brokering a venture grant scheme in order to facilitate the sort of business development mentioned above. Many stakeholders believed that the link between organic consumption and the government's healthy eating agenda needs to be further exploited and increased public procurement of organic food in schools, hospitals and through other forms of public catering was advocated by breakout groups.

3 Better branding and improved consumer information and the facilitation of choice

The recent proliferation of food labels was a common concern of the breakout groups and many argued that there is a need for a standardisation of the organic brand. The benefits of integrating organics within a multi-criteria label was also mentioned. Generally, there was a sense that the setting and control of organic standards was key to the long term expansion of the domestic sector and stakeholders believed that, in an international context, the UK Accreditation Service had an important role to play in advising on organic standards.

9.3 Conclusion

This report offers arguably one of the most integrated studies of organic consumption, production and marketing conducted to date. It throws new light on the nature of organic consumption, underlining both the commitment of the majority of existing organic consumers and the gap in perceptions, degrees of 'brand trust' and price sensitivity between this group and the majority of consumers who rarely or never buy organic. While this degree of commitment suggests that recent declines in organic consumption may not be sustained and will soon hit a floor, this finding also points to difficulties, particularly in a time of recession, in enrolling new consumers into organic networks, particularly via the direct marketing channels that the smaller producers are more likely to depend on. This group of producers, locally embedded and linked to consumers via short supply chains, fulfil the expectations of many organic consumers and exemplify the idea of alternative food producers. Managed by self selecting, entrepreneurial farmers, these organic producers make a valuable contribution towards employment and incomes generation within the local rural economy. As our broader analysis of food chains and multiplier effects across the regional and national rural economy shows, however, it is the large scale producers, concerned with the production of bulk commodities and integrated into long supply chains, that inevitably account for the main rural employment and income benefits of the organic sector, if measured in aggregate terms. While there is a good case to be made for the rural development benefits of organic farming, it is important to recognise these scale effects and their geographically uneven distribution in any policy assessment.

References

ADAS (2005). *A Study of the Social and Economic Impacts and Benefits of Traditional Farm Building repair and Re-Use in the Lake District ESA*. Final Report to English Heritage and Defra. Countryside and Community Research Institute, Cheltenham.

ADAS and Organic Centre Wales. 2005. *Review of the Organic Conversion Information Service* (*OCIS)* Report to Defra, London.

Alvensleben, R. 1998 *Ecological Aspects of Food Demand: The Case of Organic Food in Germany*. Institute for Agricultural Economics, University of Kiel.

Ankomah S. B. and Yiridoe, E.K. 2006. *Organic and Conventional Food: A Literature Review of the Economics of Consumer Perceptions and Preferences*, Organic Agriculture Centre of Canada, Nova Scotia Agricultural College, Canada.

Aschemann, J., Hamm, U., Naspetti, S. and Zanoli R. 2007. The organic market. In Lockeretz, W. (ed), *Organic Farming: An International History*. CABI International, Wallingford.

Atherton, A. 2003. Examining clusters formation from the 'bottom-up': an analysis of four cases in the North of England. *Environment and Planning C* 21, 21-35.

Banks, J. and Bristow, G. 1999. Developing quality in agro-food supply chains: a Welsh perspective. *International Planning Studies* 4, 317-331.

Banks, J. and Marsden., T. 2001. The nature of rural development: the organic potential. *Journal of Environmental Policy and Management*, 3, 103-121.

Best, H. 2008. Organic agriculture and the conventionalization hypothesis: A case study from West Germany. *Agriculture and Human Values* 25, 95-106.

Buck, D., Getz, C. and Guthman, J. 1997. From farm to table: the organic vegetable commodity in Northern California. *Sociologia Ruralis*, 37, 317-331.

Centre for Rural Economics Research (CRER) 2002. *Economic Evaluation of the Organic Farming Scheme*. Final report to Defra. CRER, University of Cambridge.

Codron, J., Siriex, L. and Reardon, T. 2006. Social and environmental attributes of food products in an emerging mass market: challenges of signalling and consumer perception, with European illustrations. *Agriculture and Human Values*, 23 (3), 283-297.

Cook, G., Reed, M., and Twiner, A. 2007. *The Discourse of Organic Food Promotion: language, intentions and effects*. The Open University, Milton Keynes.

Coombes, B. and Campbell, H. 1998. Dependent reproduction of alternative modes of agriculture: organic farming in New Zealand. *Sociologia Ruralis* 38 127-145.

Cormack, W. F. 1999. Testing a stockless arable organic arable roation on a fertile soil, Crop Rotations Design Workshop, Borris, Denmark.

Courtney, P., Gaskell, P., Mills, J. and Edwards, R. 2007. *A Socio-economic Study of Grant-funded Traditional Drystone Wall and Farm Building Restoration in the Yorkshire Dales National Park*. English Heritage.

Defra 2002. *Strategy for sustainable farming and food*. Defra, London.

Defra 2006. *Agriculture in the UK 2006*. Defra, London.

Defra 2008. *The Contribution that Organic Farming Makes in Supplying Public Poods*. Defra, London

Defra, 2004. *Action Plan to Develop Organic Food and Farming in England - Two Years On*. Defra, London.

Dolan, C.S. 2004. On farm and packhouse: employment at the bottom of a global value chain. *Rural Sociology* 69, 99-126.

Errington, A. J. 2002. Developing tools for rural development: a multidicplinary research agenda. In Arzeni, A., Esposti, R. and Sotte, F. (eds), *European Policy Experiences with Rural Development*. Kiel: Vauk, 19–41.

Errington, A. and Gasson, R. 1996. The increasing flexibility of the farm and Horticultural workforce in England and Wales. *Journal of Rural Studies* 12(2) 127-141.

Fearne, A. 2008. *Organic Fruit and Vegetables – Who Buys What and Why…and Do We Have a Clue?* dunnhumby Academy of Consumer Research, University of Kent, Canterbury.

Gabriel, D., Carver, S.J., Durham, H., Kunin, W.E., Palmer, R.C., Sait, S.M., Stagl, S. and Benton, T.G. 2009. The spatial aggregation of organic farming in England and its underlying environmental correlates. *Journal of Applied Ecology* 46 (2), 323-333.

Ghelfi, R. and Lucchi, M. 2005. Apricot production in Italy: value chain in the domestic and international markets, ISHS *Acta Horticulturae 717: XIII International Symposium on Apricot Breeding and Culture*.

Gomiero, T., Paoletti, M.G. and Pimentel, D. 2008. Energy and environmental issues in organic and conventional agriculture. *Critical Reviews in Plant Sciences* 27, 239-254.

Grunert, K.G., Bech-Larsen, T. and Bredahl, L. 2000. Three issues in consumer quality perception and acceptance of dairy products. *International Dairy Journal* 10 575-584.

Grunert, K.G., Jeppesen, L.F., Jespersen, K.R., Sonne, A., Hansen, K., Trondsen, T. and Young, J.A. 2003. Market orientation of value chains: A conceptual framework based on four case studies from the food industry. *European Journal of Marketing* 39, 428-455.

Guthman, J. 2004. Back to the land: the paradox of organic food standards. *Environment and Planning A* 36, 511-528.

Hall, A. and Mogyorody, V. 2001. Organic farmers in Ontario: an examination of the conventionalisation argument. *Sociologia Ruralis* 41, 399-422.

Harper, G.C. and Makatouni, A. 2002 Consumer perception of organic food production and farm animal welfare. *British Food Journal* 104 (3/4/5) 287-299.

Harris, F. Robinson, G. and Griffiths, I. 2008. A study of the motivations and influences on farmers' decisions to leave the organic farming sector in the United Kingdom. In Robinson, G. (ed) *Sustainable Rural Systems*. Ashgate, London.

Higgins, A. Thorburn, P. Archer, A. and Jakku, E. 2007. Opportunities for value chain research in sugar industries. *Agricultural Systems*, Special Section: sustainable resource management and policy options for rice ecosystems, International symposium on sustainable resource management and policy options for rice ecosystems, 94 (3), 611-621.

Hird, V. 1997. *Double Yield: Jobs and Sustainable Food Production*. SAFE Alliance, London.

Holloway, L., Kneafsey, M., Venn, L., Cox, R., Dowler, E. and Tuomainen, H. 2007. Possible food economies: a methodological framework for exploring food production-consumption relationships. *Sociologia Ruralis* 47, 1-19.

Holt, G. Grey, P. Neilson, R. and Tranter, R. 2001. *A multi-country case study of the process of conversion to organic farming in the EU*. http://orgprints.org/9493/01

Hughner, R.S, McDonagh, P., Prothero, A., Shultz II, C.J. and Stanton, J. 2007. *Who are organic food consumers? A compilation and review of why people purchase organic food*. Journal of Consumer Behaviour 6, 1-17.

Ilbery, B. and Maye, D. 2005a. Alternative (shorter) food supply chains and specialist livestock products in the Scottish-English borders. *Environment and Planning A* 37, 823-844.

Ilbery, B. and Maye, D. 2005b. Food supply chains and sustainability: evidence from specialist food producers in the Scottish/English borders. *Land Use Policy* 22, 331-344.

Ilbery, B.W., Holloway L., and Arber R. 1999. The Geography of Organic Farming in England and Wales in the 1990s. *Tijdschrift voor Economische en Sociale Geografie* 90, 285–295.

Jackson, A. and Lampkin, N. 2006. *Organic Farm Incomes in England and Wales 2004/05*. University of Wales, Abersystwyth.

Jones, P. Tranter, R. 2006. *Barriers to the Adoption of Organic Farming in the European Union*. Centre for Agricultural Strategy, School of Agriculture, Policy and Development, The University of Reading, UK

Jones, P., Clarke-Hill, C., Shears, P. and Hillier, D. 2001. Retailing organic foods. *British Food Journal* 103, 358-365.

Kaplinsky, R. 2004. Spreading the gains from globalization, What can be learned from value-chain analysis. *Problems of Economic Transition* 47, 74-115.

Kaplinsky, R. and Morris, M. 2001. *A Handbook for Value Chain Research*. IDRC, http://www.ids.ac.uk/ids/global/pdfs/VchNov01.pdf

Keatinge, R. 2005. *Organic Production in the Hills and Uplands*. Project report to DEFRA. ADAS Consulting Ltd, Redesdale. http://orgprints.org/6691/05

Kihlberg, I. and Risvik, E. 2007. Consumers of organic foods - value segments and liking of bread. *Food Quality and Preference* 18, 471-481.

Kledal, P. 2002. Who are the potential organic farmers? Limits to growth in organic farming in Denmark. Presented at 13th International IFMA Congress of farm Mananagment, Wagening, Holland, July 2002. Available on http://orgprints.org/385/02

Klonsky, K. 2000. Forces impacting the production of organic foods. *Agriculture and Human Values* 17, 233-243.

Lea, E. and Worsley, A. 2008. Australian consumers' food-related environmental beliefs and behaviours. *Appetite* 50, 207-214.

Lobley, M. and Potter, C. 2004. Agricultural change and restructuring: recent evidence from a survey of agricultural households in England. *Journal of Rural Studies* 20 (4), 499-510.

Lobley, M., Butler, A. and Reed, M. 2009. The contribution of organic farming to rural development: an exploration of the socio-economic linkages of organic and non-organic farms in England. *Land Use Policy* 26, 723-735.

Lobley, M., Reed, M. and Butler, A. 2005. The Impact of Organic Farming on the Rural Economy: CRR Report No 11, University of Exeter, Exeter.

Lockie, S. and Halpin, D. 2005. The 'conventionalisation' thesis reconsidered: structural and ideological transformation of Australian agriculture. *Sociologia Ruralis* 45, 284-307.

Lockie, S., Lyons, K., Lawrence, G. and Grice, J. 2004. Choosing organics: a path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite* 43 (2) 135-146.

Lockie, S., Lyons, K., Lawrence, G. and Mummery, K. 2002. Eating 'green': motivations behind organic food consumption in Australia. *Sociologia Ruralis* 42, 23-40.

Lohr L and Salomonsson, L. 2000. Conversion subsidies for organic production: results from Sweden and lessons for the united States. *Journal of International Association of Agricultural Economists* 22, 133-146.

Magkos, F., Arvaniti, F. and Zampelas, A. 2006. Organic food: buying more safety or just peace of mind? a critical review of the literature. *Critical Reviews in Food Science and Nutrition* 46 23 - 56.

Magnusson, M., Arvola, K.A., Hursti, U.K., Åberg, L. and Sjödén, P. 2001. Attitudes towards organic foods among Swedish consumers. *British Food Journal* 103, 209-227

Makatouni, A. 2002. What motivates consumers to buy organic food in the UK? Results from a qualitative study. *British Food Journal* 104 345-352.

Marsden, T. and Smith, E. 2005. Ecological entrepreneurship: sustainable development in local communities through quality food production and local branding. *Geoforum* 36, 440-451.

Marsden, T., Banks, J. and Bristow, G. 2002. The social management of rural nature: understanding agrarian-based rural development. *Environment and Planning A* 34, 809- 825.

Michèle, E.T. and Michael, D.M. 2009. Effects of agri-environment schemes in a long-term ecological time series. *Agriculture, Ecosystems and Environment* 130, 9-15.

Midmore, P. and Dirks, P.J. 2003. The development and use of'rapid assessment methods' in ex-Ante and ex-Post evaluations of policy, *AES Annual Conference*, Seale Hayne Campus, Plymouth.

Midmore, P. and Lampkin, N. 1994. Modelling the impact of widespread conversion to organic farming: an overview. In Lampkin, N. and Padel, S. (eds.) *The Economics of Organic Farming: an International Perspective.* . CABI International, Wallingford.

Midmore, P. Naspetti, S. Sherwood, A. Vairo, D. Wier, M. and Zanoli, R. 2005. *Consumer Attitudes to Quality and Safety of Organic and Low Input Foods: A Review*. University of Wales, Aberystwyth.

Millock, K. Wier, M. and Andersen, L.M. 2005. *Organic products – a matter of public or private values?* http://orgprints.org/4809/01/4809.rtf

Mills, J., Winter, W. & Powell, J. 2000. *The Socio-Economic Impact of Implementing the UK Biodiversity Action Plan for Species Rich Hedges in Devon*. Report for English Nature. Countryside and Community Research Institute, Cheltenham.

Morgan, K. and Murdoch, J. 2000. Organic vs. conventional agriculture: knowledge, power and innovation in the food chain. *Geoforum* 31, 159-173.

Morison, J., Hine R., and Pretty J. 2005. Survey and Analysis of Labour on Organic Farms in the UK and Republic of Ireland. *International Journal of Agricultural Sustainability* 3(1), 24-43.

Norton, L., Johnson, P., Joys, A., Stuart, R., Chamberlain, D., Feber, R., Firbank, L., Manley, W., Wolfe, M., Hart, B., Mathews, F., MacDonald, D. and Fuller, R.J. 2009. Consequences of organic and non-organic farming practices for field, farm and landscape complexity. *Agriculture Ecosystems & Environment* 129, 221-227.

O'Donovan, P. and McCarthy, M. 2002. Irish consumer preference for organic meat. *British Food Journal* 104, 353-370

Obach, B.K. 2007. Theoretical interpretations of the growth in organic agriculture: Agricultural modernization or an organic treadmill? *Society & Natural Resources* 20, 229-244.

Oudshoorn, F.W., Renes, R.J. and De Boer, I.J.M. 2008. Systems in organic dairy production. *Journal of Agricultural & Environmental Ethics* 21, 205-228.

Padel, S. and Foster, C. 2005. Exploring the gap between attitudes and behaviour: understanding why consumers buy or do not buy organic food. *British Food Journal* 107, 606-625.

Padel, S. and Lampkin, N. 1994. Conversion to organic farming: an overview. in Lampkin, N. and Padel, S. (eds.) *The Economics of Organic Farming: An International Perspective*. CABI International, Wallingford.

Parker, D.C. and Munroe, D.K. 2007. The geography of market failure: edge-effect externalities and the location and production patterns of organic farming. *Ecological Economics* 60, 821-833

Pratt, J. 2009. Incorporation and Resistance: Analytical Issues in the Conventionalization Debate and Alternative Food Chains. *Journal of Agrarian Change* 9, 155-174.

Rahmann, G., Aulrich, K., Barth, K., Boehm, H., Koopmann, R., Oppermann, R., Paulsen, H.M. and Weissmann, F. 2008. Impact of organic farming on global warming - recent scientific knowledge. *Landbauforschung Volkenrode* 58, 71-89.

Raynolds, L.T. 2000. Re-embedding global agriculture: the international organic and fair trade movements. *Agriculture and Human Values* 17, 297-309.

Reed, M., Cook, G. and Twiner, A. 2009. And the food revolution will be digitized: the promotion of organic food and the subversion of radical intent. *Sociologia Ruralis, In press*.

Renting, H., Marsden, T. and Banks, J. 2003. Understanding alternative food networks: exploring the role of short food supply chains in rural development. *Environment and Planning A* 35, 393-411.

Rigby, D., Young, T. and Burton, M. 2001. The development of the prospects for organic farming in the UK. *Food Policy* 26, 599-613.

Roduner, D. 2004. Value-Chains. What is behind this ‚new' key word? And what is the role of development agencies in value chain development in developing countries? *Rural Development News* 2/2005

Röhr, A., Lüddecke, K., Drusch, S., J, M.M. and v. Alvensleben, R. 2005. Food quality and safety—consumer perception and public health concern. *Food Control* 16, 649-655.

Rundlof, M., Bengtsson, J. and Smith, H.G. 2008. Local and landscape effects of organic farming on butterfly species richness and abundance. *Journal of Applied Ecology* 45, 813-820.

Sacks, J. 2002. *The Money Trail: Measuring your Impact on the Local Economy using LM3*. New Economics Foundation, London.

Schifferstein, H.N.J. and Oude Ophuis, P.A.M. 1998. Health-related determinants of organic food consumption in the Netherlands. *Food Quality and Preference* 9, 119-133.

Schneeberger, W., Darnhofer, I. and Eder, M. 2002. Barriers to the adoption of organic farming by cash-crop producers in Austria. *American Journal of Alternative Agriculture* 17, 24-31.

Shepherd, R., Magnusson, M. and Sjödén, P. 2005. Determinants of Consumer Behavior Related to Organic Food. *AMBIO: A Journal of the Human Environment* 34, 352-359.

Simons, D. and Taylor, D. 2007. Lean thinking in the UK red meat industry: a systems and contingency approach. *International Journal of Production Economics* 106, 70-81.

Smith, E. and Marsden, T. 2004. Exploring the 'limits to growth' in UK organics: beyond the statistical image. *Journal of Rural Studies* 20, 345-357.

Soil Association 2001. Organic food and farming 2001. Soil Association Bristol

Soil Association 2006a. *Soil Association evidence to the Environment, Food and Rural Affairs Committee inquiry into 'The potential of England's rural economy'*. SA, Bristol.

Soil Association 2006b. *Organics Market Report 2006*. Soil Association, Bristol.

Soil Association 2007. *Organics Market Report 2007.* Soil Association, Bristol.

Soil Association 2009 *Organics Market Report 2009.* Soil Association, Bristol.

Sotte, F. 2002. Introduction. In Arzeni, A., Esposti, R. and Sotte, F. (eds), *European Policy Experiences with Rural Development*. Kiel: Vauk.

Stagl, S. 2002. Local organic food markets: potentials and limitations for contributing to sustainable development. *Empirica* 29, 145-162.

Sumption, P. Firth, C. Davies, G. 2004. Observations on agronomic challenges during conversion to organic field vegetable production, *Proceedings BGS/AAB/COR Organic Research Conference, Harper Adams, UK*, 176-179.

Terluin, I. 2003. Differences in economic development in rural regions in advanced countries: an overview and critical analysis of theories. *Journal of Rural Studies* 19, 327-344.

Thatcher, J. (2004) *The Cornwall Food Programme: Evaluating the Economic Impact of Local Procurement in the NHS*. Master of Science dissertation in Local Sustainable Development (University of Bradford).

Thatcher, J. and Sharp, L. 2008. Measuring the local economic impact of National Health Service procurement in the UK: an evaluation of the Cornwall Food Programme and LM3. *Local Environment* 13 (3), 253 - 270.

Thompson, J. and Scoones, I. 2009. Addressing the dynamics of agri-food systems: An emerging agenda for social science research. *Environmental Science and Policy, In press*.

Tomlinson, I. 2008. Re-thinking the transformation of organics: The role of the UK government in shaping British organic food and farming. *Sociologia Ruralis* 48, 133-151.

Torjusen, H. Kjærnes, U. Sangstad, L. and O'Doherty Jensen, K. 2004. *European Consumers' Conceptions of Organic Food: A Review of Available Research.* Professional Report no. 4-2004, SIFO, Oslo.

Tovey, H. 1997. Food, environmentalism and rural sociology: on the organic farming movement in Ireland. *Sociologia Ruralis* 37, 21-37.

Tranter, R.B., Holt, G.C. and Grey, P.T. 2007. Budgetary implications of, and motives for, converting to organic farming: Case study farm business evidence from Great Britain. *Biological Agriculture & Horticulture* 25, 133-151.

Tregear, A., Dent, B. and McGregor, M.J. 1994. The demand for organically-grown produce. *British Food Journal* 96, 21-25.

van der Ploeg, J., Renting, H. et al 2000. Rural development: from practice and policies towards theory. *Sociologia Ruralis* 40, 391-400.

Watson, C.A., Walker, R.L. and Stockdale, E.A. 2008. Research in organic production systems - past, present and future. *Journal of Agricultural Science* 146, 1-19.

Watts, D., Ilbery, B. and Maye, D. 2005. Making reconnections in agro-food geography: alternative systems of food provision. *Progress in Human Geography* 29, 22-40.

Wier, M. and Calverly, C. 2002. Market potentional for organic foods in Europe. *British Food Journal* 104, 45 - 62.

Wier, M., O'Doherty Jensen, K., Mørch Andersen, L., Millock, K. 2008. The character of demand in mature organic food markets: Great Britain and Denmark compared. *Food Policy* 33, 406-421.

Williams, C.C. 1997. *Consumer Services and Economic Development*. Routledge, London.

Winter, M. and Rushbrook, L. 2003. *Literature Review of the English Rural Economy*. Research report prepared for Defra. Centre for Rural Policy Research, University of Exeter, Exeter.

Yakovleva, N. 2007. Measuring the sustainability of the food supply chain: a case study of the UK. *Journal of Environmental Policy and Management*, 9, 75-100.

Zanoli, R. (ed.) 2004. *The European Consumer and Organic Food*, Organic Marketing Initiatives and Rural Development, Volume 4, University of Wales, Aberystwyth.

Zanoli, R. François, M. Midmore, P. O'Doherty-Jensen, K. and Ritson, C. 2007. Determining consumer expectations, attitudes and buying behaviour towards "low input" and organic foods. *3rd QLIF Congress, Hohenheim*, Germany, March 20-23, 2007.

Appendix 1: Consumer questionnaires and letters

The consumer survey was divided into three main branches: the national survey, the box survey (Riverford, River Nene, River Swale and Growing with Nature box schemes) and the specialist organic retailer survey (Planet Organic) (see Chapter 2, Figure 2.2). The questionnaires for these separate branches differed only in their first section. Therefore, the National survey is presented in full while for brevity, only the first sections of the box and the retailer are appended. Similarly, while separate letters were sent to customers of different branches and box schemes, only the national letter is shown after the questionnaires.

Food survey

(Region: K/YH)

UNIVERSITY OF EXETER
Centre for Rural Policy Research

*Please make sure the person completing this survey is the **main food shopper** in your household.*

Section 1: About where you shop

1a) How often do you do your ***main*** food shopping? (*Tick **one** box only*)

Daily ❒	More than once a week ❒	Once a week ❒
Once a fortnight ❒	Once a month ❒	Less than once a month ❒

1b) Have you ever bought organic food?

Yes ❒ No ❒ ***If NO, please go to Section 4***

Section 2: About your expectations when you buy organic food

2a) How often do you buy organic food? (*Tick **one** box only*)

I occasionally purchase organic food (a few times a year) ❒
I purchase organic food every month ❒
I purchase organic food every week ❒

2b) Which of the following organic produce do you buy?

❒ Milk	❒ Yogurt	❒ Cheese	❒ Eggs
❒ Vegetables	❒ Fruit	❒ Herbs and spices	❒ Dried beans/pulses
❒ Chicken	❒ Beef	❒ Lamb	❒ Pork
❒ Bread	❒ Chocolate	❒ Baby Food	❒ Pasta Sauces
❒ Wine and Beer	❒ Coffee	❒ Tea	❒ Cordials
❒ Mustard, pickles or chutney	❒ Jam	❒ Health/body care products	❒ Ready Meals

❒ Others (*please tell us*) _____

2c) Where do you buy organic produce?

Local convenience store ❒	Butchers ❒	Greengrocers ❒	Bakers ❒
Health/whole food shop ❒	Supermarket ❒	Delicatessen ❒	Specialist organic shop ❒
Farmers market ❒	Farm shop ❒	Internet ❒	Veg Box scheme ❒
Meat Box scheme ❒	Other (*please tell us*) _____ ❒		

2d) If you have **NEVER bought organic produce** direct from the producer (such as from a farmers' market, farm shop, veg and meat box schemes or via the internet) please indicate to what extent you agree or disagree with the following statements

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I don't buy direct from producers because:					
It is too expensive	❒	❒	❒	❒	❒
There are no suppliers available where I live	❒	❒	❒	❒	❒
I have never thought about it	❒	❒	❒	❒	❒
I didn't know that I could	❒	❒	❒	❒	❒
It is too inconvenient	❒	❒	❒	❒	❒
Not interested in buying direct from producers	❒	❒	❒	❒	❒
Supermarkets meet all my needs	❒	❒	❒	❒	❒

2e) Please indicate to what extent you agree or disagree with the following statements concerning organic food

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I buy organic produce because it is healthier for me and/or my children	❒	❒	❒	❒	❒
I buy organic produce because it is safer for me and/or my children	❒	❒	❒	❒	❒
I buy organic produce to treat myself	❒	❒	❒	❒	❒
I buy organic produce to cook a special meal for myself or my family	❒	❒	❒	❒	❒
I buy organic produce to cook a special meal for my friends	❒	❒	❒	❒	❒
I only buy organic produce when I have some extra money	❒	❒	❒	❒	❒
I mainly buy organic produce when I am on holiday	❒	❒	❒	❒	❒
I buy organic produce because it is better for the environment	❒	❒	❒	❒	❒
I buy organic produce to reduce my food miles	❒	❒	❒	❒	❒
I buy organic produce because I want to support British farmers	❒	❒	❒	❒	❒

2f) Do you buy organic vegetables?

Yes ❒ No ❒ (if ***NO***, please go to ***Question 2h***)

2g) Thinking about when you buy ***organic vegetables and fruit***, please indicate to what extent you agree or disagree with the following statements

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I expect organic vegetables to be as cheap as non-organic vegetables	❒	❒	❒	❒	❒
I expect organic vegetables to be fresher than non-organic vegetables	❒	❒	❒	❒	❒
I expect organic vegetables to taste better than non-organic vegetables	❒	❒	❒	❒	❒
I expect organic vegetables to have a higher nutritional quality	❒	❒	❒	❒	❒
I expect to buy organic vegetables only when they are in season	❒	❒	❒	❒	❒
I expect organic vegetables to be free from soil	❒	❒	❒	❒	❒
I expect organic vegetables to be free from pesticides	❒	❒	❒	❒	❒
I expect organic vegetables to be safer to eat than non-organic vegetables	❒	❒	❒	❒	❒
I expect organic vegetables to have minimum or no packaging	❒	❒	❒	❒	❒
I expect organic vegetables to be locally produced	❒	❒	❒	❒	❒

2h) Do you buy organic meat?

Yes ❒ No ❒ (if ***NO***, please go to ***Question 2j***)

2i) Thinking about when you buy **organic meat**, please indicate to what extent you agree or disagree with the following statements

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I expect organic meat to be as cheap as non-organic meat	❒	❒	❒	❒	❒
I expect organic meat to be leaner than non-organic meat	❒	❒	❒	❒	❒
I expect organic meat to taste better than non-organic meat	❒	❒	❒	❒	❒
I expect organic meat to have a higher nutritional quality	❒	❒	❒	❒	❒
I expect organic meat to be free from growth hormones	❒	❒	❒	❒	❒
I expect organic meat to be produced to the highest animal welfare standards	❒	❒	❒	❒	❒
I expect organic meat to be reared as free range	❒	❒	❒	❒	❒
I expect organic meat to be safer to eat than non-organic meat	❒	❒	❒	❒	❒
I expect organic meat to be locally produced	❒	❒	❒	❒	❒

2j) Do you buy organic milk?

Yes ❒ No ❒ (if ***NO***, please go to ***Question 2l***)

2k) Thinking about when you buy **organic milk**, please indicate to what extent you agree or disagree with the following statements

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I expect organic milk to be as cheap as non-organic milk	❒	❒	❒	❒	❒
I expect organic milk to taste better than non-organic milk	❒	❒	❒	❒	❒
I expect organic milk to have a higher nutritional quality	❒	❒	❒	❒	❒
I expect organic milk to be free from antibiotics	❒	❒	❒	❒	❒
I expect organic milk to be produced to the highest animal welfare standards	❒	❒	❒	❒	❒
I expect organic milk to be safer to drink than non-organic milk	❒	❒	❒	❒	❒
I expect organic milk to be locally produced	❒	❒	❒	❒	❒

2l) Thinking about when you buy organic produce in general, please indicate to what extent you agree or disagree with the following statements

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I expect to know where organic food is produced	❒	❒	❒	❒	❒
I expect that organic produce has not been transported by air	❒	❒	❒	❒	❒
I expect organic produce to be free from chemical residues	❒	❒	❒	❒	❒
I expect organic farming practices to be beneficial to the environment	❒	❒	❒	❒	❒
I do not expect organic produce to be genetically modified	❒	❒	❒	❒	❒
I expect British farmers to supply organic produce	❒	❒	❒	❒	❒
I expect to buy organic produce only when it season	❒	❒	❒	❒	❒
I expect to be able to give feedback about produce bought	❒	❒	❒	❒	❒
I expect to be have personal contact with the producer	❒	❒	❒	❒	❒

Section 3: About your future purchases of organic food

3a) In the future, do you expect to change the amount of organic food that you buy and consume?

I expect to ***increase*** *the amount of organic food that I buy and consume* ❒

I expect to ***decrease*** *the amount of organic food that I buy and consume* ❒

I expect ***no change*** *in the amount of organic food that I buy and consume* ❒

If NO CHANGE, please go to Section 5.

3b) I expect to change the amount of organic food I buy because:

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I will have more income	❒	❒	❒	❒	❒
I will have less income	❒	❒	❒	❒	❒
I can buy non-organic products for less	❒	❒	❒	❒	❒
I am concerned about food scares (BSE, Foot & Mouth, Bird Flu)	❒	❒	❒	❒	❒
I want to support improving animal welfare	❒	❒	❒	❒	❒
I am concerned about pesticides on vegetables and fruit	❒	❒	❒	❒	❒
I am concerned about genetically modified organisms in my food	❒	❒	❒	❒	❒
I want to support British farmers and producers	❒	❒	❒	❒	❒
I am concerned about climate change	❒	❒	❒	❒	❒
I want to buy more vegetables and fruit that are in season	❒	❒	❒	❒	❒
I want to reduce food miles	❒	❒	❒	❒	❒
Other reason (*please tell us*) _____	❒	❒	❒	❒	❒

Now please go to Section 5

Section 4: About why you do NOT buy organic food

4a) Please indicate to what extent you agree or disagree with the following statements concerning why do you **not** buy organic food:

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I do not know what organic means	❒	❒	❒	❒	❒
Organic produce is too expensive	❒	❒	❒	❒	❒
I never see any organic produce where I shop	❒	❒	❒	❒	❒
Organic produce tastes no different	❒	❒	❒	❒	❒
Organic produce has no higher nutritional value than non-organic produce	❒	❒	❒	❒	❒
Organic produce is no safer than non-organic food	❒	❒	❒	❒	❒
Organic produce is not fresher than non-organic produce	❒	❒	❒	❒	❒
Organic produce is mostly imported	❒	❒	❒	❒	❒
Organic farming does not support better animal welfare conditions	❒	❒	❒	❒	❒
Organic is just a marketing label	❒	❒	❒	❒	❒
Organic food does not support British farmers	❒	❒	❒	❒	❒
Organic farming does not benefit the environment	❒	❒	❒	❒	❒

4b) What would make you change your mind so that you bought organic food?

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
Cheaper prices	❒	❒	❒	❒	❒
More income	❒	❒	❒	❒	❒
Easier availability	❒	❒	❒	❒	❒
Better quality	❒	❒	❒	❒	❒
Clearer labelling	❒	❒	❒	❒	❒
Nothing would change my mind	❒	❒	❒	❒	❒
Other reason (*please tell us*) _____	❒	❒	❒	❒	❒

Section 5: About food you buy that is locally produced but is NOT organic

5a) What do you understand by the term **locally** produced food?

5b) Which is most important to you? (Use each of the numbers 1, 2, 3 and 4 **ONCE** to indicate order of importance, with 1 as the most important and 4 as the least important)

Local ☐

Organic ☐

Fresh ☐

From a trusted source ☐

5c) If you had to make a choice between buying organic food that is not local or food that is locally produced but not organic which ***ONE*** would you purchase?

Locally produced but not organic ❒

Organically produced but not locally grown ❒

Whichever is the cheaper ❒

Section 6: About yourself

6a) Which of the following best describes your age?

Under 18 ❒ 18-24 ❒ 25-39 ❒ 40-54 ❒ 55-64❒ 65 and over ❒

6b) Are you male or female?

Male ❒ Female ❒

6c) What is the **highest** education qualification that you have?

Degree, Post graduate or member of professional institute ❒
Higher education qualifications but lower than degree (e.g. HNC/HND) ❒
BTEC, ONC/OND ❒
A or AS levels ❒
GNVQs/NVQs ❒
School qualifications (O'levels, GCSEs etc.) ❒
No qualifications ❒
Other (*please tell us*)_____ ❒

6d) Which best describes your ethnic background?

White ❒ Mixed ❒ Black or Black British ❒ Asian or Asian British ❒ Chinese ❒
Other ethnic group (*please tell us*) _____ ❒

6e) Have you visited a farm in the last 12 months?

Yes ❒ No ❒

6f) Please use the space below and overleaf to make any comments that you may have regarding organic food

---

Food survey prize draw: Thank you for completing this questionnaire. If you would like to be entered in to our food survey prize draw for £250 (1st prize), £100 (2nd prize) and £50 (3rd Prize) vouchers from your favourite box scheme or supermarket, please tick the box and enter your name and telephone number below.* ❒

*All attempts will be made to supply the winner preferred voucher. Should this not be possible, we will ask the winner for a second choice.
The draw will take place on 15th July 2008 and the winners will be notified by telephone on this date.

In early 2009 we will be inviting consumers to a policy forum to discuss the results of this research. If you wish to be invited please tick the box and enter you name and contact details below. ❒

Name _____ Telephone number _____
Email address:_____

Organic box & food survey

UNIVERSITY OF EXETER
Centre for Rural Policy Research

*Please make sure the person completing this survey is the **main food shopper** in your household.*

Section 1: About your Growing with Nature Veg Box

1a) How often do you do receive your organic box

Once a week ❒ Once a fortnight ❒ Once a month ❒ Less than once a month ❒

1b) Why did you decide to take part in this organic box scheme?

1c) How long have you been a member of this box scheme?

1d) Thinking about why you have vegetables delivered in a box, please indicate which ***three*** of the following motivations are most important to you?

(*Please tick **ONLY three boxes***)

Support for UK growers ❒
Support for the local economy ❒
Getting fresher vegetables ❒
Health benefits of organic ❒
Environmental benefits of organic growing (wildlife, soil management etc) ❒
Taste benefits of organic ❒
Lower food miles/carbon emissions ❒
Desire to use the supermarket less ❒
Convenience of home delivery ❒
Sense of connection with the farm and growing ❒
Being introduced to new vegetables ❒
Being encouraged to cook more ❒
Value of money ❒

1e) Please indicate to what extent you agree or disagree with the following statements about your box scheme:

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I expect the box scheme to use minimum or no packaging	❒	❒	❒	❒	❒
I expect that produce in the box has not been transported by air	❒	❒	❒	❒	❒
I expect to able to give feedback about the produce in the box	❒	❒	❒	❒	❒
I expect the box scheme to provide vegetables that are in season	❒	❒	❒	❒	❒
I expect information to be provided about the different vegetables in the box	❒	❒	❒	❒	❒
I expect the vegetables to be produced using environmental friendly farming	❒	❒	❒	❒	❒
I expect the vegetables in the box to be fresh and ripe	❒	❒	❒	❒	❒

1f) Please indicate to what extent you agree or disagree with the following statements about the vegetables in your box?

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I expect organic vegetables to be as cheap as non-organic vegetables	❒	❒	❒	❒	❒
I expect organic vegetables to be fresher than non-organic vegetables	❒	❒	❒	❒	❒
I expect organic vegetables to taste better than non-organic vegetables	❒	❒	❒	❒	❒
I expect organic vegetables to have a higher nutritional quality	❒	❒	❒	❒	❒
I expect to buy organic vegetables only when they are in season	❒	❒	❒	❒	❒
I expect organic vegetables to be free from soil	❒	❒	❒	❒	❒
I expect organic vegetables to be free from pesticides	❒	❒	❒	❒	❒
I expect organic vegetables to be safer to eat than non-organic vegetables	❒	❒	❒	❒	❒
I expect organic vegetables to have minimum or no packaging	❒	❒	❒	❒	❒
I expect organic vegetables to be locally produced	❒	❒	❒	❒	❒

1g) How easy do you find life with a veg box?

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
Find it easy to use up all the contents	❒	❒	❒	❒	❒
Struggle a bit to use up all the contents	❒	❒	❒	❒	❒
Really find veg boxes quite difficult to use	❒	❒	❒	❒	❒

1h) What reasons would stop you buying your organic veg box?

Organic food survey

UNIVERSITY OF EXETER
Centre for Rural Policy Research

*Please make sure the person completing this survey is the **main food shopper** in your household.*

<Store: Fulham>

Section 1: About Shopping in Planet Organic

1a) How often do you buy organic produce in this store?

Daily ❒	More than once a week ❒	Once a week ❒
Once a fortnight ❒	Once a month ❒	Less than once a month ❒

1b) Which Planet Organic store do you mainly use?

Torrington Place ❒	Westbourne Grove ❒	Fulham ❒

1c) Why did you decide to shop in Planet Organic?

1d) How long have you been shopping in Planet Organic?

1e) What organic produce do you regularly buy at this shop?

❒ Milk	❒ Yogurt	❒ Cheese	❒ Eggs
❒ Vegetables	❒ Fruit	❒ Herbs and spices	❒ Dried beans/pulses
❒ Chicken	❒ Beef	❒ Lamb	❒ Pork
❒ Bread	❒ Chocolate	❒ Baby Food	❒ Pasta Sauces
❒ Wine and Beer	❒ Coffee	❒ Tea	❒ Cordials
❒ Mustard, pickles or chutney	❒ Jam	❒ Health/body care products	❒ Ready Meals

❒ Others (*please tell us*) _____

1e) When in Planet Organic, do you buy 'food to go'?

Yes, to eat in store ❒ Yes, to eat out of store ❒ No ❒

1f) Please indicate how far you agree or disagree with the following statements regarding the organic produce available from Planet Organic

*On a scale of one to five (**1 = Agree strongly, 5 = Disagree strongly**)*	*1*	*2*	*3*	*4*	*5*
I expect the organic shop to provide only produce that is in season	❒	❒	❒	❒	❒
I expect the food to have been produced using environmental friendly ways	❒	❒	❒	❒	❒
I expect the produce in the organic shop to be fresh and ripe	❒	❒	❒	❒	❒
I expect to be able to know where meat in the organic shop is from	❒	❒	❒	❒	❒
I expect that organic produce has not been transported by air	❒	❒	❒	❒	❒
I expect the organic shop to use minimum or no packaging of fresh produce	❒	❒	❒	❒	❒

1g) What would stop you purchasing from Planet Organic?

1h) Other than using Planet Organic, where else do you buy organic produce?

Local convenience store ❒	Butchers ❒	Greengrocers ❒	Bakers ❒
Health/whole food shop ❒	Supermarket ❒	Delicatessen ❒	Specialist organic shop ❒
Farmers market ❒	Farm shop ❒	Internet ❒	Veg Box scheme ❒
Meat Box scheme ❒	Other (*please tell us*) _____ ❒		

1i) Which of the following organic produce do you buy that is NOT from Planet Organic?

❒ Milk	❒ Yogurt	❒ Cheese	❒ Eggs
❒ Vegetables	❒ Fruit	❒ Herbs and spices	❒ Dried beans/pulses
❒ Chicken	❒ Beef	❒ Lamb	❒ Pork
❒ Bread	❒ Chocolate	❒ Baby Food	❒ Pasta Sauces
❒ Wine and Beer	❒ Coffee	❒ Tea	❒ Cordials
❒ Mustard, pickles or chutney	❒ Jam	❒ Health/body care products	❒ Ready Meals

❒ Others (*please tell us*) _____

UNIVERSITY OF EXETER

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES
incorporating the Institute of Arab and Islamic Studies

CENTRE FOR RURAL POLICY RESEARCH
Amory Building
Rennes Drive
Exeter
UK EX4 4RJ

Telephone +44 (0)1392 262438
Fax +44 (0)1392 263305
Email crprmail@exeter.ac.uk
Web www.centres.ex.ac.uk/crpr

«Title» «Forename» «Surname»
«Address1»
«Address2»
«Address3»
«Address4»
«Address5»
«Mailing_Postcode»

June 12th 2008

Dear «Title» «Forename» «Surname»

Food survey and prize draw

I am writing to invite you (or the main person in your household responsible for buying food on a regular basis) to take part in our survey about the purchasing and consumption of food. This is timely research given recent increases in food prices and your views are important to us. Although we are particularly interested in organic produce, it is just as important to us that we receive questionnaires from consumers that *do not* buy organic food. As a token of our appreciation we are offering participants the chance to enter into our food survey prize draw on *July 15th 2008* for a voucher from a shop of the winner's choice*: 1st prize of a £250 voucher; 2nd prize of £100 voucher; and 3rd prize of £50 voucher.

The enclosed questionnaire forms part of a research project that is being conducted by the Centre for Rural Policy Research (University of Exeter). Information about the project is given on the reverse side of this letter. All information provided will be handled in the strictest confidence: your details will ***not*** be passed on to any other organisation and you will ***not*** be identifiable in any of the survey results. We do hope you will be able to help us build an accurate picture of consumers' attitudes towards organic food by completing the questionnaire and returning it in the **freepost** envelope (no stamp required) provided by **15th July 2008**. If you have any queries, please contact Dr Allan Butler, who is a member of the research team, on 01392 262438 (Allan.J.Butler@Exeter.ac.uk).

With many thanks in advance for your time and co-operation.

Yours sincerely,

Dr Matt Lobley
Assistant Director
Centre for Rural Policy Research

*All attempts will be made to supply the winners with their preferred voucher. Should this not be possible, we will ask the winner for a second choice.

UNIVERSITY OF EXETER
Centre for Rural Policy Research

Socio-economic aspects of local and national organic farming markets

The project

After rapid growth, the area of organically farmed land has remained relatively constant in recent years. On the other hand, retail sales continue to grow, increasing by 30% in 2005, leading to an estimated annual market value of £1.6 billion. Whilst research suggests that organic farming can provide a wide range of benefits, including positive employment impacts, improved environmental benefits and support for local and regional economies, constraints in the supply chain, in particular limited growth in the area farmed, mean that the sourcing of organic produce is increasingly met by imported food, although this does vary considerably depending on the sector studied. Clearly, there are a range factors that affect the ability of organic producers in different sectors to meet consumer demand. In turn, consumers have their own expectations of organic food such as seasonality of produce, local food supply, and the variety of products. It is against this background that this Defra funded research project will explore the opportunities and barriers to increasing organic production from farms in England and Wales and consider the implications for rural development. The research will also appraise the extent to which organic farm businesses and associated food chains meet public expectations of organic food. The research will examine these issues through an integrated approach designed to combine a state of the art review of existing knowledge with new empirical investigations of producer and consumer behaviour, all supported by a specially convened panel of expert stakeholders.

Objectives

1. Review existing knowledge on organic supply, organic food chains and barriers to the expansion of organic production through an analysis of relevant literature and evidence provided by key stakeholders.
2. Characterise the organic market according to gross output values, net output values, physical flows of commodities including use of environmental resources, flows of services/consultants, employment, destination of sales, and imports and exports. These data will be used to describe simple value chain models and to create a national benchmark for organic businesses.
3. Examine the impact of organic farming on rural development in terms of local employment and income multipliers (including analysis of supply to public sector bodies such as schools and hospitals).
4. Develop whole chain models to examine upstream and downstream linkages of organic businesses to develop a detailed analysis of their relationships with different retail outlets, which sell organic produce, and those that supply the production process.
5. Identify and explore opportunities and barriers to the expansion of organic production through both increasing output from existing producers and the conversion of non-organic producers.
6. Consider the extent to which the current supply of organic food meets consumer expectations regarding food quality, safety, seasonality, etc.
7. Develop implications for rural policy

This project is being undertaken by a consortium of researchers from The University of Exeter, The Countryside and Community Research Unit (University of Gloucestershire), Coventry University, Henry Doubleday Research Association (HDRA) and Imperial College London.

The results of this research will be published on the CRPR and Defra websites

For further information on this project visit the CRPR website: www.centres.ex.ac.uk/crpr/ or contact Dr Matt Lobley (01392 264539, m.lobley@exeter.ac.uk)

Appendix 2: The geographical distribution of organic farming in England and Wales

In 1999, Ilbery *et al.* wrote 'Geographically, the core organic area in England and Wales is confirmed as a crescent of contiguous counties in central-southern England incorporating Hereford and Worcestershire, Gloucestershire, Oxfordshire, Berkshire, Devon and Dorset. Secondary outliers of considerable significance are Dyfed in south-west Wales and East Sussex in South East England' (p. 290). The top 10 counties in 1996 accounted for just over 50% of all organic holdings and 70% of the total organic area in England and Wales. In terms of organic holdings, 22 counties had a LQ of greater than one and these were essentially concentrated in central-southern and south-western parts of England and Wales. Just three counties (Wiltshire, Dyfed and Devon) accounted for 32% of the organic area, with Wiltshire (3,362 ha) having 82% more than the second ranked Dyfed (1,845 ha). However, the LQs for the total organic area showed a slightly different pattern. While Wiltshire recorded an exceptionally large LQ of 6.4, Dyfed and Devon fell to ninth and tenth places respectively and were replaced in second and third places by Gloucestershire (3.9) and Dorset (3.8); East Sussex (2.7) and Berkshire (2.6) ranked fourth and fifth, even though they did not come in the top 10 counties in terms of organic area.

Ilbery *et al.*(1999) continued by stating that 'in national terms, the organic core is a reasonably marginal cereal production area, but one where organic premiums may enable farmers to make adequate profits' (p. 293) and 'the key organic areas do not coincide with the arable heartland of eastern England where intensive, industrialised cereal production is the norm'. In conclusion, they suggested that a 'process of spatial rationalisation seems to be occurring, in which the organic sector is becoming increasingly concentrated in a select group of counties (the organic core) in central-southern England, but there is little understanding of why this is happening' (p. 294).

A decade later, this process of spatial rationalisation seems to have continued, but with the 'organic core' now firmly centred on the south-west rather than central-southern region of England. Indeed, the South West region accounted for 34.5% of all organic farms, 31.8% of the total organic area and 38.5% of the area of organic conversions in England and Wales in 2006 (Table A2.1). For each of these 'indicators' of organic farming, Wales and the South East region came second and third respectively. Conversely, the North East, North West, East Midlands, eastern and Yorkshire/Humberside regions fared quite badly in terms of most of these 'indicators'. The LQ analysis confirmed the pre-eminence of the South West region, but interestingly the North East region was ranked second in terms of organic conversions (ahead of both the South East and Wales) and third for organic area (ahead of the South East, see Table A2.1). This demonstrates the importance of analysing organic farming data in relation to general farming data rather than in isolation. Nevertheless, analysis at the broad regional scale hides considerable variations at lower scales of spatial analysis.

Table A2.1: Regional distribution of organic farming in 2006: raw data and location quotients

	Number of organic farms			Organic area			Organic conversion		
	No.	**%**	**LQ**	**Area**	**%**	**LQ**	**Area**	**%**	**LQ**
East Midlands	235	6.3	0.7	12,447	4.2	0.37	2062	2.5	0.22
Eastern	266	7.2	0.75	10,785	3.7	0.28	3,630	4.4	0.33
North East	116	3.1	1.08	22,617	7.7	1.41	6,923	8.5	1.54
North West	173	4.7	0.48	19,458	6.6	0.76	1,781	2.2	0.25
South East	423	11.4	1.01	35,798	12.2	1.09	13,183	16.1	1.44
South West	1282	34.5	1.61	93,416	31.8	1.82	31,558	38.5	2.21
West Midlands	351	9.5	0.86	26,310	9.0	1.01	3,974	4.9	0.54
Yorks/Humber	155	4.2	0.46	9,033	3.1	0.32	3,388	4.1	0.43
England	3,001	80.9	0.96	229,864	78.3	0.91	66,499	81.1	0.94
Wales	710	19.1	1.21	63,546	21.7	1.55	15,426	18.8	1.35
England/Wales	3,711	100		293,410	100		81,925	100	

Table A2.2 confirms the dominance of Devon in the South West region of England as the leading organic farming CUA, in terms of organic farms, organic area and the area in organic conversion. It has more than twice the number of organic holdings (431) than the second ranked county, Cornwall (195), and nearly 9000 ha in conversion compared to 5872 ha in the second placed county of Somerset. Wiltshire and Somerset are other important organic farming counties in the south-west, whereas the positions of Cornwall and Dorset vary considerably according to the different organic 'indicators'. The top 10 counties now account for nearly 48% of all organic holdings (down from just over 50% in 1996) and 52% of the total organic area in England and Wales (down from 70% in 1996). This suggests that, unlike at the regional scale, organic farming is becoming more dispersed at the CUA level. However, 20 CUA (compared to 22 in 1996) now have a LQ of over 1. These CUA are located, as in 1996, mainly in the south-west, central-southern and South East regions of England and in southern parts of Wales, with a prominent outlier in Northumbria in the North East (Figure A2.1). The Eastern, East Midlands (except Lincolnshire), North West and North East (except Northumbria) regions all have LQ values of less than one. In terms of organic area, the top three CUA (Devon, Wiltshire and Northumbria) now account for 23% (down from 32% in 1996). Significantly, if one compares the organic area with the number of organic farms in each CUA, Northumbria emerges with easily the largest average area of organic production per farm, which at 236.5 ha (19,627 ha on 83 farms) is a long way ahead of the second most important CUA – Wiltshire, at 147.1 ha). In contrast, the average organic area per farm in other leading organic counties is below 100 ha and includes Devon at 57.6, Cornwall at 47.4, Somerset at 64.9, Ceredigion at 80.7 and Gloucestershire at 88.5.

When examining the top 10 CUA in terms of LQ (Table A2.3), some interesting contrasts emerge with the raw organic data (Table A2.2). Devon is no longer the number one county on any organic 'indicator'. It slips to seventh place in terms of organic farms, tenth for organic area and ninth for organic conversions. This is quite a

significant reversal and, when comparing the relative number of organic farms and organic area/conversions with all farms and the total agricultural area, other CUA become much more prominent. For example, Wiltshire is now the leading CUA in terms of organic farms (LQ of 2.25) and organic area (2.95), but falls to sixth place for organic conversions (2.66). Likewise, both Pembrokeshire and Ceredigion improve their relative positions considerably with the latter ranked first in terms of organic conversions (3.58), fourth for organic area (2.21) and sixth for the number of organic farms (1.74), and the former now ranked second for organic farms (2.24) and third for organic area (2.53). Other CUA to improve their relative positions include Dorset, Gloucestershire and East Sussex, while Somerset and Powys move in the opposite direction. One final observation from Tables A2.2 and A2.3 is the almost total absence of Herefordshire and Worcestershire; this contrasts with their dominant position in the 'organic core' in 1996.

Table A2.2: Top 10 counties based on raw organic data, 2006

Organic farms	Organic area	Organic conversion
Devon (431)	Devon (24813)	Devon (9000)
Cornwall (195)	Wiltshire (22218)	Somerset (5872)
Somerset (195)	Northumbria (19627)	Wiltshire (5594)
Powys (162)	Powys (16166)	Northumbria (5404)
Wiltshire (151)	Somerset (12658)	Oxfordshire (5072)
Dorset (141)	Gloucester (12214)	Ceredigion (3995)
Gloucester (138)	Shropshire (11974)	N W Wales (3650)
Pembroke (124)	Cumbria (11614)	Gloucester (3640)
Hereford (121)	N W Wales (10895)	Dorset (3581)
Lincoln (111)	Dorset (10589)	Cornwall (3209)

Table A2.3: Top 10 counties based on location quotient analysis, 2006

Organic farms	Organic area	Organic conversion
Wiltshire (2.25)	Wiltshire (2.95)	Ceredigion (3.58)
Pembroke (2.24)	East Sussex (2.65)	Oxfordshire (3.38)
Dorset (2.05)	Pembroke (2.53)	S. Yorkshire (3.00)
Northumbria (1.84)	Ceredigion (2.21)	West Sussex (2.90)
Gloucester (1.75)	Gloucester (2.14)	Somerset (2.74)
Ceredigion (1.74)	Dorset (1.89)	Wiltshire (2.66)
Devon (1.71)	Northumbria (1.87)	Dorset (2.29)
East Sussex (1.62)	S. Yorkshire (1.85)	Gloucester (2.29)
Oxfordshire (1.61)	West Sussex (1.81)	Devon (2.21)
Berkshire (1.56)	Devon (1.70)	N W Wales (1.93)

Figure A2.2 confirms that the spatial distribution of LQ values for the total organic area is similar to that for the number of organic farms. Twenty three CUA have a LQ of greater than one and these are again concentrated mainly in the south-west, South East and central-southern regions of England and in Wales, with prominent outliers this time in Northumbria, Shropshire and South Yorkshire. In terms of the area of organic conversion, the three topped ranked CUA are Ceredigion (LQ of 3.58), Oxfordshire (3.38) and, surprisingly, South Yorkshire (3.0). Figure A2.3 thus

highlights a more dispersed geography than Figures A2.1 and A2.2, although eastern, east Midland and North West regions of England still fail to make any significant showing.

Overall, and in contrast to the single 'organic core' in central-southern England and the secondary outliers in south-west Wales and East Sussex in 1996, there now appears to be three 'core' areas of organic farming: the south-west (notably Wiltshire, Devon, Dorset and Gloucestershire), the South East (notably East Sussex, West Sussex, Oxfordshire and Berkshire) and south Wales (notably Ceredigion and Pembroke in the south-west and Glamorgan in the South East). Northumbria is now a significant outlier of organic farming in the North East, with South Yorkshire showing signs of relative significance in terms of both organic area and organic conversions, but not organic farms (see Figure A.2.3).

Figure A2.1: Location quotient analysis of number of farms in England and Wales

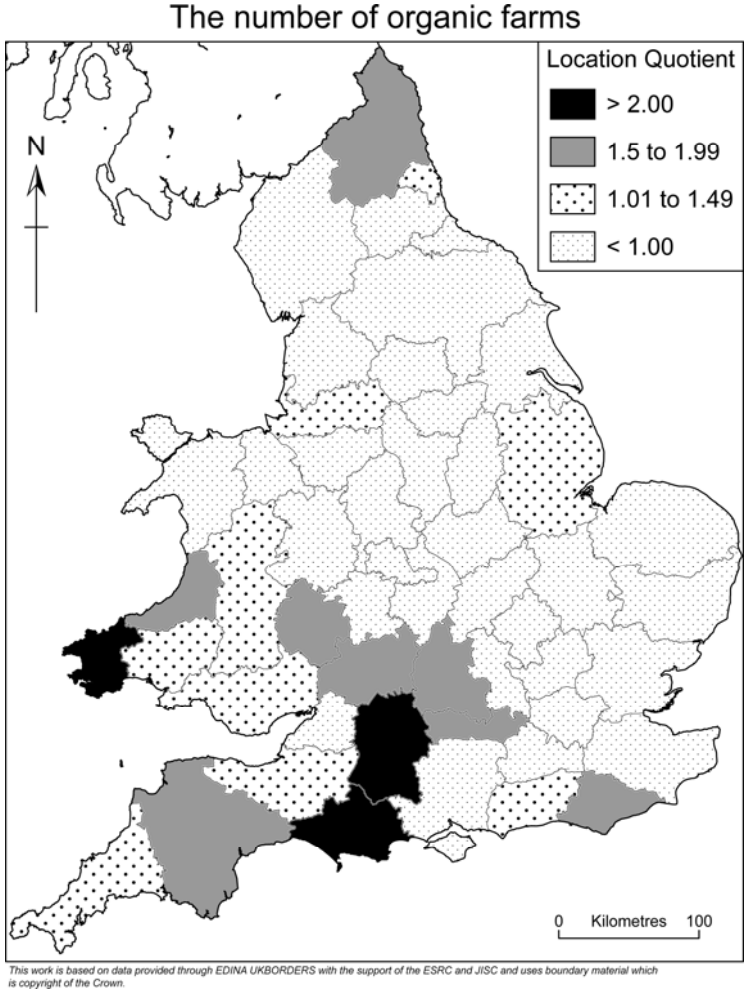


Figure A2.3: Location quotient analysis of the area of organic land in England and Wales

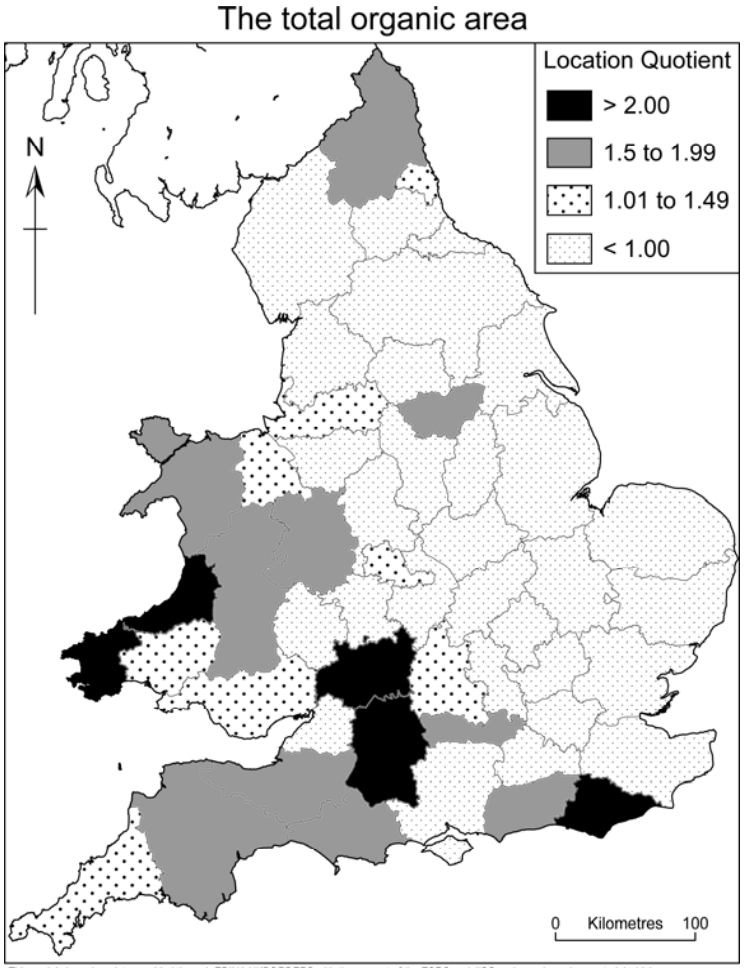
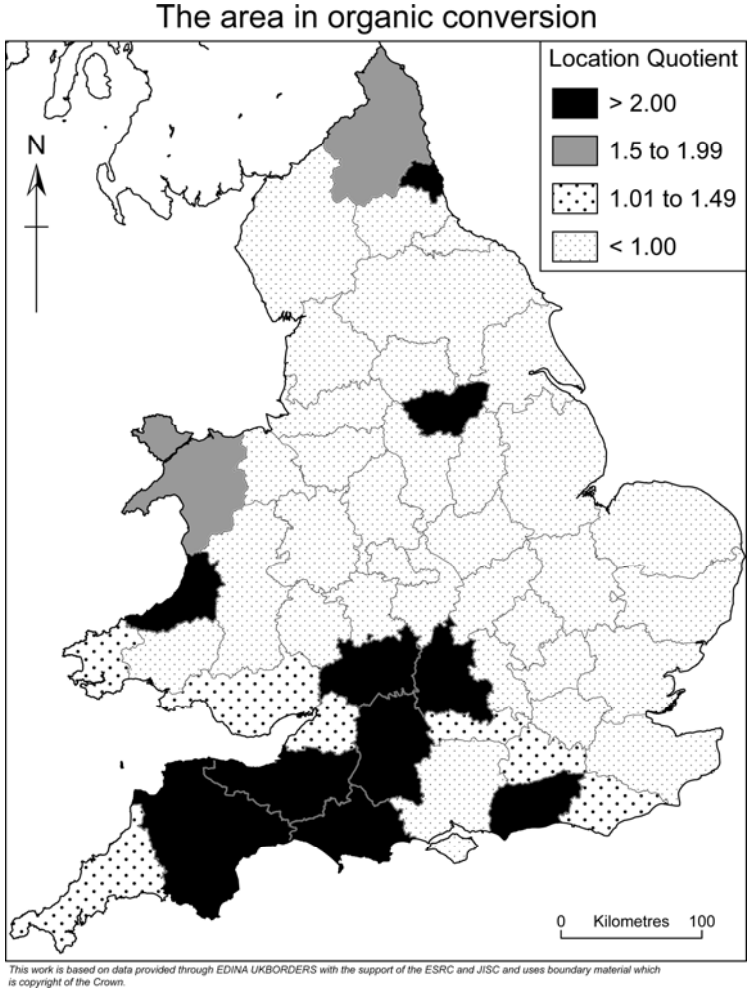


Figure A2.3: Location quotient analysis of the area of organic land in conversion in England and Wales



Appendix 3: Producer survey questionnaire and producer survey covering letter

Organic farmer and producer survey

UNIVERSITY OF EXETER
Centre for Rural Policy Research

«Name» («POST»)

*The person completing this form should be the principal farmer, producer or manager, if possible. **ALL** information given will be treated in the strictest confidence.*

Section A: Your general farm business

What is your status on the farm?
☐ Farmer/Producer ☐ Manager ☐ Other (*please specify*).....

Land and agricultural enterprises

What is the total area of land that you manage?

	Acres	*or*	Hectares
Area owned	.....		.....
Area rented IN	.....		.....
Area rented OUT	.....		.....
Other	.....		.....
Total area farmed	.....		.....

What area of your land is certified organic? .....Acres ***or*** ..... Hectares

Do you presently have any land that is in organic conversion? ☐ Yes ☐ No
If ***yes***, how large is this area? .....Acres ***or***.....Hectares

Which ***one*** of the following best characterises your farm?
☐ Dairy ☐ Cattle/sheep ☐ Arable ☐ Pig/Poultry
☐ Mixed ☐ Horticulture ☐ Other (*please specify*).....

Which of the following agricultural/horticultural enterprises do you have on your farm?
☐ Dairying ☐ Beef/Suckler ☐ Sheep/lambs ☐ Pigs
☐ Poultry ☐ Goats ☐ Cereals ☐ Vegetables
☐ Salads ☐ Fruit ☐ Herbs ☐ Nuts
☐ Other (*please specify*) .....

Which ***one*** of these enterprises is most important in terms of turnover? .....

Are any of your agricultural enterprises ***not*** organic? ☐ Yes ☐ No
If ***yes***, which agricultural enterprises are not organic? .....

Sales and purchases

What is the approximate value of ***all*** agricultural goods and services that you sold in the most recent financial year? (*excluding VAT, grants, subsidies*)

£.....

Approximately, what percentage of your sales is purely organic?.....%

What is the approximate value of ***all*** goods and services that you bought in the most recent financial year? (*Please exclude VAT, rent and labour and capital investments*)

£.....

What percentage of your purchases do you estimate is purely on inputs for the production or processing of organic produce? .....%

Labour

How many people work in your business? (*please include all those that farm, manage, process, pack, retail and distribute farm produce*)

	Full-time	Part-time	Casual	Seasonal
You and your family	.....	.....	.....	.....
Employees	.....	.....	.....	.....

Is your entire workforce (family and employed labour) purely engaged in organic production or processing? ☐ Yes ☐ No

Please estimate the gross annual salary costs for
Yourself and family £..... Employees £.....

Do you experience any particular difficulties in either recruiting or retaining staff? (*e.g. wage costs, skills level, language barriers*)
☐ Recruiting only ☐ Retaining only ☐ Both recruiting and retaining
☐ No problems experienced ☐ Not applicable (N/A)

If you experience any particular difficulties in either recruiting or retaining staff, please explain

Please estimate the percentage of your total employed labour that can be described as migrant workers .....%

Please note: the remainder of this questionnaire refers only to your organic farming and sales including that presently in conversion.

Section B: Organic marketing channels

Where do you see the main focus of your organic sales? (*tick only one*)

☐ Local ☐ Regional ☐ National ☐ Outside UK

How does this compare to five years ago?

☐ More local ☐ More regional ☐ More national ☐ More outside UK
☐ Less local ☐ Less regional ☐ Less national ☐ Less outside UK
☐ No change

In terms of **value of all organic sales**, what percentage of your farm produce do you sell through the following marketing channels?

Own box scheme (Meat only)	.....%
Own box scheme (Vegetable/Fruit)	.....%
Box scheme run by a co-operative	.....%
Farmers' market	.....%
Internet sales	.....%
Direct to another farmer	.....%
Own farm shop	.....%
Local privately owned shop	.....%
Contract with supermarket	.....%
Restaurants and private caterer	.....%
Public sector caterer	.....%
Contract with processor	.....%
Livestock market	.....%
Marketing co-operative	.....%
Wholesale market	.....%
Pack house	.....%
Other (*please specify*)	.....%
Total	**100%**

Please make sure that your percentages add to 100%

Which of these marketing channels is most important to you? .....

Why did you develop this particular marketing channel?

Why did you develop this particular marketing channel?

How long have you been operating this way of marketing your produce? .....years.

When selling your organic produce, do you emphasise any of the following characteristics to your customers?

☐ Organicness ☐ Local food ☐ Regional provenance
☐ Free range ☐ Traditional breeds ☐ Freshness
☐ Traceability ☐ Healthy food
☐ Other (*please specify*) .....
☐ I do not emphasise any particular characteristics

In terms of **quantity**, what ***volume*** of your organic produce do you sell through the following marketing channels on an annual basis? (*Please indicate physical units: tonnes, animals, litres, boxes, etc.*)

Own box scheme (Meat only)	.....
Own box scheme (Vegetable/Fruit)	.....
Box scheme run by a co-operative	.....
Farmers' market	.....
Internet sales	.....
Direct to another farmer	.....
Own farm shop	.....
Local privately owned shop	.....
Contract with supermarket	.....
Restaurants and private caterer	.....
Public sector caterer	.....
Contract with processor	.....
Livestock market	.....
Marketing co-operative	.....
Wholesale market	.....
Pack house	.....
Other (*please specify*)	.....

Please remember to indicate units: tonnes, animals, litres, boxes, etc.

If you have experienced any problems when selling your produce through a particular marketing channel, please explain

Do you experience any problems in providing your customers/consumers with continuity of supply because of seasonality?

☐ Yes but provide an alternative ☐ Yes but do not provide alternative
☐ Do not experience any problems

If you provide an alternative, where is this sourced?

☐ Local ☐ Regional ☐ National ☐ Outside UK

How do you receive feedback about the quality of your organic produce?

☐ Face-to-face contact ☐ Other form of personal contact
☐ Internet contact ☐ Customer satisfaction survey
☐ Other (*please specify*).....
☐ I do not receive any feedback from my customers

If you have made any changes in response to customer feedback, please explain what the feedback was and how you responded?

Section C: About adding value to your organic sales

Do you add value to the produce grown on your farm though on-farm processing, retailing, packaging, distributing, etc.?

☐ Yes ☐ No (*if **no** please go to Section D*)

Which of the following do you operate on your farm?

☐ Processing ☐ Retail
☐ Packing ☐ Distribution
☐ Other (please specify).....

What is the approximate value of all ingredients and packaging that you purchased in the most recent financial year? (*excluding VAT*)

£.....

Do you add value only to produce grown on your own farm?

☐ Yes ☐ No

If ***no***, how many other farms produce do you process/retail/package/distribute?.....

If you use ingredients in processing to add value to your organic produce, what are your three most important? (*e.g., rennet for cheese, fruit for yogurt, etc*) (*list up to 3 if less are used*)

1..... 2..... 3.....

From where do you source these ingredients?

Ingredient 1	☐ Local	☐ Regional	☐ National	☐ Outside UK
Ingredient 2	☐ Local	☐ Regional	☐ National	☐ Outside UK
Ingredient 3	☐ Local	☐ Regional	☐ National	☐ Outside UK

If you need to purchase specific forms of packaging for your produce, what are they?

☐ Cardboard boxes ☐ Wooden boxes ☐ Plastic bags/wrapping
☐ Plastic containers ☐ Plastic bottles ☐ Glass bottles/jars
☐ I do not use packaging ☐ Other (please specify).....

Where do you mainly source your packaging?

☐ Local ☐ Regional ☐ National ☐ Outside UK

Have you ever experienced any problems in acquiring either ingredients or packaging?

☐ Never ☐ Rarely ☐ Frequently ☐ Very frequently

If you have experienced problems, please explain below

Section D: Animal feed used on farm

Do you use any animal feed on your farm?

☐ Yes ☐ No (*if **no** please go to Section E*)

Which of the following animal feed do you grow or purchase?

Feed concentrates	☐ Grown on-farm	☐ Purchased
Silage	☐ Grown on-farm	☐ Purchased
Hay	☐ Grown on-farm	☐ Purchased
Haylage	☐ Grown on-farm	☐ Purchased
Cereals	☐ Grown on-farm	☐ Purchased
Root crops	☐ Grown on-farm	☐ Purchased
Other	☐ Grown on-farm	☐ Purchased

(*please specify other*).....

What percentage of your animal feed come from the following sources:

Homegrown	.....%
Bought from another farm	.....%
Bought from merchant	.....%
Other source	.....%
Total	**100 %**

Have you ever experienced any problems in acquiring animal feed from off-farm sources?
☐ Never ☐ Rarely ☐ Frequently ☐ Very frequently

If you have experienced problems with animal feed, please explain below

Section E: Environmental features and recycling

Which of the following do you add to your land to improve growth of organic crops or grass?
☐ Farmyard manure/slurry from own farm ☐ Purchased organic fertiliser
☐ Farmyard manure/slurry from another's farm ☐ Green manures
☐ Other (*please specify*).....

Do you have any of the following environmental management plans for your farm?
☐ Manure management plan ☐ Soil management plan
☐ Nutrient management plan ☐ Wildlife management plan
☐ Other (*please specify*).....
☐ I do not have any environmental management plans

Do any of your customers return packaging to your farm to be reused or recycled?
☐ Yes ☐ No

Which of the following materials do you recycle (including composting) on your farm or off your farm?

Cardboard	☐ on-farm	☐ off-farm	☐ Do not recycle
Metal	☐ on-farm	☐ off-farm	☐ Do not recycle
Oil	☐ on-farm	☐ off-farm	☐ Do not recycle
Plastics	☐ on-farm	☐ off-farm	☐ Do not recycle
Slurry/manure	☐ on-farm	☐ off-farm	☐ Do not recycle
Tyres	☐ on-farm	☐ off-farm	☐ Do not recycle
Crop residues/wastes	☐ on-farm	☐ off-farm	☐ Do not recycle
Waste water	☐ on-farm	☐ off-farm	☐ Do not recycle
Wood	☐ on-farm	☐ off-farm	☐ Do not recycle

Do you generate any energy on your farm that is used within your business?
☐ Yes ☐ No *(if **no** go to Section F)*
If ***yes***, please estimate the percentage of your total energy use that you generate?.....%

Section F: Information and services that you use

In terms of creative ideas to develop your business, including choice of marketing channels, which of the following sources of advice do you use to inform your decision-making.
☐ Family ☐ Other organic farmers
☐ Friends (*not farmers*) ☐ Paid consultants
☐ Farming press ☐ Discussion group
☐ Internet pages ☐ Internet discussion forums
☐ Organic certification bodies ☐ Other (*Please specify*) .....
☐ I do not seek any advice

Which of the following services do you regularly use?
☐ Accountant ☐ Financial advisor (not accountant)
☐ Organic consultant ☐ Agronomist
☐ Agricultural contractors ☐ Machinery maintenance/repairs
☐ Environmental consultant ☐ Feed advisor
☐ Vet - Conventional ☐ Vet - Homeopathy
☐ Livestock Hauliers ☐ Other (*please specify*) .....

Section G: Organic farming experiences

How long have you been in organic production? .....years

In the last five years (or since you became organic), have you changed the area that you farm organically?
☐ Increased ☐ Reduced ☐ Remained the same

Which of the follow factors influenced your decision?
☐ Price of land bought/rented ☐ Production costs
☐ Cost of borrowing ☐ Quality of land
☐ Distance from main farm ☐ Organic credentials of land
☐ Opportunity ☐ Market price of produce
☐ Family changes ☐ Other (*please specify*).....

Have you ever farmed in a way that was not organic?
☐ Yes ☐ No (*if **no** go to Section H*)

How many years did you farm non-organically? .....Years

When the farm was converted, were any difficulties encountered with the following

- ☐ Farm profitability
- ☐ Technical farming problems
- ☐ Marketing of produce
- ☐ Obtaining certified feed
- ☐ Processing of produce
- ☐ Obtaining technical advice
- ☐ Obtaining market information
- ☐ Obtaining certified seed
- ☐ Other (*please specify*).....
- ☐ No difficulties were encountered during conversion

Section H: Your future in organic farming

Which of the following statements best summarises your attitude to your future in organic farming?

- ☐ I will only ever farm organically
- ☐ I will farm organically as long as I make a profit doing so
- ☐ I will stop farming organically in the next 5 years
- ☐ I will stop farming organically as soon as possible

If you intend to stop farming organically, or would do so if it no longer makes a profit, what would you do?

- ☐ Continue farming and return to conventional methods
- ☐ Continue farming and grow crops for bioenergy
- ☐ Retire/semi-retire from farming
- ☐ Sell the farm as an organic farm
- ☐ Sell the farm but not as an organic farm
- ☐ Other (*please specify*).....
- ☐ Don't know

How do you see your business developing over the next five years?

Over the next five years, do you plan to:

Change the area that you farm organically?
☐ Increase ☐ Reduce ☐ No Change ☐ N/A

Change the number of marketing channels that you operate?
☐ Increase ☐ Reduce ☐ No Change ☐ N/A

Change the level of processing that you operate?
☐ Increase ☐ Reduce ☐ No Change ☐ N/A

Change the level of employed labour?
☐ Increase ☐ Reduce ☐ No Change ☐ N/A

Change the level of family labour?
☐ Increase ☐ Reduce ☐ No Change ☐ N/A

Change amount of environmental management?
☐ Increase ☐ Reduce ☐ No Change ☐ N/A

Which of the following factors are influencing your plans?

- ☐ Market prices (*incl. organic premium*)
- ☐ Cost of borrowing
- ☐ Availability of packaging
- ☐ New/change to marketing channel
- ☐ Availability of labour
- ☐ Size of farm
- ☐ Price of land
- ☐ Availability of market information
- ☐ Access to off-farm processing facilities
- ☐ Other (*please specify*).....
- ☐ Production costs
- ☐ Farm profitability
- ☐ Availability of feed
- ☐ Quality of produce
- ☐ Staff recruitment/retention
- ☐ Availability of land
- ☐ Quality of land
- ☐ Customer feedback
- ☐ Family changes

If in the next 5 years you plan to develop any **new** marketing channels, please tell us what they will be and why you intend to develop them.

Where do you see the main focus of your market in the next 5 years?

☐ More local ☐ More regional ☐ More national ☐ More outside UK
☐ Less local ☐ Less regional ☐ Less national ☐ Less outside UK
☐ No change

Thank you for your co-operation in completing this survey. *If you have any questions about the project, please feel free to contact the research team on 01392 262438. The results of this project will be published in the Spring of 2009. If you would like a summary of the project, please tick the box* ☐

If you would be happy to be contacted as part of in-depth research into the topics raised by this questionnaire, please tick the box ☐

If you have any additional comments about organic markets and producing for them, please use the back of this questionnaire.

UNIVERSITY OF EXETER

SCHOOL OF HUMANITIES
AND SOCIAL SCIENCES
incorporating the Institute of Arab and Islamic Studies

CENTRE FOR RURAL POLICY
RESEARCH
Amory Building
Rennes Drive
Exeter
UK EX4 4RJ

Telephone +44 (0)1392 262438
Fax +44 (0)1392 263305
Email crprmail@exeter.ac.uk
Web www.centres.ex.ac.uk/crpr

«Name»
«Address_1»
«Address_2»
«Address_3»
«Address_4»
«Address_5»
«Counties_breakdown»
«Postcode»

5 December 2007

Dear «Name»

Organic Farmers and Producer Survey

I am writing to invite you to take part in a survey as part of our research on local and national organic farming markets. This research, funded by Defra (project number OF0377), is being conducted by the Centre for Rural Policy Research (University of Exeter) with colleagues from the Countryside and Community Research Institute (University of Gloucestershire), the Henry Doubleday Research Association (HDRA) and Imperial College London. The project will characterise organic markets for different farming sectors and enterprises, examine the opportunities and barriers to increasing organic production from farms in England and Wales and consider the implications this has for rural development. The research will also appraise the extent to which organic farm businesses and associated food chains meet public expectations of organic food.

Your business has been carefully selected from a national sample. Whilst your co-operation in the survey is voluntary, we would be very grateful if you are able to take part. Ideally, you should be the principal farmer or manager, if possible, and it should not take more than 20 minutes of your time to complete this from. All information provided will be handled in the strictest confidence: your details will not be passed on to any other organisation and neither your farm nor any individual associated with it will be identifiable in any of the survey results. We do hope you will be able to help us build an accurate picture of the current state of local and national organic farming markets in England and Wales by completing the questionnaire and returning it in the **freepost** (no stamp required) envelope provided, by **17th December 2007**. If you have any queries, please contact Dr Allan Butler, who is a member of the research team, on 01392 262438 (Allan.J.Butler@Exeter.ac.uk).

With many thanks in advance for your time and co-operation.

Yours sincerely,

Matt Lobley
Assistant Director
Centre for Rural Policy Research

Appendix 4: Face-to face interview schedule

A. Wholechain/LM3 Producers: Face-to-face interviews

1]. Interview details:

[Interviewer: complete this section before or after the interview, if possible.]

Interview No.:

Name of interviewer:

Date of interview:

Name of interviewee:

Position in the business:

Address of business:

Postcode:

Tel:
Fax:
E-mail:
Web address:

2]. Background information about the farm and the products

- Please tell us a little about the *history* and key *motivations* behind establishing the farm as an organic business?
  - Lifestyle reasons, entrepreneurial, economic necessity, etc

- Have there been any significant changes to the business in the last 5 years (e.g. number of employees, size of business, ownership)

- For each type of employment please indicate the number of employees living in the following areas:

	Live within a 30 min travel time*	Live within a 1 hour travel time*	Live elsewhere in the UK	Live outside the UK
You and your family:				
Full time				
Part time				
Casual				
Seasonal				
Other Employees:				
Full time				
Part time				
Casual				
Seasonal				

*Show map

Additionality questions

- Has the number of employees increased or decreased since converting to organic production? Please indicate the approximate proportional increase.

Delete as appropriate:

Increase/Decrease by ____FT employees
Increase/Decrease by ____PT employees
Increase/Decrease by ____Casual employees
Increase/Decrease by ____Seasonal employees

- Has the turnover of the farm increased or decreased since converting to organic production? Please indicate the approximate proportional change.

Increase by ____% OR Decrease by____%

- Could you say something about the *organic products* your business produces?

What organic products do you sell?

What are your key organic products?

What things do you emphasise when you market your organic produce?

Do you add value and if so how?

Do you produce non-organic products and if so how do they compare?

In your opinion, how has your business contributed to the local economy / rural development? (e.g. employment, skills/training, regional identity)

3]. Organic business supply chain

Interviewer: show the interviewee the blank chain diagram and explain that you want to attempt, over the next few minutes, to draw the main supply chain links for the organic business in terms of where and how they SELL their produce and where and how they source their INPUT SUPPLIES.

A]. ORGANIC MARKETING CHANNELS

- Could you tell me about the different ways that you sell your organic produce? (*Interviewer: please draw the links on the diagram)*
  - Who do you supply/sell to?
  - How are the products distributed to the customer/consumer?

- What proportion of your organic sales, by value, are to customers in the following areas?

	Within:				
	30 minute travel time*	**1 hour travel time***	**UK**	**Else-where**	**All**
Non organic sales					100%
Organic sales:					
Direct to Consumers					100%
Retailers					100%
Wholesalers					100%
Processors					100%
Caterers, restaurants, pubs					100%
Public sector bodies					100%
All organic sales	100%				100%

*Show map

- Why do you use these particular supply chains to sell your organic products?

- Which of these supply chains are the most important to your business and why?

- What are the relationships like with your customers? Are they different between distribution channels?

- Have any customer arrangements been particularly successful and why? (e.g. certain type of supply or key customers in specific chains)

- Do you have any problems selling your organic produce? Have you had problems in the past and do you perceive any threats to your marketing channels in the future?

- Have these supply links changed over time and if so why?

- Do you co-operate with other producers to market/sell your produce and why?

B]. ORGANIC INPUTS

- Could you tell me about the input supplies that you use for your organic business?
  (Interviewer: please draw the links on the diagram)
  - What are the main inputs e.g. raw materials, packaging?
  - What about secondary inputs e.g. vets, advice, services?
  - Where do the inputs come from?

- What proportion of your business expenses, by value, are from suppliers in the following areas?

	Within: 30 minute travel time*	1 hour travel time*	UK	Elsewhere	All
Non-organic farm purchases of goods and services					100%
Organic farm purchases of goods and services					100%

*Show map

Please provide further information about your turnover that relates to the organic element of your production.

How is the farm's turnover spent? For each row the total % should be the total of '% 30 minute, % 1 hour, % UK and '% elsewhere' (see map).

Item	% of farm turnover	% 30 Min. travel time	% 1 hour travel time	% UK	% Elsewhere	Total %	Name and address of main local business(es) you use for each category.
Example		*10%*	*30%*	*40%*	*20%*	*100%*	*Smiths feed supplies, Exton Industrial Estate, Wimple, Dorset*
Primary inputs e.g. packaging, livestock, ingredients, seed, feed, fertilizer (split into up to four main categories)						100%	
						100%	
						100%	
						100%	
Professional services						100%	
Subcontractors						100%	
Staff costs (excl. NI and pension)						100%	
NI, pensions, and training						100%	
Drawings/ Directors bonuses						100%	
Plant, machinery, Repairs						100%	
Fuel and utilities						100%	
Taxes (VAT, Corporation Tax & business rates)						100%	
Loan repayments, inc. rent & mortgage						100%	
New investment						100%	
Other expenses						100%	
Total:	**100%**						

Supplementary supplier questions

- Has the proportion of turnover that is spent on farm inputs (supplies) increased or decreased since converting to organic production? Please indicate the approximate proportional change.

Increase by ____% OR Decrease by____%

- Has the extent to which you source your inputs locally (i.e. within 30 min. travel time) increased or decreased since converting to organic?

Increase by ____% OR Decrease by____%

- What are the main criteria influencing your choice of supplier?

- What are the most important links?

- What is the nature of the agreements with input suppliers? (e.g., verbal, formal contracts, mix of arrangements)

- Do you have any problems sourcing organic supplies and do you perceive any threats to your supplies in the future?

- Have these links changed over time and if so why?

4]. Plans for the future of your organic business

- How do you see your business developing over the next 5 years?

- Where do you see the main focus of your market in the next 5 years and why?

- Do you plan to develop any new marketing channels in the next 5 years and why?

- What factors are currently influencing your plans for the future? (e.g. demand for organic produce, legislation reforms, supply chain issues)

- Finally, are there any other issues you would like to raise about your organic farm business, esp. in relation to marketing?

5]. Producer: personal household expenditure

Please estimate your personal household expenditure, according to where it takes place.

	Within a 30 min. travel time*	Within a 1 hour travel time*	Elsewhere	Mail order/ internet/ other	Total
Example	*25%*	*70%*	*5%*	*0%*	*100%*
Food					100%
Clothing					100%
Durables					100%
Services/other					100%

**Show map*

How is your income spent?

Monthly/annual expenditure	**%**
Food, clothing, durables and services (i.e. all of the above)	
Income tax and NI	
Rent/mortgage	
Household utility bills and council tax	
Loan repayments	
Savings	
Total income	**100%**

Could you please ask two further employees of the business to complete the personal household expenditure question?

(provide separate sheet and ask to return by post if necessary – but only as a last resort)

(Interviewer: If possible try to get 1 skilled worker and 1 semi-unskilled worker. It doesn't matter where they live, but more useful if they live within the 30 minute travel time).

(Interviewer: thank the respondent for their valuable inputs to the project and repeat that all information provided will be anonymous and confidential. Inform respondents that we will send them a copy of the interview analysis and ask if they would be interested in attending later dissemination events).

Input suppliers

The Business

Final Consumer

Appendix 5: Benchmark data for organic farms in England and Wales

Appendix 5a All farms benchmark data (including England and Wales)

Table A5a.1: Benchmarking data for all organic farms

All farms		**Number in sample:**	**199**	
Farm size:	189			
Organic Area:	166			
% under organic production:	88%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	24	Number of channels:	2	
Calves:	3	Market concentration:	0.75	
Lambs:	116			
Sheep:	7		***% sold***	***£ per ha***
Pigs:	29	Own meat box scheme:	2.7%	15
Poultry:	1,271	Own veg box scheme:	5.2%	1,131
Cereal (tonnes):	65	Farmers' market:	3.5%	321
Fruit and Vegetables (tonnes):	23	Internet sales:	0.7%	2,586
Milk (litres):	249,085	Own farm shop:	3.5%	374
Boxes:	260	Farm gate sales:	0.2%	0
Dozen eggs:	16,892	Supply coop/company veg box:	2.6%	92
		Locally owned private shops:	2.4%	48
Financial	***£ per ha***	Restaurants and private caterers:	1.3%	25
All farm sales:	6,157	Public caterers:	0.0%	0
All purchases:	4,144	Sold to another farmer:	6.5%	42
Gross margin:	2,013	Supermarket:	6.0%	832
		Processor/abattoir:	21.4%	431
Organic Sales:	6,598	Livestock market:	2.3%	12
Purchases for organic production:	2,765	Marketing coop:	28.6%	296
Gross margin for organic production:	3,836	Wholesaler:	7.2%	124
		Packhouse:	3.1%	258
Labour	***Number***	Grain merchant:	1.6%	8
Total family labour:	2	Other channel:	1.1%	3
Total employee labour:	3			
	per ha	Direct sales only:	15.9%	4,431
Family FTEs:	0.075			
Employee FTEs:	0.125			
Total FTEs:	0.201			

Table A5a.2: Benchmarking data for all organic farms in England

England		**Number in sample: 155**		
Farm size:	211			
Organic Area:	185			
% under organic production:	88%			
Number of enterprises:	3			

Output	***per farm***
Cattle:	28
Calves:	3
Lambs:	116
Sheep:	6
Pigs:	37
Poultry:	1,632
Cereal (tonnes):	84
Fruit and Vegetables (tonnes):	14
Milk (litres):	262,213
Boxes:	302
Dozen eggs:	21,071

Financial	***£ per ha***
All farm sales:	7,593
All purchases:	5,163
Gross margin:	2,430
Organic Sales:	8,148
Purchases for organic production:	3,412
Gross margin for organic production:	4,738

Labour	***Number***
Total family labour:	2
Total employee labour:	3
	per ha
Family FTEs:	0.084
Employee FTEs:	0.158
Total FTEs:	0.241

Marketing Channels		
Number of channels:	2	
Market concentration:	1.89	
	% sold	***£ per ha***
Own meat box scheme:	5.8%	15
Own veg box scheme:	3.8%	1,439
Farmers' market:	0.9%	408
Internet sales:	3.9%	3,320
Own farm shop:	0.2%	465
Farm gate sales:	2.9%	1
Supply coop/company veg box:	2.4%	89
Locally owned private shops:	1.4%	18
Restaurants and private caterers:	0.0%	29
Public caterers:	6.4%	0
Sold to another farmer:	5.5%	45
Supermarket:	21.6%	1,039
Processor/abattoir:	2.2%	519
Livestock market:	26.0%	13
Marketing coop:	8.9%	272
Wholesaler:	3.4%	149
Packhouse:	2.1%	315
Grain merchant:	0.7%	11
Other channel:	0.7%	3
Direct sales only:	17.5%	5,647

Table A5a.3: Benchmarking data for all organic farms in Wales

Wales		**Number in sample:**	**44**	
Farm size:	109			
Organic Area:	101			
% under organic production:	92%			
Number of enterprises:	3			

Output	***per farm***
Cattle:	10
Calves:	3
Lambs:	117
Sheep:	11
Pigs:	0
Poultry:	0
Cereal (tonnes):	1
Fruit and Vegetables (tonnes):	55
Milk (litres):	202,841
Boxes:	112
Dozen eggs:	2,171

Financial	***£ per ha***
All farm sales:	1,099
All purchases:	558
Gross margin:	542
Organic Sales:	1,140
Purchases for organic production:	483
Gross margin for organic production:	656

Labour	***Number***
Total family labour:	2
Total employee labour:	2
	per ha
Family FTEs:	0.047
Employee FTEs:	0.012
Total FTEs:	0.059

Marketing Channels		
Number of channels:	2	
Market concentration:	0.73	
	% sold	***£ per ha***
Own meat box scheme:	5.5%	12
Own veg box scheme:	3.1%	46
Farmers' market:	2.5%	16
Internet sales:	0.0%	0
Own farm shop:	2.4%	57
Farm gate sales:	0.0%	0
Supply coop/company veg box:	1.6%	103
Locally owned private shops:	2.6%	156
Restaurants and private caterers:	0.9%	9
Public caterers:	0.0%	0
Sold to another farmer:	6.9%	30
Supermarket:	7.9%	104
Processor/abattoir:	20.5%	120
Livestock market:	2.9%	11
Marketing coop:	37.8%	381
Wholesaler:	1.1%	36
Packhouse:	2.0%	56
Grain merchant:	0.0%	0
Other channel:	2.3%	3
Direct sales only:	13.6%	131

Appendix 5b Farm size benchmark data

Table A5b.1: Benchmarking data farms less than 25ha

Farm size: Less than 25 ha		**Number in sample: 34**		
Farm size:	9			
Organic Area:	9			
% under organic production:	95%			
Number of enterprises:	4			
Output	***per farm***	**Marketing Channels**		
Cattle:	1	Number of channels:	2	
Calves:	0	Market concentration:	0.69	
Lambs:	13			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	7.1%	31
Poultry:	3	Own veg box scheme:	28.9%	6,606
Cereal (tonnes):	0	Farmers' market:	10.9%	1,835
Fruit and Vegetables (tonnes):	7	Internet sales:	4.2%	15,136
Milk (litres):	0	Own farm shop:	7.6%	2,003
Boxes:	1,415	Farm gate sales:	0.7%	2
Dozen eggs:	2,814	Supply coop/company veg box:	2.6%	288
		Locally owned private shops:	7.0%	225
Financial	***£ per ha***	Restaurants and private caterers:	1.3%	55
All farm sales:	29,329	Public caterers:	0.0%	0
All purchases:	20,087	Sold to another farmer:	2.4%	16
Gross margin:	9,242	Supermarket:	9.2%	2,231
		Processor/abattoir:	4.4%	38
Organic Sales:	29,039	Livestock market:	0.8%	5
Purchases for organic production:	10,234	Marketing coop:	3.5%	62
Gross margin for organic production:	18,805	Wholesaler:	5.1%	219
		Packhouse:	1.3%	282
Labour	***Number***	Grain merchant:	0.0%	0
Total family labour:	2	Other channel:	2.9%	4
Total employee labour:	2			
	per ha	Direct sales only:	59.4%	25,632
Family FTEs:	0.360			
Total employee FTEs:	0.686			
FTEs:	1.046			

Table A5b.2: Benchmarking data for farms between 25 and 49.99 ha

Farm size: 25-49.99 ha		**Number in sample: 23**		
Farm size:	38			
Organic Area:	36			
% under organic production:	96%			
Number of enterprises:	2			
Output	***per farm***	**Marketing Channels**		
Cattle:	9	Number of channels:	2	
Calves:	1	Market concentration:	0.73	
Lambs:	14			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	12	Own meat box scheme:	2.0%	13
Poultry:	0	Own veg box scheme:	0.0%	0
Cereal (tonnes):	4	Farmers' market:	1.5%	16
Fruit and Vegetables (tonnes):	5	Internet sales:	0.0%	0
Milk (litres):	25,652	Own farm shop:	5.6%	81
Boxes:	0	Farm gate sales:	0.4%	2
Dozen eggs:	23,568	Supply coop/company veg box:	5.3%	215
		Locally owned private shops:	5.8%	56
Financial	***£ per ha***	Restaurants and private caterers:	2.0%	29
All farm sales:	1,758	Public caterers:	0.0%	0
All purchases:	973	Sold to another farmer:	7.6%	82
Gross margin:	785	Supermarket:	1.7%	57
		Processor/abattoir:	24.8%	227
Organic Sales:	1,793	Livestock market:	1.3%	9
Purchases for organic production:	806	Marketing coop:	18.9%	101
Gross margin for organic production:	987	Wholesaler:	13.9%	148
		Packhouse:	8.9%	750
Labour	***Number***	Grain merchant:	0.0%	0
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	1			
	per ha	Direct sales only:	9.6%	112
Family FTEs:	0.038			
Total employee FTEs:	0.016			
FTEs:	0.054			

Table A5b.3: Benchmarking data for farms between 50 and 99.99 ha

Farm size: 50-99.99 ha		**Number in sample: 51**		
Farm size:	72			
Organic Area:	68			
% under organic production:	94%			
Number of enterprises:	2			
Output	***per farm***	**Marketing Channels**		
Cattle:	18	Number of channels:	2	
Calves:	3	Market concentration:	0.82	
Lambs:	59			
Sheep:	4		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	2.9%	13
Poultry:	2,657	Own veg box scheme:	1.0%	8
Cereal (tonnes):	13	Farmers' market:	0.6%	4
Fruit and Vegetables (tonnes):	3	Internet sales:	0.0%	0
Milk (litres):	110,098	Own farm shop:	1.8%	19
Boxes:	21	Farm gate sales:	0.0%	0
Dozen eggs:	40,059	Supply coop/company veg box:	1.5%	15
		Locally owned private shops:	0.5%	5
Financial	***£ per ha***	Restaurants and private caterers:	0.1%	1
All farm sales:	1,145	Public caterers:	0.0%	0
All purchases:	699	Sold to another farmer:	9.2%	43
Gross margin:	446	Supermarket:	4.1%	14
		Processor/abattoir:	25.9%	245
Organic Sales:	1,131	Livestock market:	3.1%	17
Purchases for organic production:	535	Marketing coop:	40.1%	385
Gross margin for organic production:	596	Wholesaler:	5.2%	31
		Packhouse:	2.0%	327
Labour	***Number***	Grain merchant:	2.0%	3
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	1			
	per ha	Direct sales only:	6.3%	43
Family FTEs:	0.023			
Total employee FTEs:	0.006			
FTEs:	0.029			

Table A5b.4: Benchmarking data for farms between 100 and 199.99 ha

Farm size: 100-199 ha		**Number in sample: 39**		
Farm size:	138			
Organic Area:	120			
% under organic production:	87%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	22	Number of channels:	2	
Calves:	4	Market concentration:	0.74	
Lambs:	106			
Sheep:	7		***% sold***	***£ per ha***
Pigs:	134	Own meat box scheme:	0.4%	3
Poultry:	2,564	Own veg box scheme:	0.0%	0
Cereal (tonnes):	19	Farmers' market:	1.7%	15
Fruit and Vegetables (tonnes):	28	Internet sales:	0.0%	0
Milk (litres):	288,923	Own farm shop:	2.2%	44
Boxes:	66	Farm gate sales:	0.0%	0
Dozen eggs:	7,649	Supply coop/company veg box:	3.5%	20
		Locally owned private shops:	0.6%	3
Financial	***£ per ha***	Restaurants and private caterers:	1.1%	39
All farm sales:	1,773	Public caterers:	0.0%	0
All purchases:	1,244	Sold to another farmer:	6.9%	47
Gross margin:	528	Supermarket:	4.5%	284
		Processor/abattoir:	29.6%	1,451
Organic Sales:	2,682	Livestock market:	2.5%	20
Purchases for organic production:	2,108	Marketing coop:	36.2%	429
Gross margin for organic production:	573	Wholesaler:	6.9%	207
		Packhouse:	3.4%	107
Labour	***Number***	Grain merchant:	0.2%	8
Total family labour:	2	Other channel:	0.4%	4
Total employee labour:	3			
	per ha	Direct sales only:	4.3%	62
Family FTEs:	0.012			
Total employee FTEs:	0.012			
FTEs:	0.024			

Table A5b.5: Benchmarking data for farms 200 ha or more

Farm size: 200 ha and over		**Number in sample: 52**		
Farm size:	525			
Organic Area:	458			
% under organic production:	87%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	55	Number of channels:	2	
Calves:	5	Market concentration:	0.72	
Lambs:	292			
Sheep:	17		***% sold***	***£ per ha***
Pigs:	5	Own meat box scheme:	1.6%	16
Poultry:	333	Own veg box scheme:	0.0%	0
Cereal (tonnes):	221	Farmers' market:	3.8%	8
Fruit and Vegetables (tonnes):	56	Internet sales:	0.1%	0
Milk (litres):	617,212	Own farm shop:	2.7%	35
Boxes:	0	Farm gate sales:	0.0%	0
Dozen eggs:	7,356	Supply coop/company veg box:	1.8%	38
		Locally owned private shops:	1.3%	6
Financial	***£ per ha***	Restaurants and private caterers:	2.3%	16
All farm sales:	1,157	Public caterers:	0.0%	0
All purchases:	678	Sold to another farmer:	5.6%	36
Gross margin:	479	Supermarket:	8.8%	1,475
		Processor/abattoir:	20.3%	195
Organic Sales:	2,350	Livestock market:	2.9%	8
Purchases for organic production:	1,427	Marketing coop:	32.4%	350
Gross margin for organic production:	933	Wholesaler:	7.7%	80
		Packhouse:	2.6%	69
Labour	***Number***	Grain merchant:	4.2%	23
Total family labour:	2	Other channel:	1.9%	5
Total employee labour:	7			
	per ha	Direct sales only:	8.3%	60
Family FTEs:	0.005			
Total employee FTEs:	0.010			
FTEs:	0.014			

Appendix 5c English regional benchmark data

Table A5c.1: Benchmarking data for farms in the East Midlands region

Region: East Midlands		**Number in sample: 13**		
Farm size:	94			
Organic Area:	65			
% under organic production:	69%			
Number of enterprises:	2			
Output	***per farm***	**Marketing Channels**		
Cattle:	9	Number of channels:	2	
Calves:	0	Market concentration:	0.85	
Lambs:	21			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	1.6%	11
Poultry:	0	Own veg box scheme:	0.0%	0
Cereal (tonnes):	15	Farmers' market:	11.5%	20
Fruit and Vegetables (tonnes):	18	Internet sales:	0.0%	0
Milk (litres):	14,615	Own farm shop:	3.3%	12
Boxes:	0	Farm gate sales:	0.0%	0
Dozen eggs:	158,304	Supply coop/company veg box:	0.1%	2
		Locally owned private shops:	5.2%	17
Financial	***£ per ha***	Restaurants and private caterers:	0.2%	1
All farm sales:	3,337	Public caterers:	0.0%	0
All purchases:	2,104	Sold to another farmer:	0.6%	9
Gross margin:	1,233	Supermarket:	7.7%	5,702
		Processor/abattoir:	30.1%	324
Organic Sales:	7,999	Livestock market:	0.2%	4
Purchases for organic production:	4,926	Marketing coop:	10.4%	182
Gross margin for organic production:	3,073	Wholesaler:	13.9%	253
		Packhouse:	15.3%	1,463
Labour	***Number***	Grain merchant:	0.0%	0
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	6			
	per ha	Direct sales only:	16.5%	43
Family FTEs:	0.043			
Employee FTEs:	0.021			
Total FTEs:	0.064			

Table A5c.2: Benchmarking data for farms in the Eastern region

Region: Eastern		**Number in sample: 10**		
Farm size:	172			
Organic Area:	79			
% under organic production:	46%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	4	Number of channels:	3	
Calves:	0	Market concentration:	0.69	
Lambs:	0			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	16	Own meat box scheme:	0.0%	0
Poultry:	10,010	Own veg box scheme:	1.2%	44
Cereal (tonnes):	29	Farmers' market:	11.6%	708
Fruit and Vegetables (tonnes):	105	Internet sales:	0.0%	0
Milk (litres):	0	Own farm shop:	4.6%	82
Boxes:	0	Farm gate sales:	0.0%	0
Dozen eggs:	30,491	Supply coop/company veg box:	5.9%	378
		Locally owned private shops:	6.2%	43
Financial	***£ per ha***	Restaurants and private caterers:	0.3%	5
All farm sales:	2,914	Public caterers:	0.0%	0
All purchases:	1,576	Sold to another farmer:	1.0%	37
Gross margin:	1,338	Supermarket:	0.0%	0
		Processor/abattoir:	19.5%	4,024
Organic Sales:	6,690	Livestock market:	0.0%	0
Purchases for organic production:	5,409	Marketing coop:	16.4%	208
Gross margin for organic production:	1,281	Wholesaler:	13.0%	418
		Packhouse:	19.5%	709
Labour	***Number***	Grain merchant:	0.8%	33
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	6			
	per ha	Direct sales only:	17.4%	834
Family FTEs:	0.093			
Employee FTEs:	0.049			
Total FTEs:	0.142			

Table A5c.3: Benchmarking data for farms in the South East region

Region: South East		**Number in sample: 21**		
Farm size:	361			
Organic Area:	308			
% under organic production:	85%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	29	Number of channels:	2	
Calves:	7	Market concentration:	0.76	
Lambs:	74			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	13	Own meat box scheme:	0.0%	0
Poultry:	490	Own veg box scheme:	9.3%	957
Cereal (tonnes):	294	Farmers' market:	6.8%	1,199
Fruit and Vegetables (tonnes):	10	Internet sales:	0.0%	0
Milk (litres):	298,571	Own farm shop:	11.2%	901
Boxes:	88	Farm gate sales:	0.0%	0
Dozen eggs:	19,889	Supply coop/company veg box:	0.0%	0
		Locally owned private shops:	0.5%	8
Financial	***£ per ha***	Restaurants and private caterers:	5.2%	37
All farm sales:	4,259	Public caterers:	0.0%	0
All purchases:	1,481	Sold to another farmer:	8.9%	53
Gross margin:	2,778	Supermarket:	9.9%	465
		Processor/abattoir:	17.0%	189
Organic Sales:	4,078	Livestock market:	0.6%	8
Purchases for organic production:	1,024	Marketing coop:	16.3%	148
Gross margin for organic production:	3,054	Wholesaler:	10.1%	81
		Packhouse:	0.0%	0
Labour	***Number***	Grain merchant:	4.1%	32
Total family labour:	1	Other channel:	0.0%	0
Total employee labour:	6			
	per ha	Direct sales only:	27.2%	3,057
Family FTEs:	0.069			
Employee FTEs:	0.084			
Total FTEs:	0.153			

Table A5c.4: Benchmarking data for farms in the South West region

Region: South West		**Number in sample: 68**		
Farm size:	197			
Organic Area:	184			
% under organic production:	93%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	32	Number of channels:	2	
Calves:	3	Market concentration:	0.77	
Lambs:	47			
Sheep:	14		***% sold***	***£ per ha***
Pigs:	77	Own meat box scheme:	1.0%	9
Poultry:	1,985	Own veg box scheme:	6.5%	241
Cereal (tonnes):	45	Farmers' market:	2.4%	98
Fruit and Vegetables (tonnes):	4	Internet sales:	2.1%	7,568
Milk (litres):	259,485	Own farm shop:	2.2%	31
Boxes:	286	Farm gate sales:	0.5%	1
Dozen eggs:	0	Supply coop/company veg box:	3.4%	71
		Locally owned private shops:	2.1%	14
Financial	***£ per ha***	Restaurants and private caterers:	0.9%	22
All farm sales:	10,180	Public caterers:	0.0%	0
All purchases:	3,542	Sold to another farmer:	6.7%	49
Gross margin:	6,637	Supermarket:	6.5%	1,105
		Processor/abattoir:	20.8%	286
Organic Sales:	10,067	Livestock market:	4.0%	18
Purchases for organic production:	3,024	Marketing coop:	29.8%	260
Gross margin for organic production:	7,044	Wholesaler:	7.5%	167
		Packhouse:	0.4%	115
Labour	***Number***	Grain merchant:	1.7%	7
Total family labour:	2	Other channel:	1.6%	6
Total employee labour:	2			
	per ha	Direct sales only:	14.7%	7,948
Family FTEs:	0.040			
Employee FTEs:	0.077			
Total FTEs:	0.117			

Table A5c.5: Benchmarking data for farms in the North East region

Region: North East		**Number in sample: 5**		
Farm size:	655			
Organic Area:	596			
% under organic production:	91%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	112	Number of channels:	2	
Calves:	0	Market concentration:	0.63	
Lambs:	1,880			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	12	Own meat box scheme:	0.0%	0
Poultry:	0	Own veg box scheme:	0.0%	0
Cereal (tonnes):	330	Farmers' market:	0.0%	0
Fruit and Vegetables (tonnes):	0	Internet sales:	0.0%	0
Milk (litres):	0	Own farm shop:	8.0%	323
Boxes:	0	Farm gate sales:	0.0%	0
Dozen eggs:	0	Supply coop/company veg box:	0.0%	0
		Locally owned private shops:	0.0%	0
Financial	***£ per ha***	Restaurants and private caterers:	0.0%	0
All farm sales:	1,198	Public caterers:	0.0%	0
All purchases:	817	Sold to another farmer:	19.0%	84
Gross margin:	381	Supermarket:	0.0%	0
		Processor/abattoir:	44.0%	630
Organic Sales:	1,159	Livestock market:	2.0%	7
Purchases for organic production:	792	Marketing coop:	13.0%	59
Gross margin for organic production:	367	Wholesaler:	14.0%	57
		Packhouse:	0.0%	0
Labour	***Number***	Grain merchant:	0.0%	0
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	4			
	per ha	Direct sales only:	8.0%	323
Family FTEs:	0.005			
Employee FTEs:	0.015			
Total FTEs:	0.020			

Table A5c.6: Benchmarking data for farms in the North West region

Region: North West		**Number in sample: 8**		
Farm size:	143			
Organic Area:	135			
% under organic production:	95%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	12	Number of channels:	2	
Calves:	13	Market concentration:	0.72	
Lambs:	14			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	1.5%	7
Poultry:	0	Own veg box scheme:	12.5%	1,544
Cereal (tonnes):	41	Farmers' market:	0.0%	0
Fruit and Vegetables (tonnes):	0	Internet sales:	0.0%	0
Milk (litres):	596,250	Own farm shop:	0.0%	0
Boxes:	1,625	Farm gate sales:	0.0%	0
Dozen eggs:	0	Supply coop/company veg box:	3.8%	123
		Locally owned private shops:	2.6%	86
Financial	***£ per ha***	Restaurants and private caterers:	0.0%	0
All farm sales:	2,681	Public caterers:	0.0%	0
All purchases:	28,460	Sold to another farmer:	7.5%	34
Gross margin:	-25,779	Supermarket:	5.0%	163
		Processor/abattoir:	15.0%	203
Organic Sales:	2,700	Livestock market:	1.1%	25
Purchases for organic production:	789	Marketing coop:	31.9%	425
Gross margin for organic production:	1,912	Wholesaler:	18.5%	69
		Packhouse:	0.0%	0
Labour	***Number***	Grain merchant:	0.0%	0
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	3			
	per ha	Direct sales only:	14.0%	1,552
Family FTEs:	0.330			
Employee FTEs:	0.935			
Total FTEs:	1.265			

Table A5c.7: Benchmarking data for farms in the West Midlands region

Region: West Midlands		**Number in sample: 18**		
Farm size:	194			
Organic Area:	179			
% under organic production:	92%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	40	Number of channels:	2	
Calves:	0	Market concentration:	0.71	
Lambs:	190			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	6.4%	49
Poultry:	389	Own veg box scheme:	0.6%	1
Cereal (tonnes):	50	Farmers' market:	0.3%	3
Fruit and Vegetables (tonnes):	17	Internet sales:	0.0%	0
Milk (litres):	586,111	Own farm shop:	0.8%	9
Boxes:	6	Farm gate sales:	0.0%	0
Dozen eggs:	28	Supply coop/company veg box:	3.1%	31
		Locally owned private shops:	2.8%	7
Financial	***£ per ha***	Restaurants and private caterers:	0.0%	0
All farm sales:	1,153	Public caterers:	0.0%	0
All purchases:	727	Sold to another farmer:	8.2%	69
Gross margin:	426	Supermarket:	2.8%	19
		Processor/abattoir:	25.8%	330
Organic Sales:	1,004	Livestock market:	1.6%	17
Purchases for organic production:	595	Marketing coop:	46.6%	490
Gross margin for organic production:	437	Wholesaler:	0.0%	0
		Packhouse:	0.0%	0
Labour	***Number***	Grain merchant:	0.8%	4
Total family labour:	2	Other channel:	0.0%	0
Total employee labour:	3			
	per ha	Direct sales only:	8.1%	63
Family FTEs:	0.019			
Employee FTEs:	0.013			
Total FTEs:	0.032			

Table A5c.8: Benchmarking data for farms in the Yorkshire and Humberside region

Region: Yorkshire/Humberside		**Number in sample: 12**		
Farm size:	76			
Organic Area:	68			
% under organic production:	90%			
Number of enterprises:	3			
Output	***per farm***	**Marketing Channels**		
Cattle:	11	Number of channels:	2	
Calves:	0	Market concentration:	0.66	
Lambs:	6			
Sheep:	0		***% sold***	***£ per ha***
Pigs:	0	Own meat box scheme:	6.7%	57
Poultry:	42	Own veg box scheme:	11.7%	14,472
Cereal (tonnes):	31	Farmers' market:	1.3%	2,006
Fruit and Vegetables (tonnes):	2	Internet sales:	0.0%	0
Milk (litres):	101,500	Own farm shop:	5.9%	4,016
Boxes:	1,034	Farm gate sales:	0.0%	0
Dozen eggs:	40,417	Supply coop/company veg box:	6.0%	297
		Locally owned private shops:	1.7%	19
Financial	***£ per ha***	Restaurants and private caterers:	3.8%	185
All farm sales:	22,879	Public caterers:	0.0%	0
All purchases:	20,022	Sold to another farmer:	1.7%	11
Gross margin:	2,856	Supermarket:	0.8%	31
		Processor/abattoir:	15.6%	160
Organic Sales:	23,024	Livestock market:	0.0%	0
Purchases for organic production:	13,559	Marketing coop:	17.1%	372
Gross margin for organic production:	9,464	Wholesaler:	10.8%	146
		Packhouse:	8.3%	1,239
Labour	***Number***	Grain merchant:	8.3%	12
Total family labour:	2	Other channel:	0.4%	1
Total employee labour:	4			
	per ha	Direct sales only:	25.5%	20,550
Family FTEs:	0.358			
Employee FTEs:	0.739			
Total FTEs:	1.098			

UNIVERSITY OF EXETER

Centre for Rural Policy Research
Department of Politics
Amory Building
Rennes Drive
Exeter EX4 4RJ

Telephone: +44(0)1392 263836

www.exeter.ac.uk/crpr