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CENTRE FOR RURAL RESEARCH

The Impact of Organic Farming on the Rural Economy in England

Matt Lobley, Matt Reed and Allan Butler
with Paul Courtney and Martyn Warren

The Impact of Organic Farming on the Rural Economy in England

Final Report to DEFRA

CRR Research Report No. 11

Matt Lobley, Matt Reed and Allan Butler

with Paul Courtney and Martyn Warren

Centre for Rural Research
University of Exeter
Lafrowda House
St German's Road
Exeter, EX4 6TL

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For further information, please contact Dr Matt Lobley, Centre for Rural Research, Lafrowda House, University of Exeter, St German's Road, Exeter, EX4 6TL.
Tel: 01392 264539. E-Mail: m.lobley@exeter.ac.uk

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“Living in harmony with the planet is THE most important thing to ensure the continuation of human life.” (Organic farmer)

“If attitudes don’t change soon, we will be a country of park keepers relying on imported food with no industry of our own. What other industry has no say in the price it commands for its products? I hope to be around long enough to see the day when there is not enough food to go around and then see what people have to say. Let the world go hungry!” (Organic farmer)

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Tests of Statistical Significance: A Note

On a number of occasions in this report comparisons are made between sub-groups of respondents. In these cases Chi^2 has been calculated to test the statistical significance of the difference between sub-groups. A 'significant' difference between distributions is taken to be one where there is less than a 5% probability of the difference arising by chance.

This report also notes statistical significance regarding the comparison of means between sub-groups of respondents. For these, the t-tests procedure compares the means for two groups of cases. An extension of the two-sample t-test is the analysis of variance (ANOVA) that tests the hypothesis that several means are equal. A 'significant' difference between means is taken when there is a less than 5% probability of the difference arriving by chance. On occasion 'significant' difference is indicated where there is a less than 10% probability of the difference arriving by chance, which is indicated by $p<0.1$. Furthermore, while not shown, all 'significantly' different means are also reliable in terms of the test for variance homogeneity.

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

Chapter One: Introduction and background

Introduction

Organic farming in the UK has experienced considerable growth in the last two decades. Although the 1,636 registered organic farmers in England account for only 2.5%[1] of the farm population, the market for organic produce is estimated to be worth some £1.2 billion or 1.05% of the UK grocery market (Soil Association 2004, 2003). Interest in the organic sector however, stretches far beyond the apparent rapid growth and buoyancy of the market. Organic farming is promoted on the basis of the multiple benefits it provides; healthier food, improved farmed environment and a contribution to the rural economy (Pretty 2002; Soil Association 2003). To date, it is the environmental impacts of organic farming that have received most research attention and while some still contest the environmental benefits of organic farming (Colman 2000; Shepherd 2003), there is growing consensus that it does indeed offer certain environmental benefits over and above those of conventional agriculture. For example, in nutritional terms, while there is some evidence that "a predominately organic diet reduces the amount of toxic chemical ingested, totally avoids GMOs, reduces the amount of food additives and colourings" (Cleeton 2004: 62) as well as increasing the amount of vitamins, antioxidants and beneficial fatty acids (Soil Association 2005), others have argued that "in our view the current scientific evidence does not show that organic food is any safer or more nutritious than conventionally produced food" (Krebs 2003).

More recently researchers have turned their attention to the role of organic farming in the rural economy and specifically, the potential for organic farming to contribute to rural development (Pugliese 2001). It is frequently argued that organic farming can promote employment in rural areas (Hird 1997; Midmore and Dirks 2003) and that it can also contribute to rural development, for instance, through the provision of environmental services that underpin rural tourism. Given the wide-ranging implications of these three claims it is not surprising that sometimes organic farming is presented as a panacea for the problems facing the food and farming sector.

[1] Figure calculated by the Centre for Rural Research from DEFRA data.

Equally, it is not surprising that it can stimulate just as vociferous ‘anti-organic’ feeling that sees in organics a rejection of the agricultural science that has led to such remarkable growths in yields and productivity in the last fifty years.

Parallel with the growth of and interest in the organic sector, ‘local food’ has taken on increased economic, environmental and symbolic importance. Much of this is concerned with reducing environmental costs, particularly food miles but also a desire to increase local economic multipliers and contribute to the (re)connection of farmers and consumers (e.g. Pretty et al 2005). Although organic produce is not necessarily ‘local’ (even locally supplied organic boxes may not contain exclusively locally produced food), there is nevertheless a close alliance between local food and organic food. Combining a greater degree of localness in food sourcing with increased organic production would lead to considerable savings associated with the reduction of environmental externalities (Pretty et al 2005). Although the economic and social benefits of reducing negative externalities and increasing positive externalities are recognised, the potential for organic farming (or other forms of farming) to contribute to rural economies is much more wide ranging than the focus of previous research would suggest.

Against this background, the research reported here has sought to explore the hypothesis set out in the original research brief that organic farming provides an additional benefit to the rural economy over and above that of conventional agriculture, defined for the purposes of this project as ‘non-organic’ (see below for a discussion of the meaning and definition of organic farming). The approach adopted involved tracing the socio-economic footprint of a range of farm business types. The concept of the socio-economic footprint represents a development of earlier research (Errington and Courtney 2000) tracing the economic footprints of small towns. In contrast to conventional economic analysis, the research focused on examining the socio-economic linkages associated with different types of farming such as sales and purchasing patterns but also evidence of social connectivity and embeddedness.

The specific objectives of the project were to:

- Review the current state of knowledge of the wider socio-economic impacts of organic farming.
- Examine differences in the socio-economic footprint between organic and non-organic farming.
- Examine differences in the socio-economic footprint between different types of organic and non-organic farms.
- Develop policy implications and inform future decision making on the support of organic farming.

Full details of the methodology are provided in Chapter Three and Appendix 1 although it should be noted here that data was collected from 655 organic and non-organic farmers in England through a postal questionnaire survey conducted in 2004 and that this was supplemented by in-depth face-to-face interviews with 22 farmers and stakeholders, in three study areas in South West, Eastern and Northern England.

The structure of this report is as follows. The remainder of this chapter provides a discussion of the meaning of organic farming and charts the growth and development of the organic sector in UK with a particular focus on England. Chapter Two draws on a wide range of organic farming and rural development literature in order to explore the possible ways in which organic farming may play a distinctive role in rural economies and rural development. Chapter Three describes the methodology used for the postal survey, explores the characteristics of organic farms and organic farmers and compares these with non-organic farmers. The economic contribution of organic and non-organic farms is discussed in Chapter Four through an analysis of purchase and sales patterns (spending and revenue levels, connectedness to 'local' economy, employment impacts, etc). Chapter Five draws the analysis together through a description of the socio-economic footprints of different types of farm business and a detailed qualitative investigation of the processes, decisions and distinctive business configurations that lie behind different footprints. Finally, Chapter

Six considers the implications of the findings for future research policy relating to organic farming, non-organic farming and the promotion of rural development.

Defining organic farming

The popular or 'lay' definition of organic farming defines it by what it does not do, or what is perceived by consumers not to be present. Commonly it is described as being farming without the use of chemicals, by which many people mean contemporary pesticides, fungicides and herbicides as well the absence of antibiotics and more recently Genetically Modified (GM) technologies. Proponents of organic farming argue that this is not an entirely adequate description of organic farming as a system of agriculture (Lampkin 1990). They emphasise the centrality of improving and maintaining the soil, wildlife and habitat protection, high levels of animal welfare, as well as the absence of all of the substances noted above. Underlying this characterisation is a wide divergence of ideas about how a positive definition of organic farming might be constructed. Although many organic farmers agree on what they are against and the general prescriptions of what they are for, the specifics of a farming system are still the matter of some contention. For example, those who belong to the Biodynamic school of organic farming are concerned with astrological alignments and preparations that aid plant growth, whilst those who subscribe to the Soil Association's standards would be not concerned with such characteristics of an organic system. At the level of the individual farm the diversity of actual practices in part reflects these differences and also the preferences of the farm operator.

Since the formation of the UK Register of Organic Food Standards (UKROFS) and the implementation of EU Regulation 2092/91 there has been legal control and oversight of the designation 'organic'. This system instigated a set of standards to which farmers have to conform to in order to be able to describe their farm and its products as organic (Soil Association 1999; Reed 2004). Farms are inspected on an annual basis by approved 'Certifying Agencies', the largest of which is the Soil Association Cert Ltd in England and the Organic Farmers and Growers is second largest. It takes at least two years for a farm to be 'converted' to organic status, a

period in which the farm system is moved from a non-organic or conventional one to an organic one. During the conversion period the produce of the farm cannot be described as organic. In 2003 a new body called the Advisory Committee on Organic Standards (ACOS) replaced UKROFS although the process of conversion and certification remains the same.

As the research presented in this report is concerned with the operation and impacts of the farm business rather than the agronomic practices conducted on the farm, instead of entering into a discussion of the farming system we have pragmatically accepted certification as the basis for being considered organic. While it is certainly possible for farmers to be practising organic farming without certification, for the purposes of this project registration is the baseline for inclusion as an 'organic farmer'. Certification provides an understood and pragmatic means of defining organic farms (and, by extension, non-organic farms). In addition, registration and certification imply a range of engagements with support policies, institutions and other businesses that are of interest in understanding the management and impact of the farm business. While mindful of the importance of the discussions about the formation and rationality of organic standards, for the purpose this research, registration and certification are of central importance (Lilliston and Cummins 1998; Guthman 2004).

Organic farming, for many of its proponents, is only part of a larger project about building a more sustainable agricultural system that produces healthier food and, in turn, a better society. In this project, consumers who share the beliefs and aspirations of the 'organic movement' support organic farmers through the purchase of organically produced food. This project has not been without political and social conflict as it is concerned ultimately with control of the direction of agriculture in the UK (Dudley 1991; Holden 1999). Such conflict is essentially political although rarely in the sense of involving political parties but certainly in the mobilisation of a range of organisations and the creation of collective action. Analytically this is best understood by considering aspects of the organic sector as being part of a social movement.

Whilst it is not necessary to pursue what characterises a social movement at great length, it is important to note some of the features of a social movement (see Table 1.1) (della Porta and Diani 1999; Crossley 2002; Tovey 2002). The informal networks that characterise a movement and the importance of solidarity mean that organic farmers will find themselves involved in relations of trust with a wide range of sympathetic consumers. It also places them in the same organisations as other organic farmers from whom they can receive support and with whom they will have lower barriers to co-operation by virtue of their shared beliefs. Finally, it will mean that the organisations that represent organic farmers may consider themselves to have a much wider remit than if they were a trades body alone. As an example of this it is worth considering the recent protests and debate around the introduction of Genetically Modified crops as a demonstration of how this form of solidarity reaches beyond the farm gate (Toke and Marsh 2003).

As is apparent from this brief discussion, being an organic farmer can involve a great deal more than simply signing up for a certification scheme, but it can involve also just that alone. Organic farmers exhibit a range of reasons for converting their farm; it may be that they are seeking an opportunity to make profit, to secure their family business or to take part in a wider project to transform agriculture (Lampkin 1994; Midmore 1994; Padel 1994; Hesketh et al 2002). Any one business may be involved for any one of these reasons or for all of them simultaneously, just as the reasons for people to consume organic food are also complex and subtle. Arguably, the presence of those who are in pursuit of a particular set of ideals, that they hold strongly and share with others, conditions the way in which the whole sector operates.

Table 1.1: Characteristics of a Social Movement

Characteristic Aspects of a Social Movement	Constituent parts
(1) Informal interaction networks	Interaction between individuals, groups and organisations. Range of networks from loose to dense Precondition and setting for (2)
(2) Shared beliefs and solidarity	Symbolic redefinition New collective identity
(3) Collective action focusing on conflicts	Promotion/opposition to change Contestation of a social stake
(4) Use of protest	Unusual political behaviour Frequent protest activity

Source: della Porta and Diani, 1999

The growth, development and current condition of the organic sector

It is difficult to escape what sounds like hyperbole when describing the growth of the organic sector in the UK in the last twenty years. The rise of organic food and farming has been remarkable, but only in the last seven or eight years has it become of economic and social consequence. Without understanding the scale of the organic sector and the dynamics within it the results of this research and their implications are less easily understood. Much greater detail on the sector is available in a range of recent reports and provided on a regular basis from the certification bodies and DEFRA (ADAS 2003; Firth et al 2003; Soil Association 2004). Rather than attempt to match the detail of the regular reports on the sector produced by DEFRA and the certification bodies, the following sections outline some of the key characteristics of the sector and some of the challenges it faces.

In 1984 there were fewer than 300 organic farms in the UK and the retail value of organic products was estimated at around £1 million (Reed 2004). By the end of 2004 there were over 4,300 organic farms UK, the market for organic food in the UK was the third largest in the world with over £1billion in retail sales and with 724,525 hectares certified, it had the seventh largest area of organic land in the world (Yussefi and Willer 2004; Soil Association 2004). Despite the large amount of organic land in the UK, more than half (estimated at 56%) of the organic products sold in the UK have been imported and in some categories such as fruit, vegetable and salad crops this rises to 76% (DEFRA 2004). As with most other food products, the overwhelming majority of organic goods are sold through the multiple retailers. Soil Association data for 2003/04 suggests that 80% of organic sales are via supermarkets with the remainder divided evenly between direct sales and independent retailers (Soil Association 2004).

These headline figures are well known and to some extent have become clichés in that they do not reveal the dynamic processes that are at work in the sector. Organic farming has developed at different speeds at different times as a result of a combination of factors including consumer demand, policy intervention and the influence of the major multiple retailers. It is apparent from Figure 1.1 that the retail values of organic sales have risen sharply since the late 1990s, following a boom in the late 1980s and retrenchment in the early 1990s. However, it cannot be assumed that there is a direct correlation between growth in retail sales value and the growth or performance of the domestic organic sector. What is clear is that many multiple retailers viewed this growth as a strong signal of the potential of the market. Both the House of Commons and the House of Lords similarly considered that the strength of the market should lead the development of the organic sector, although it does receive some government support (see below) (House of Lords 1999; House of Commons 2001).

Their Lordships were generally more sympathetic to organic farmers than their counterparts in the other chamber but they had reservations about state support for organic farming, in part because it might distort the market but also because:

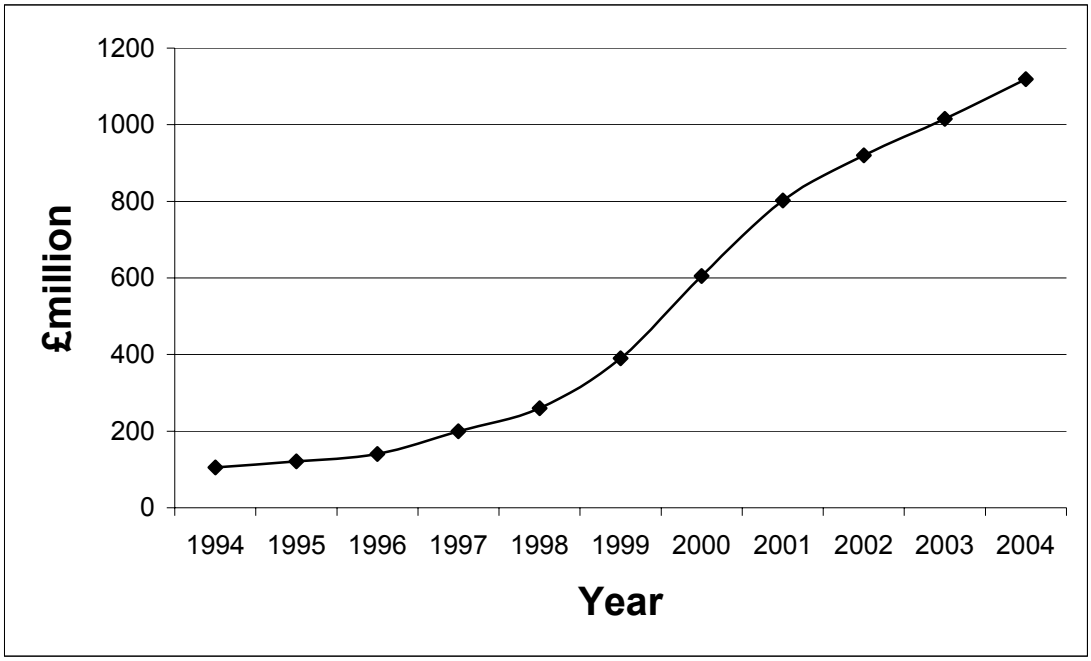
> *An excessive targeting of funds towards organic farmers can only reduce the amount of money available for the achievement of environmental and other goals in the farming community in general.* (House of Lords 1999: para.117)

The Commons Select Committee was far more sceptical of the general claims of the organic sector and wanted to see it generally led by market forces:

> *There is a real question as to the extent to which the Government should be providing support at all when the market is so obviously strong.* (House of Commons 2001: para.1)

Despite the reservations of parliament, the government has provided support and it could be argued has become more supportive over the past eight years rather than less. Few people from these committees questioned the primary importance of the market in developing the organic sector.

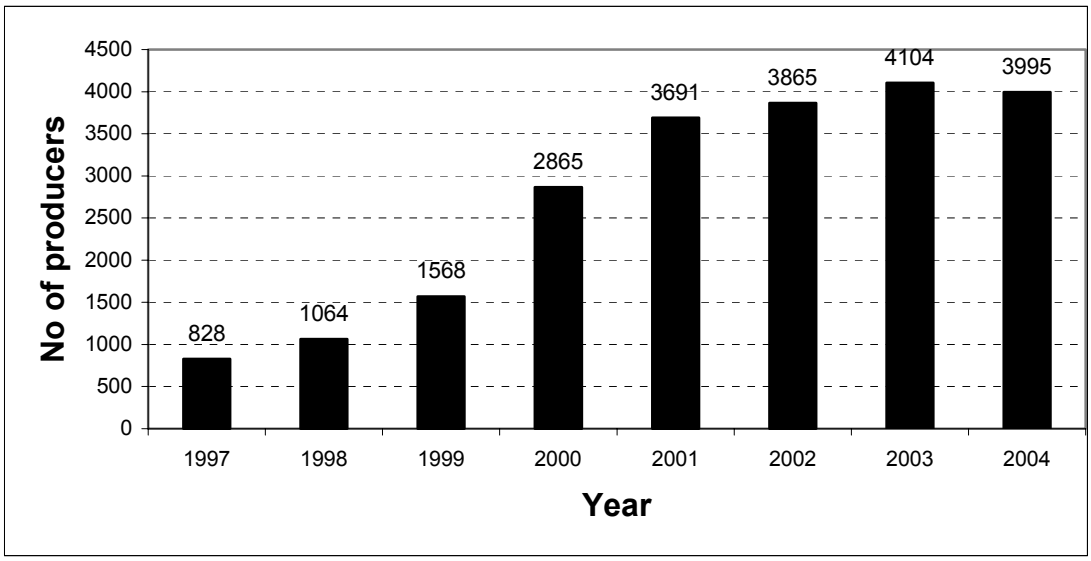
Figure 1.1: Retail sales of organic food products



Source: The Soil Association 1998, 2002,2004

With such a clear market signal occurring at a time when the rest of the agricultural economy was fairing particularly badly it could be anticipated that a number of farm businesses would respond to the opportunity presented. In Figure 1.2 the rise in the number of organic farms is clear although there would appear to be a time lag between the beginning of the boom and the rise in the number of producers. In part this is attributable to the delay caused by conversion (see below) but may also be linked to specific sectoral factors.

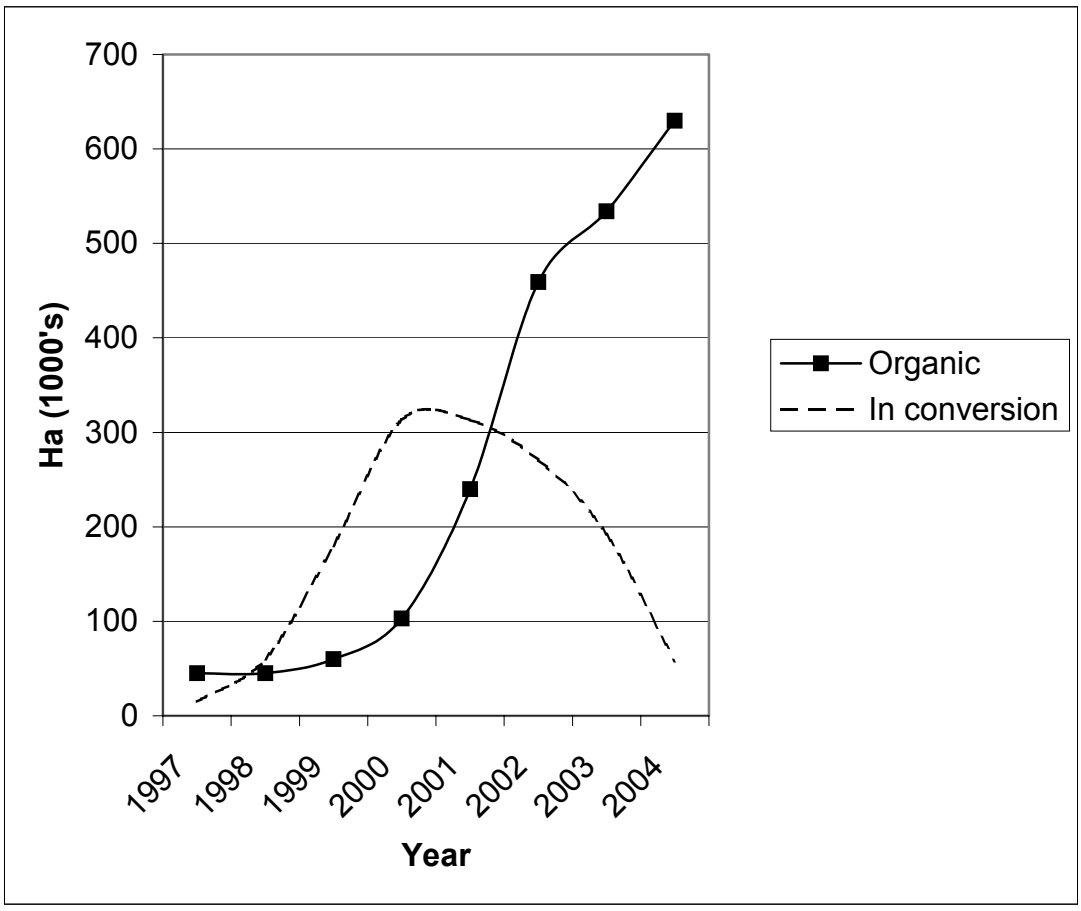
Figure 1.2: Number of registered organic producers



Source: The Soil Association 1998, 2002,2004

The number of farms engaged in organic production does not necessarily reveal the full progress of the sector, as the size and type of farms may be of equal importance. Data on the later is quite restricted whilst the area under conversion and under organic production has much more commonly been used to assess the growth of the sector. As can be seen in Figure 1.3 there has been a switch between the amount of land in conversion and the amount of land in full organic production. This demonstrates the full extent of the surge in organic conversion and the effects of the time lags, with a change in the balance of land between 2001 and 2002 following the highpoint of land in conversion in 2001.

Figure 1.3: Growth of organic land and amount of land in conversion



Source: Soil Association 2004

Until recently support for organic farming from the state has been limited and based on the environmental contribution that organic farming is deemed to provide. The first programme was the Organic Aid Scheme (1994-1999), which sought to provide support for organic farms during the conversion period. Uptake was low, with a support ceiling of 300 hectares per holding and a low payment level; only 266 applicants enrolled 27,763 hectares under the scheme (DEFRA website). The second intervention was the formation of the Organic Conversion Information Scheme (OCIS) in 1996. The service provides a telephone helpline, information pack and up to 1½ days of on-farm consultancy and has significantly improved the uptake of the OAS (DEFRA website).

In 1999 the government introduced the Organic Farming Scheme (OFS), which was considerably more generous than the provision under the OAS. Area payments were enhanced, the cap of 300 hectares was removed and lump sum payments were introduced to cover training and initial consultancy. The original budget for the first two years of the scheme was spent in six months and the scheme was closed. On reopening in January 2001 the scheme had an increased budget that was set to rise until 2006. From June 2003 the scheme was again modified with more generous payments and payments targeted at top-fruit growers in order to ensure that the scheme was able to meet its target of 650 farmers a year until 2006. The OFS is now closed as the organic strand of the previous agri-environmental programme and is being replaced by Organic Stewardship under the umbrella of the Environmental Stewardship programme.

The other area of government support has been through the Organic Action Plan, set up after the recommendations of the Curry Commission in 2002 (Curry 2002). The Plan sought to address the failure of British producers to take up a full share of the growth in retail sales. An Action Plan Team was formed of stakeholders and representatives of the food industry with the aim of:

- creating sustainable growth in organic farming and foods,

- increasing the share of UK produced food in the market and

- promoting the organic sector throughout the food chain.

The review of the Action Plan after two years of its operation found that there had been progress made on increasing the domestic sourcing of organic produce and integration in the national supply chain. Five new areas were set out for the Action plan to focus on:

1. The Sustainable Food and Farming Strategy (SFFS) – DEFRA working with the Organic Action Plan Group to ensure that organic production is making a full contribution to DEFRA's SFFS and vice versa.

2. Public procurement of food – Action Plan Group to make recommendations to ensure that the sustainable food procurement initiative delivers increased purchasing of organic food.

3. UK sourcing – to take forward progress made by retailers and extend the work to the food service and manufacturing sectors, including identifying obstacles.

4. Local supply networks – Action Plan Group to advise on capitalising on the strengths of local organic supply and identifying how obstacles to further development can be overcome.

5. Action Plan Group to advise on how organic produce can contribute to the Government's public health agenda.

It is evident from these points that the public goods produced by organic farming are becoming an important focus for its development within policy formation (ADAS 2003; DEFRA 2004). Most of this work is under the banner of sustainability and environmental benefit, but some areas are looking to a broader social role, for example in the facilitation of healthy eating. This suggests that organic farming is finding a place in rural policy that is far wider than just the facilitation of market opportunities as envisaged by the Parliamentary Select Committees at the turn of the century. The findings of this report have an obvious bearing on these goals.

Despite the growth and apparent potential of the organic sector as well as considerable policy intervention, academic researchers are beginning to identify limits

to growth in the sector and to challenge received wisdom concerning the past growth of domestic organic farming. The picture typically presented of the development of organic farming, partly set out above, is one of continued and sustained growth that treats organics "as an aggregated and homogenous category" (Smith and Marsden 2004:1) and does not focus on the situation that producers face. Smith and Marsden argue that although the picture of aggregate growth may be impressive, by considering the sales of organic food as a percentage of overall food sales "only marginal percentage growth has been taking place" (Smith and Marsden 2004:4). Moreover if the retail sales of organic food are presented in terms of the value of sales per hectare of organic land, the value of sales has fallen from £1,210 per hectare in 1996 to £471 per hectare in 2000. While physical production has increased, the retail value and market share of organic producers has not risen by a comparable extent, effectively trapping many organic producers in a classic cost-price squeeze.

Further analysis revealed a range of uneven experiences during the 'organic boom'. As is well known, the organic dairy industry has been in a situation of considerable over-supply for some time, with only 50-60% of organic milk sold onto the organic market. Smith and Marsden calculate that the gross margins achieved by such farms are likely to indistinguishable from their conventional counterparts, as lower stocking densities will balance the benefits of the organic premia. Organic lamb has experienced some volatility with increasing production of organic lamb and the competition offered by other 'green' brands of lamb. Organic horticulture on the other hand, does not appear to have suffered an erosion of price but the domestic availability of an increased amount of produce certainly indicates that as with organic dairying this is a future possibility. Organic cereal production shares a similar situation to that of organic horticulture. One conclusion is that: "the very optimistic aggregate forecasts of future prospects for UK organics could be masking influential micro-level counter-trends" (Smith and Marsden 2004:8).

Smith and Marsden argue that the price squeeze that they have analysed within the British organic sector is the result of the interaction between the strategy adopted by

the multiple retailers and those of the government. Since the mid-1990s multiple retailers have shown a determination to sell organic produce and as part of that they have sought to encourage farmers to convert to organic production. All of the major multiple retailers have made considerable efforts to increase the productive base in the UK, including sponsoring Soil Association events, a research centre at the University of Newcastle and approved demonstration farms. The message put forward by the multiples is that they want more produce and are prepared to purchase it at the right price:

> *The new challenge to indigenous organic farmers is to meet the volume, range and quality criteria at farm-gate prices that will make organic produce affordable to the majority of households in the UK.* (Smith and Marsden 2004:9)

A similar approach attempted by Iceland in 2000 was soon abandoned after considerable losses (Reed 2004). The other multiple retailers, argue Smith and Marsden, are determined to achieve this without eroding their own substantial profit margins: "The preferred option appears to be a combination of cheap imports and low UK farm-gate prices consequent on an over-abundance of indigenous organic produce" (Smith and Marsden 2004:10).

The role of multiple retailers in the growth and future shape of the domestic organic sector is beyond the scope of the research reported here but the recognition of the uneven experience of the organic sector and the demands placed on producers supplying multiples are themes that re-occurred frequently in the empirical stages of the project. In turn, this suggests that if organic farming can and does produce an additional benefit over and above that of conventional farming, it will become increasingly important to understand the dynamics of the sector and the forces shaping its development.

Summary

As a farming system, organic farming can be understood in terms of a set of legally prescribed standards. This narrow definition can be contrasted with a broader perspective which views organic farming as a social movement; a collective project in which producers and consumers interact in various ways in order to share and

pursue a particular set of ideals. Organic farming, and the supply of organic produce, have grown rapidly in recent years although the aggregate picture obscures important differences between sectors. To its proponents, organic farming not only offers a means of producing safer, healthier food under improved environmental conditions but it is also potentially a means of delivering rural development. It is this final issue that is considered in depth in the following chapter.

Chapter Two: Organic farming and the rural economy

Introduction

Organic farming is a topic that raises considerable passion; the enthusiasm of its proponents is only matched by the scepticism of its detractors (Colman 2000) . Rural development is scarcely less contested and complex. The mixture of the two topics cannot but be highly contentious. In England in the last five years the number of organic farms has risen sharply, capturing a rapidly expanding share of the food market and benefiting from increased policy support. Simultaneously the question of rural development has been raised by the travails that have afflicted many rural communities, as economic recession in the farming industry has been cut through with the trauma of Foot and Mouth disease, contention over the meaning of rural life and the role of farmers within it, and disquiet about questions of food quality. Against this background, organic farming is sometimes promoted as a vehicle to deliver safe, high quality food from an enhanced farmed environment while at the same time stimulating rural development through enhanced employment. In such a highly charged situation arguments rapidly polarise and it is important that any analysis rests on a set of clear arguments and robust evidence.

This chapter draws on a range of studies concerned with the economics and sociology of rural development and identifies a number of ways in which farming may contribute to the process of rural development. The chapter begins with a discussion of the 'rural economy'. It then goes on to review existing evidence relating to the role of organic farming in rural economies/rural development and, drawing on a wider range of literature dealing with rural development and economic activity, develops a framework for assessing the relative roles of organic and non-organic farming.

The role of agriculture in the rural economy and rural development

For a number of decades the rural economy of England has seen a structural shift away from primary industries, including agriculture (PIU 1999). However, there are

significant regional variations in the role of agriculture, particularly in East Anglia and in the South West of England, although in no region does the industry account for more than 5% of GDP (PIU 1999). In terms of employment, there has been a decline in agriculture's share of employment in rural areas from 6% to 4% of total rural employment between 1981 and 1996 (DEFRA 2002), while employment in the service sector in rural areas has increased from 60% to 71% over the same period. Such figures point to the declining role agriculture has in the rural economy.

The declining nature of agriculture's contribution to the rural economy, its spatial differentiation and its dynamic change is now widely recognised by researchers. Lobley et al (2002) confirmed spatially differentiated process of restructuring and identified a 'restructuring spectrum' that can be used to describe the complex pattern of restructuring in the recent past and the future. This ranges from 'static businesses' making little or no change, to 'agricultural integrators' developing non-farm business closely linked to farming, on and off farm 'diversifiers' and 'leavers'. Such trajectories of restructuring at the farm and regional level have different economic, social and environmental implications beyond the farm into the local rural economy. Moreover, as Tigges et al (1998) argue, agricultural restructuring is more than its economic change as it is also about social relationships of place and gender.

For most purposes the term 'rural economy' is a shorthand way of considering a range of 'economies' rather than discussing a discrete, unified and homogenous economy (Winter and Rushbrook 2003). These various economies may share similar characteristics but may also be quite different in terms of economic linkages with the wider economy and reliance on different sectors, for instance. For the purposes of this report both the spatial aspects of rural economies and the linkages associated with economic activity are important in promoting rural development. The shift in rural policy towards more of a territorial focus and the growing policy emphasis on regional and local sustainable economic development is associated with the development of research addressing interactions within 'local' economies. Some writers, such as Courtney and Errington (2000) have considered local economic linkages although the renewed focus on the local economy extends beyond traditional concerns with

economic multipliers and has witnessed a resurgence of interest in the importance of clusters, networks and innovation (Winter and Rushbrook 2003).

Research interest in rural economies inevitably promotes discussion of 'rural development', although as van der Ploeg and colleagues concede: "Any critical discussion of these issues must begin with the acknowledgement that, as yet, we have no comprehensive definition of rural development" (van der Ploeg et al 2000:391). Sotte argues that rural development "means providing non agricultural functions and employment in rural areas, fostering exchanges between sectors and territories, and thus breaking both isolation and mono-functional agricultural specialisation" (Sotte 2002:12). Errington on the other hand, adopts a less overtly anti-agriculture definition arguing that rural development involves "premeditated changes in human activity which seek to use resources within the rural arena to increase human well-being" (Errington 2002:11). In this sense, rural development is about more than promoting employment and generating income.

While it is true that a universally accepted and comprehensive definition of rural development does not exist it is nevertheless possible to identify some of the factors and processes associated with rural development. Before considering the characteristics of rural development it is important at this stage to distinguish between broad based development within the economy as a whole and rural development closely connected to farming. Whilst the rural economy is certainly much wider than agriculture alone, this study is principally concerned with farm businesses and allied enterprises. Thus, we do not consider directly the role of other businesses in the rural economy. To that end the perspective advanced here is one of 'farm centred' rural development, which places farmers and farm businesses as central actors in the process of rural development. This is not to claim that they are the most important, or only actors, but rather for a number of reasons that they are well placed to deliver rural development.

According to van der Ploeg and colleagues, farm businesses have particular advantages in being involved in the process of rural development for three

interconnected reasons (van der Ploeg et al 2000). Firstly, as long term residents in rural areas it is in a farmer's self-interest to run a viable business, within a vibrant economy. Whilst this has a certain validity (and reflects some very longstanding arguments about the beneficial role of farmers in society) it also ignores the potential limitations the self-interests of established farmers, which may not necessarily result in a rural economy of benefit to the wider community. Secondly, it is argued that farm businesses offer the opportunity to realise new enterprises in a step-by-step fashion. Farmers and their household members are able to 'toe-dip' into new opportunities, minimising business risks. While it is true that farming provides a resource base from which to experiment with new economic activities, equally, it could be argued that many existing farmers are in a poor position to respond quickly to market signals. Despite powerful driving forces evidence suggests that recent agricultural restructuring has been confined to a relatively few farms and that a distinct group of 'resistors' are particularly unwilling to quickly re-configure their resources and realign their businesses (Lobley and Potter 2004). Finally, van der Ploeg and colleagues argue that farmers are able to use their pre-existing networks of contacts to take advantage of opportunities. This presupposes that these networks are pertinent for taking up these possibilities and that farmers are part of such networks. Evidence from a review of the Peak District Integrated Rural Development programme (Blackburn et al 2000) suggests that farmers operated within well defined but narrow networks and that, in contrast to non-farming residents, these networks were not particularly useful in terms of broader rural economic and community development.

A broader perspective on the potential contribution of farmers and farmers to rural development derives from growing interest in ideas surrounding the concept of *economies of scope* (Renting et al 2003). Originally a contested concept within economics, economies of scope refer to the synergistic benefits and cost savings made through producing at least two different products. Other rural social scientists have developed a broader interpretation of the concept but it is still concerned with exploiting synergies, in this case, between the different aspects of a farm business. For example, the quality of the semi-natural environment of a farm can become the reason for an agri-environmental agreement, the basis of a farm holiday business

and part of the marketing of the particular products from the farm. The farm business needs to be able to reconfigure itself to take advantage of these potential synergies that, of course, requires change by the business operators as well. In turn, they may have to draw on the ideas and knowledge of their friends, acquaintances and even customers to see the possibilities. Realising that such interactions exist and then being able to exploit them becomes one of the key aspects of farm centred rural development.

The potential contribution of organic farming to rural development

Despite some debate about the definition and nature of rural development and the role of farms within it, farmers clearly can and do play a role, shaping the environmental context and often providing the location for rural development through diversification. In the case of organic farming in particular, although considerable research effort has been devoted to exploring the farm level impact of conversion to organic production, there has been is very little investigation of the contribution of organic farming to rural economies and the rural development process. To date, impact on labour use appears to have generated most interest but, as Morris et al (2001) argue, research on the wider "social impacts of organic farming is very limited". Nevertheless, from the limited body of research that has been carried out and the much more expansive literature on rural development, it is possible to identify a range of ways in which organic farming can contribute to rural economies.

Employment

Employment for many commentators is an unambiguous and easily measurable indicator for rural development success. Jobs protected or created within a rural area provide the foundation on which viable communities can be based, as they in turn supply the economic multipliers that support other businesses and services. According to Midmore and Dirks (2003) employment is a central concern in rural development: "the approximate measure of rural community well-being is and should still be employment, because although the emerging paradigm of rural development

suggests this should no longer be the end of policy, it is certainly one of the most important means by which further ends should be achieved" (Midmore and Dirks 2003:3).

Research on the employment impact of organic farming typically indicates a positive impact. Padel and Lampkin (1994) for example, estimate additional labour requirements in the range of 10-25% and Hird (1997) reports a similar effect, yet the employment impact is sensitive to enterprise type. For example, Bowler (1992) found the employment impact to be positively associated with horticultural and vegetable production, while research in Germany suggests that on organic arable farms employment is 60% higher, but that no significant differences exist for livestock farms (Kohne and Kohn 1998, quoted in Centre for Rural Economics Research 2002). According to Midmore (1994), the impact on employment is positive for most outputs under organic production. However, pasture and forage crops are less likely to create employment with only half the quantity used as compared to conventional production methods. Other production systems that have a considerably lower employment multiplier include the production of organic cattle, which uses 34% less than conventional production systems. Only organic milk production has a significantly greater employment multiplier than conventional production at 2.96 compared to 2.29.

The research cited above would seem to support the notion that *certain types* of organic farming can contribute to rural development through a positive employment effect (Midmore and Dirks 2003). There are, however, a number of additional considerations. The study by the Centre for Rural Economics Research found that businesses with multiple enterprises had higher levels of employment, Winter and Rushbrook explained this, "because the benefits of specialization and economies of size are lost" (Winter and Rushbrook 2003:68). The extra employment created by organic conversion is largely confined to part-time and casual labour (Centre for Rural Economics Research 2002; Morris et al 2001) and while for some, part-time employment may offer flexibility around other work and family commitments; casual employment by its very nature offers little job security. Indeed, there is some debate

"whether job increases within organic farming represent sustainable full-time employment" (Morris et al 2001). Moreover, technological change and greater labour efficiency over time could threaten the much-quoted organic jobs dividend (Offermann and Nieberg 2000; Haring et al 2001).

Much of the research focus to date has been on the quantitative aspects of employment generation while qualitative issues have received little attention (see below). In a survey of large scale non-organic producers, Walford (2003) points to the need for an increasingly technologically competent, highly professionalized agricultural workforce, while others have identified the high level of skills and management ability necessary for organic farming (Morris et al 2001). As yet there does not appear to have been much, if any, large-scale empirical work examining the implications of an increase in demand for a knowledge-rich organic work force. Similarly, it seems that there is no work on the implications of large 'gangs' of casual and seasonal labour often associated with organic horticulture in particular.

Generating and retaining value in rural areas

Clearly, the local economic impact of a farm (whether it is organic or not) goes beyond employment. Midmore (1994) calculated the potential multiplier effects of Welsh organic agriculture compared to conventional farming in the Principality. While he recognised the limitations of multipliers from input-output modelling, they do provide an indication of the impact that organic farming has on the wider rural economy. Three sets of multipliers were calculated – output, income and employment – for different agricultural crops (cereals, pasture and forage, other crops, milk, cattle, sheep and other livestock) (Midmore 1994). Generally, the output multipliers suggested that for most outputs there were only marginal positive or negative differences between the farming systems. Income multipliers, on the other hand, suggested that pasture and forage crops produce substantial more income than conventional agriculture with the former recording a multiplier of 4.26 compared to 1.88. Only sheep and cereals produced less income from organic production compared to conventional production.

As a result of this analysis, Midmore concluded, "conversion to organic farming does have the potential to generate considerably wider social and economic impacts than simply on the farms involved" (Midmore 1994:368). Although this appears to be a widely shared belief, few researchers (notwithstanding the work of Midmore et al) have collected any empirical evidence. The Cambridge evaluation of the Organic Farming Scheme identified some knock on and spill-over effects, such as value-adding initiatives and direct marketing, but did not explore how these initiatives may contribute to the local economy or the rural development process (CRER 2002).

Organic farming and diversification

Along with participation in agri-environmental schemes, farm based diversification is seen to play a major role in farm based rural development. Reanalysis undertaken for this research of the data collected for the earlier DEFRA-funded Diversification Baseline study [2] (Turner et al 2002) points to a number of distinguishing characteristics relating to organic farming and diversification

The definition of 'diversification' employed in the baseline study project does not encompass participation in agri-environment or woodland planting schemes but does encompass the leasing of land/buildings for non-agricultural use as well as a range of other practices (see Turner et al 2002 for full details). When diversified activities on farms are considered distinct differences between organic and non-organic businesses are apparent. A first point to note is that the proportion of farms engaged in some sort of diversified activity is higher for organic farms (77.1%) compared to their non-organic counterparts (67.3%), a point the earlier Cambridge study had noted but was not able to quantify.

[2] Of the total of 2,504 returns to the survey, 113 farms had Organic status (4.5% of the total). Of the respondents with organic status, 52% were located in the South West, 12% in the South East and 11% in the West Midlands. The data also revealed a distinct profile in terms of farm type. Over 22% of the organic farms were dairy farms (compared to 15% of non-organic farms). This is in part a reflection of the dominance of the South West in the sample, but also the growth in that particular market. There was also a preponderance of the heterogeneous farm types; mixed, cattle and sheep (Lowland) and Other types. See Appendix 2 for a full breakdown of the farm type and size characteristics of the Diversification Baseline sample.

On diversified farms 41% of non-organic businesses were engaged in supplying agricultural services, but only 31% of Organic holdings (see Table 2.1). Whilst 40% of organic farms offer accommodation (compared to 25% of conventional farms), organic farms also lead in trading enterprises (41% compared to 36% of non-organic farms). On the basis of this data, it appears that organic farms tend to focus on trading or providing services to those outside of the agricultural industry and are more likely to involved in the 'unconventional', producing commodities or serving niche markets. Organic farms are also more likely to be engaged in more diversified activities. The average number of diversified enterprises for organic holdings was 2.6 compared to 2.2 for non-organic farms. There is a regional aspect to this given the dominance of the South West, which offers far more opportunities to respond to tourism than many other areas. Based on this data, overall the role of organic farms is quite distinct from that their conventional counterparts, with a tendency to focus on different markets and offer different services or products.

Table 2.1: Forms of farm diversification compared between non-organic and organic farms

	Non-Organic (%)	Organic (%)
Agricultural Services	41	31
Trading Enterprises	36	41
Accommodation and catering	25	40
Equine enterprises	19	24
Recreation and Leisure	24	30
Unconventional Crops and crop-based processing	23	34
Unconventional Livestock and livestock processing	16	31
Miscellaneous	35	33

Source: The Centre for Rural Research

Organic farms were also much more likely to have received grant aid to assist in diversifying; 15.2% compared to only 5.4% for the non-organic farms. There was also evidence that very small organic farms were run as more economically active units. Only 2% of very small diversified non-organic farms had received any grant aid compared to 14% of their organic counterparts. Indeed, in every size category organic farms were more likely to have received grant assistance. Taken together,

these findings suggest that as a result of their diversification behaviour, the impact of organic farming on the local economy may be significant and distinctive. There is also evidence that organic farms in the diversification baseline study accessed public funds in a very different manner to their non-organic counterparts (see Table 2.2). In part, this reflects the forms of diversified enterprise they had chosen to develop, but it also indicates an engagement with public funds outside of the traditional agricultural sector.

Table 2.2: Sources of grant aid on diversified farms (% citing use of source)

	Non-organic	Organic
Farm diversification grant scheme	41%	11%
Rural Enterprise scheme	35%	43%
Local Authority Scheme	9%	13%
Processing and Marketing grant scheme	5%	16%
Tourist Board grant	8%	0%
Energy crops scheme	5%	4%
Farm Business Non-Capital grants scheme	3%	6%
Objective 5b	2%	6%
FMD recovery	2%	6%
Other	5%	6%

Source: Centre for Rural Research

Skills, knowledge and networks

In recent academic research on the economy of rural areas there has been a resurgence of interest in the importance of clusters, networks and their role in rural development and innovation (Winter and Rushbrook 2003). The strengthening of local ties is seen as being a prerequisite for the formation of a stronger rural economy with the benefits of local enterprise cascading into the rest of the rural economy. This takes the study of endogenous development beyond the consideration of economic multipliers alone to consider the importance of a whole range of interactions and transactions, which may strengthen the local economy (Courtney and Errington 2000). In turn, this explicitly links rural development with the concerns of social capital and embeddedness, (see below) which focuses on the creation of bonds between groups of people resident broadly in the same area. High levels of social

capital would foster innovation; this however would be dependent on a cluster of relatively well-embedded and networked firms or individuals to be observable. In such a cluster, norms would be set that promote creative flows of thinking, prioritise new flows of information and lower the social and economic costs of co-operation. However, as Winter and Rushbrook (2003) comment in their recent review of the literature about the rural economy, little of the research on rural business communities "is grounded in empirical sociological research within business communities" (Winter and Rushbrook 2003:40).

Much of the previous research on the development of organic farming has implicitly or explicitly adopted an innovation diffusion approach (Ilbery et al 1999, Colman 2000). While the simple innovation diffusion model has been subject to considerable academic criticism it nevertheless highlights a range of factors concerning organic farming and organic farmers that may help contribute to rural development (Padel 2001). In innovation theory, 'innovators' have higher levels of educational attainment and more links outside of their immediate community, whilst 'early adopters' are more closely aligned to their communities and include 'opinion formers' who influence others in the community. A wide range of studies have used this model as the basis for examining the diffusion of organic farming. Certainly, most studies have found organic farmers to be better educated, younger, more likely to come from urban backgrounds, and have less farming experience (Dabbert et al 2003). There are persistent, but largely unsubstantiated, indications that gender is also an important factor with women playing a leading role in the decision to convert or as business principals (Invetheen 1998).

Padel (2001) argues that organic farming is not typical of technical innovations, describing it as an information based innovation with those engaged within it actively seeking sources of information about organic farming outside of the mainstream of agriculture and from others involved in organic farming. As a consequence, knowledge networks take on greater significance within organic farming:

> *Because of the bottom-up character of organic farming, the technology transfer extension approach that is frequently associated with adoption research has to*

> *be rejected. Instead a broad vision of a knowledge network with the involvement of producers, advisors and researchers should be aimed for.* (Padel 2001:51)

Whilst Padel looks to the diffusion of a technology, others (e.g. Morgan and Murdoch 2000) look towards the networks that lie behind innovation in order to explain some of the characteristics of organic farming. According to this perspective, networks are the mechanisms that bring information to organic farms from a trusted source, whether this is from within or outside the organic movement. Thus information regarding organic farming will flow through both weak and strong ties in personal business networks that may be obtained either by actively seeking and then talking to the individual that possess the required knowledge or through routine passive conversations without pre-determined intentions (Lin 1999). As such, networks are about who you know, who you talk to, and perhaps most importantly who you trust. This last quality is established between individuals who are well known to each other, on the basis of long-term acquaintance, and have demonstrated the necessary credentials to render each other reliable (Giddens 1990). Consequently, the social space of the farmer is an important aspect in decision-making and innovation, particularly regarding actions involving taking advice or seeking information regarding organic farming.

There has been a recent emphasis put upon the importance of farm businesses making use of information and knowledge to adapt to the changing needs of the market place. This has been part of a broader thrust of moving towards a learning or information based economy. The benefits for the rural economy would be obvious, with farm businesses being more efficient, responding quickly to market signals and that success, in turn, boosting the rest of the economy. Often policy programmes designed to help boost the skills of farm business have sought to lift whole areas through widely available skills and education packages.

The knowledge needs of organic farmers are viewed as being very particular as it requires the combination of knowledge about their specific farm and access to a body of knowledge that is relatively specialised. This has been characterised as a knowledge ‘deficit’:

> *In other words, the knowledge deficit needs to be understood as an effect of the systemic bias against organic farming, a bias which ranged from the formal organs of the state to informal, but no less important, peer pressure from intensive farmers at the local level.* (Morgan and Murdoch 2000:167)

This deficit, paradoxically, benefits the organic farmer as in seeking this knowledge they become engaged with the wider networks of organic farming and they become 'knowing agents' (Morgan and Murdoch 2000). Organic farmers are able to blend their local, context specific knowledge with that of the wider networks of organic information to their own benefit. They are able to 'exercise more autonomy and control over both their relations with other actors in the food chain' (Morgan and Murdoch 2000:168). This would suggest that organic farmers are at the leading edge of a rural learning economy and gain greater autonomy through taking responsibility for their own learning.

Whilst Morgan and Murdoch present a picture that they admit to being simplified for explanatory purposes and focussed on the organic sector, more general empirical studies suggest that the flows of information are different and are used tactically by individual farm businesses (Egdell 2000). Rather than information being shared or cascaded, it is viewed as of being of use in the competition with their neighbours. The focus on contextual, applied knowledge tends to discount the importance of the formal education, not necessarily related to the business or agriculture, in providing new sources of information, new flows of income or perspectives. At the same time most of these accounts of a learning economy take an individualistic perspective, viewing the farmer as the learning agent rather than considering the household and the resources that it holds as a unit. Knowledge and information can allow farm and rural businesses run more efficiently, seek out opportunities and be more flexible. The capacity to learn is as important as the ability to gather information but the combination of the two is obviously crucial. It is unclear whether there is a consensus on the way in which farm businesses gather and use information, let alone how the conditions for that to be improved are created.

Community

Rural researchers are increasingly interested in the role of networks and the associated concepts of embeddedness and social capital (Falk and Kilpatrick 2000; Murdoch et al 2000; Winter 2003). Drawing on these concepts, economic behaviour is no longer viewed simply in narrow economic terms. Rather, the innovative capacity of an individual enterprise is viewed as being linked with the associational capacities of those controlling it. Entrepreneurial skill is not seen as being held by an isolated individual but is located in a cluster of other people with whom businesses operators can collaborate with, share knowledge and trust. This means that the transaction costs of the business are lowered, with skills being developed in particular areas where these networks exist and innovation stemming, in part, from the flows of information between such businesses. Interest in social relations inevitability brings the concept of community into play although the term community can be something of an analytical whitewash that obscures as much as it illuminates.

Community is a frequently ill-defined term referring to notions of settled populations with "a wide variety of kinship, social and political links plus a cultural awareness or identification with the local geographical area" (Curran and Blackburn 1994:18). That said the observation that the connections between people, and the collective actions of people who share some bonds are important is one that is hard to ignore. As has been implied in the discussion above, these bonds and connections are seen as of central importance in the process of rural development. For many commentators the presence of community is an unalloyed public good that brings forth flows of trust, solidarity and security.

Social Capital

> *the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition – or in other words, to membership in a group* (Bourdieu 1986, 248).

Social capital is a way of conceptualising the social resources that an individual holds. From the perspective of the individual these resources require them to be part of a group and recognised as such, as well as having a set of social skills and competences to mobilise them. Quickly it becomes apparent that most people

belong to more than one group and that each group may be of different importance and scale. In addition, some people have more social capital than others and such capital can ebb and flow.

As with most concepts, academic researchers frequently contest both the nature and benefits of social capital. Indeed, it is possible to distinguish between different types of social capital and to recognise that it has a 'dark side'. Putnam (2001) argues that it is possible to distinguish between *bonding* social capital and *bridging* social capital. The former is the social capital that binds people together, and the latter that which allows individuals to form new relationships and share with those beyond their immediate group. Or as Putnam describes it, "Bonding capital constitutes a kind of sociological superglue, whereas bridging social capital provides a sociological WD-40" (Putnam 2001:23). These material metaphors also serve as a warning, as too much glue can prevent movement and change, whilst those too loosened will not be able to experience the surety and support of the network. Possession of social capital is not in-itself sufficient; it is the form and the use of these competences that is of importance. Bonding capital creates the fellow feeling of a tight group but it also explicitly serves to exclude those outside of the group. A certain degree of exclusivity is the definition of a group, but it may lead to practices of exclusion that are less socially desirable. Bridging capital is in part concerned with the flow of new information, as the most challenging and new ideas will come from outside of the group. Thus, social capital provides the conceptual bridge between the individual and group or networks in which that individual is involved and in doing so is closely connected to the concept of embeddedness.

Mark Granovetter (1985) is widely regarded as writing the seminal paper on the role of embeddedness in economic behaviour. In simplest terms, the embeddedness perspective points to the recognition that economic interactions are also related to non-economic connections (including non-business connections). Individuals are not free of social relationships. They are embedded in a community and linked to others through networks of association (professional and/or social): "in other words, economic connections are embedded in social, political and cultural relations and

structures. Indeed, strong political and social links are seen as especially critical for models of industrial development that have a strong local component" (Curran and Blackburn 1994:93). In such a situation bonds of trust and affection will develop and Granovetter argues that these relationships can lower the cost of transactions in the market place. If I know someone for years and live beside her, I will do business with her more easily and quickly than I would with a stranger. So, embeddedness may aid economic efficiency.

At the same time it is important to recognise that tightly socially bonded groups may be less reactive to changes and external stimuli because of those tight connections. Tightly bonded, inward facing groups can foster inertia rather than the dynamism associated with innovation and development. Granovetter (1985) observed that innovation often stemmed from new information and such knowledge was most likely to come from associates who were infrequently seen. Friends and acquaintances that are only occasionally contacted are more likely to be the purveyors of novel information and their importance is that role. Granovetter's concept of the *strength of weak ties* has an obvious parallel to the role of bridging social capital in that being able to reach beyond the group has benefits. Granovetter's insight is that in assessing an individual's relationships it is important to map it as comprehensively as possible as it will be the outliers who are often of greatest importance.

Given the discussion earlier in this chapter about the importance of clusters and networks in the discussion of the economic contribution of farm businesses, and specifically organic farms to the process of rural development, the tools and insights of social capital can be seen to be of immediate importance. For example, a study of innovation in Italy illustrated this as families sharing close networks of association moved from supplementing their agricultural incomes in the 1950s through to operating leading edge business by the end of the century (Cooke and Morgan 1998). These tight clusters of businesses were able to remain competitive by being able to associate with one another easily and quickly, sharing skills and information. These horizontal networks, in part, run counter to the standardisation and integration

suggested in vertical networks, and to date most examples are based in rural areas with an economic stake in agriculture.

In the case of organic farming, a number of researchers have pointed to the propensity of organic farmers to cluster together (Ilbery et al 1999) while Padel and Lampkin (1994) highlight the role of wider social networks. Given the importance of separate infrastructure for the storage of organic milk and grain, or for abattoirs to be cleaned down before slaughtering organic animals, there are important practical reasons for organic farmers to collaborate. Equally, solving problems on the farm and remaining within organic standards may require the support of other organic farmers. The other benefit is that of example and encouragement, particularly when the sector was very small other people would have been an important support.

Other evidence certainly suggests that a failure of organic producers to cluster together and to develop networks of association can endanger farm survival. For example, Rigby et al (2001) report that: "In specific areas where the critical mass of organic producers required to make the transportation and processing of their products economical did not exist, producers faced severe difficulties" (Rigby et al 2001:606). The benefits of clustering and networking went beyond the economic though: "The dangers of geographical isolation were not simply in terms of marketing but also in terms of information and advice on the practicalities of production" (Rigby 2001 et al: 607). Importantly, not only do Rigby and colleagues identify the role of networks but they go on to argue that organic and non-organic farmers operate within different networks. Unfortunately, given their limited data and sample size, they were not able to offer more substantial examples that the ones above. What is clearly demonstrated by all of these studies is that organic farmers have practical reasons to be spatially close to one another.

New entrants

As with any community there are boundaries, there is a 'them' and us', but people also leave and enter a community. As this research is focused on farm centred rural development it is important to consider the population dynamics of farming

communities i.e. entry and exit from farming. It has long been known that farming has a 'top heavy' age structure as farmers often demonstrate a reluctance to retire from active farming. With many family farmers being involved in passing the farm business between generations, so business planning is closely aligned with the life course of the family. It is important to understand the dynamics of entry into farming to know something of how the community operates.

In the recent ADAS report on 'Entry to and Exit from Farming the in the UK' the authors explore the age profile of active farmers, which they confirm is significantly older than the rest of the workforce (ADAS 2004). The average age for a farmer in England is 55 years, which is comparable to the other UK nations, but the age structure of the farming population is older than comparators such as the rural or urban self-employed. Not only are farmers older but also they have often been engaged in the farm business for a long period, with the average date of entry being 1968. Almost one in four (23%) of farm business has a decision maker involved with it over the age of 65. By comparison 3% of the general workforce is over 65. Farming is characterised by an aging population in control of the business, although it is acknowledged that younger farmers often carry out much of the day to day work.

Definitions of what constitutes a 'new entrant' to farming differ. Given the propensity for families to pass farm between generations it is possible to distinguish between 'intergenerational entrants' (where the occupation of farming as well a frequently the farm itself has been passed between generations), a 'new entrant' (someone who has never farmed before and does not come from a farming family) and a 'recent new entrant'. For the purposes of the most recent ADAS report it was defined as those who "entered farming in the last five years via various routes including inheritance (new and succession), farm purchase and/or inheritance, share farming/contract farming and farm manager employment" (ADAS 2004:22). Regardless of the definition employed it is apparent that the entry into farming is very low. The authors of the ADAS report found that only 1.4% of respondents had been a farmer for less than five years. In total their best estimate is that between 1.4% and 2% of the farming population (including successors) were new entrants in the last five years.

Taking the more restrictive definition of being the first generation to farm, less than one in ten of all farmers were the first in their family to be farmers. Either indication suggests that a very low number of people enter the industry on a regular basis.

Not only are rates of entry in to farming very low but so are rates of exit. It is difficult to measure exits from farm business as the business may end but the family retains the ownership of the land and is able to start again, or wind-down the business to a very low level. However, data on VAT de-registrations provide some indication of exit from farming. By comparing VAT de-registrations over the nine years to 2003, a period covering a severe farming recession, it was apparent that the mean annual rate for agricultural businesses was 3.9% compared to 9.7% across all industries and 14.7% for Hotel and Catering businesses. Obviously not all businesses need to register for VAT but as the authors comment:

> *There is also an underlying expectation, from what has been mentioned before on business success rate that this difference would be greater if all businesses were recorded, including those too small to register.* (ADAS 2004:37)

The inertia of the farming population itself suggested in these figures also has implications for business behaviour. While in many ways the farming community is very stable, this stability could mitigate against much change occurring within it. With low levels of physical/occupational mobility and high levels of intergenerational transfers, the bonds in farming communities in some ways should be very strong. Based on the earlier discussion of social capital and embeddedness, the low levels of people entering the industry would suggest that the opportunities for most members of this community to have new flows of information and to be exposed to new and innovative ways of thinking would also be very low.

Environmental goods and services

The role of the environment as a driver of economic development is increasingly recognised yet under researched (Winter and Rushbrook 2003). In many cases previous researches considering the social and economic implications of organic farming have simply pointed to its environmental contribution as an indicator of given social and economic benefit. In this research the opposite position is adopted. The

environmental benefits of organic farming although contested by some (Shepherd et al 2003) are taken as given for the purposes of this project. As such the environmental goods and services provided by organic farming constitute an important aspect of rural development but one that is not explored further in this report.

Features of Rural Development

Attempting to synthesise the literature on farm-centred rural development and draw out the role of organic farming within it is a fairly unenviable task but as the preceding sections have shown, there are many areas where organic farming can potentially play a role and create an impact that is distinct from that associated with non-organic farming. These are summarised in Table 2.3 below but it should be noted that at this stage it should not be assumed that organic farming necessarily achieves all these goals. Nor is it a 'shopping list' for rural development but rather a framework for exploring the impacts of different types of farming activity.

Table 2.3 Features of Rural Development

Feature of Rural Development	Farm Aspects and Examples
Employment	Employment of the farm family Other employees in the farm business Employment created off the farm
Generating and retaining value in the rural economy	High value products On-farm processing On-farm retailing Co-operative processing/selling Diversification
Skills, knowledge and networks	Fostering of innovation Specific product knowledge New networks Human capital
Community	Solidarity Social capital Social networks Vibrant community life
Environmental goods	A high quality farm environment Aesthetic aspects of landscape

The geography of organic farming

It is useful to outline the possible ways in which organic agriculture may contribute to rural development but as a 'minority activity' it is also important to understand where organic farming takes place, how this has changed over time and how this may affect the rural development potential of organic farming. The aggregated data that is contained in many organic reports is aspatial; its aggregation across a particular area into a single figure obscures different processes that may be taking place within or between different areas. Typically in the EU the level of consideration is the nation state or often the sub-national region. This is reflected in the formation in the UK of national action plans for organic farming and the collection of statistics at a national level. While these levels of analysis are of obvious importance for those charged with the formation and implementation of policy, they are of less use at the level at which people live their lives, operate their businesses and contribute to rural development.

Despite the importance of understanding the spatial distribution and dynamics of organic farming, there have been surprisingly few attempts to undertake this task. Apart from the recent addition of a map to the DEFRA organic statistics web pages, the only published paper on the distribution of organic farms within England is that by Ilbery and colleagues (1999) about the development of organic farming in England. Ilbery had previously studied the distribution of agri-environmental scheme agreements and focussed on the use of the location quotient (LQ)[3] in analysing their relative concentration (see Ilbery et al 1999). Building on this work allowed Ilbery and his team to note where the highest concentrations of organic farmers were located in relation to non-organic farmers. They concluded that Wiltshire was the core organic county, which they argued rested on farmers there exploiting the market

[3] The location quotient (LQ) is a formula for measuring the relative concentration of an activity. Ilbery and colleagues used it to measure the relative concentration of organic farms in particular areas. The equation is as below.

$$\frac{\textit{Number of organic farms in county 'x'/ Number of organic farms in England and Wales}}{\textit{Number of farms in county 'x'/Number of farms in England and Wales}}$$

presented by organic status for their arable crops. Beyond that they were unable to advance any explanations for the patterns they uncovered.

Measurements of relative concentration are not a fully adequate gauge for the purposes of understanding a dynamic and emerging commercial sector. Rather, the LQ needs to be combined with measurements of numerical concentration as well as the presence of established organic farm businesses. Equally, the LQ measures presence rather than activity; it assumes that all the businesses are of equal scale and economic importance. Even some simple spatial analysis can provide a better picture of developments at a range of spatial scales – regional, county, even postcode district that can help us understand the different processes and outcomes in those locations.

For the current project two stages of analysis have been undertaken to help understand the spatial development of organic farming in England. The first was an LQ analysis of each region of England (see Table 2.4) in which each region was ranked according to its LQ value. Looking at Table 2.4 it is apparent that generally the North of England has the fewest organic holdings, while the South West and South have the most. Although this provides an approximate guide of *relative* concentration greater detail can be gathered by bringing various forms of analysis together.

Table 2.4: Location Quotient by English region, with ranking

Region	Location Quotient	Ranking
North East	0.82	4
North West	0.55	7
Yorkshire and Humberside	0.47	8
East Midland	0.78	7
West Midlands	0.96	3
Eastern	0.80	5
South West	1.55	1
South East	1.22	2

Source: Centre for Rural Research from 2003 DEFRA data

Drawing on Soil Association data it was possible to extend this analysis and gauge how long a farm certified by them had been in organic production. The total number of certified holdings in a county, the LQ score of that county and the number of pre-1990 registered organic farms could then be compared (see Table 2.5). This analysis clearly demonstrates that there are a number of complex localised processes at work, with some counties such as Berkshire being quite static whilst others like Northumberland rising quickly. This may imply that some counties have reached a ceiling, either of local demand or of farmers prepared to convert to organic status. Equally, these figures do indicate considerable 'churning' of organic status, with a substantial degree of reversion from organic status. Given that conversion is now supported by public funds to procure environmental goods, this implies a policy failure. It also demonstrates that creating a sustainable organic business is a considerable challenge.

Table 2.5: The most 'Organic' counties and analysis of their oldest Organic holdings

County	No of Holdings	Ranking of No. of holdings	LQ ranking	Pre-1990	1991-1996 registration	% of existing holdings
Wiltshire	117	4	3	4	11	13.4
Dorset	106	5	4	5	6	10.4
Berkshire	28		5	4	7	39.3
Oxfordshire	57		6	2	4	10.5
Gloucestershire	101	6	7	2	7	8.9
East Sussex	64		8	2	4	9.4
Devon	307	1	9	11	16	8.8
Herefordshire	90	7	10	7	9	17.8
Somerset	135	3	11	4	7	8.1
Cornwall	136	2	12	1	7	5.9
Northumberland	38		13		1	2.6
Shropshire	82	8	14	6	6	14.6
Kent	67	10	15	4	5	13.4

Source: Centre for Rural Research from 2003 DEFRA and Soil Association data

Devon appears as the core county in that it has a high absolute number of holdings and the largest absolute number of long established registrations. The dominance of

the South West as the home of English organic farming is abundantly clear. It is difficult to assess the push and pull factors of this clustering; certainly the presence of processing facilities such as specialist dairies and abattoirs facilitates access to the market place. The South West is well served with organic extension services, such as the Organic Studies Centre and large numbers of organic farms help with the spread of information and support. Opinion leaders in the region and the example of highly successful businesses may have had a role. The presence of a receptive and supportive group of 'counter-cultural' consumers motivated by a belief in organic farming in Bristol and Bath, as well as market towns such Glastonbury and Totnes appear to have played a role in fostering the fledgling sector.

Summary

Although organic farming is often promoted as a vehicle to deliver multiple benefits to rural areas relatively little research has examined the wider economic and social role of organic farming. To date, research suggests that organic farming stimulates employment, although the employment effect varies according to farm type and is associated with a greater incidence of farm diversification. In addition, diversification by organic farmers is frequently of a different nature to that on non-organic farms and is more closely associated with a trading enterprise. Reviewing the wider literature on farming and rural development has helped identify a number of 'features of rural development', which may be associated with organic farming. In turn, these features help frame the analysis presented in the following chapters.

Chapter Three: The characteristics of organic farmers and their farms

Introduction

This is the first of three chapters detailing the empirical findings from the research. A postal survey was undertaken designed to capture a range of organic and non-organic farming situations ranging from the 'core' organic area of Devon to the less mature (in organic terms) and developing organic sector of northern England. This chapter presents an initial overview of the results of the farm survey, identifying key farming and socio-economic characteristics of organic and non-organic farmers as essential background to the more detailed analyses of socio-economic impacts in later chapters.

Postal survey methodology and sample selection

In order to explore the socio-economic impacts of organic and non-organic farms a self-completion postal questionnaire was designed to capture a range of information about farm business characteristics, patterns of sales and purchases (the value and location of transactions), diversification activities, respondent demographic characteristics, embeddedness and participation in the local community and the extent to which formal and informal networks play an important role in the farm business (see Appendix 1).

The sample was drawn by DEFRA's census branch and was stratified by geographic area and farm type. The total sample comprised 1684 farm businesses in England, of which 684 were registered organic. Based on the earlier analysis of the temporal and spatial distribution of organic farms (reported in Chapter Two) the sample was geographically structured in order to reflect the characteristics of the organic sector in different areas. Although originally interested in the North East of England because of its small but quickly expanding organic sector, in order to recruit a large enough sample of farms, the target area was broadened to most of the north of England (see Figure 3.1). The second area selected was the county of Devon, which has the highest number of organic farms of any county in England as well as some of the

oldest. Finally, by way of contrast, East Anglia was selected on the basis that it represents a very different farming structure to the other study areas and currently has a relatively low level of organic development.

Figure 3.1: Map of study areas

Source: Centre for Rural Research

The postal survey ran from early March to mid-May 2004 and achieved an overall response rate of 43%, of which 4% were discarded as they had been insufficiently completed. The aggregate response rate however, varies considerably between the organic and non-organic sub-samples with a 44% (302) response rate for organic farms and 35% (353) for non-organic farms. These response rates compare favourably with those recorded by other recent postal surveys focussed on organic farming as well as those concerned with farming in general[4]. Regionally, response rates were strikingly similar with both Devon and the Eastern region recording a

[4] The OF&G (The Organic Farmers and Growers 2004) surveyed 4,000 organic farmers, achieving a response rate of 29%, while ADAS (ADAS 2003b) surveyed 13,000 farmers and received a poor response rate of 14% of which 98 respondents were organic farmers.

response rate of 46% for organic farms, while the northern region was lower at 39%. For non-organic farms the response rate varied between 35% and 36%[5].

An overview of the sample

The farm

In total, respondents to the postal survey managed an agricultural area of 98,000 ha, of which 44,000 ha were in the hands of the operators of organic farms. Average (mean) farm size in the sample is 155 ha (median = 68 ha), but this varied considerably by both survey region and organic/non-organic status (see Table 3.1). Although organic farms in the survey were smaller on average, in both Devon and the Northern region they were larger than their non-organic counterparts.

Table 3.1: Mean and median farm size for all farms, organic and non-organic and regional variations

	All farms	All Organic farms	All Non-organic farms	Eastern Organic farms	Devon organic farms	Northern organic farms	Eastern non-organic farms	Devon non-organic farms	Northern non-organic farms
	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)
Mean	155	147	162	204	90	205	277	86	143
Median	68	70	65	49	65	93	101	52	72
Total Area Farmed	98076	43588	54487	17584	13474	12530	29037	11412	14038
N	655	302	353	87	152	63	109	140	104

Source: Farm survey

Data on the distribution of organic farms by size and type is not readily available so it is not possible to compare the farm size and type characteristics of our sample with the organic population in the study regions or the national organic population. A recent survey by the OF&G and data from Soil Association registration lists provides some basis for comparison and, in turn, an estimate of non-response bias. As Table 3.2 illustrates, on this basis the farm survey has captured a relatively representative cross-section of organic farms of different sizes although it appears that larger organic farms are slightly over-represented.

[5] Given the relatively small number of organic farms in the Eastern and Northern regions, a regional analysis of the results is presented in appendix 2.

Table 3.2: Farm size distribution: farm survey data compared to OF&G and SA data

Farm Type	Farm survey respondents	Farm survey respondents	Farm survey respondents	Survey respondents OF&G 2004[a]	Soil Association registration list 2004[b]
	Organic	Non-organic	All farms	Organic	Organic
Less than 20 ha	21.6	27.4	24.7	19	29.1
Between 20 - 49 ha	17.6	14.3	15.8	20.2	22.1
Between 50- 99 ha	23.6	19.0	21.2	23.4	20.8
Between 100 - 199 ha	17.9	17.9	17.9	20.3	13.9
200 ha or Over	19.3	21.4	20.4	17.1	14.1
Total	100.0%	100.0%	100.0%	100.0%	100.0%
N =	302	353	655	n/a	n/a

Source: Farm survey; Soil Association 2003; The Organic Farmers and Growers 2004
a: analysis of data from the OF&G 2004 survey.
b: analysis of data taken from the Soil Association registration list.

As Table 3.3 shows, the survey achieved a good cross section of the main farm types (see Appendix 2 for regional distribution). However, without census data on the farm type distribution of organic farms it is not possible to determine if the sample is representative of the type of organic farms in the geographical areas that constitute the sample.

Table 3.3: Farm type distribution: farm survey data and DEFRA census data compared

Farm Type	Farm survey respondents Organic	Farm survey respondents Non-organic	Farm survey respondents All farms	DEFRA census All farms
Arable cropping	7.6	19.8	14.2	22.3
Horticulture	9.3	2.8	5.8	3.8
Dairy	10.3	9.6	9.9	7.4
Lowland cattle and sheep	14.6	15.0	14.8	16.9
Pigs and Poultry	4.6	1.1	2.7	4.5
LFA cattle and sheep	12.6	13.6	13.1	12.1
Mixed	34.4	18.4	25.8	5.9
Other farm type	6.6	19.5	13.6	27.1
	100.0%	100.0%	100.0%	100.0%
N =	302	353	655	

Source: Farm Survey, DEFRA census 2003

The farmer and farm household

Turning to the respondents themselves, a range of personal and demographic data points to some significant differences between the people who operate organic farms and their conventional counterparts. For example, the mean age of organic farmers in the sample is 50 compared to 56 for non-organic farmers[6]. Moreover, as Table 3.4 shows there are far fewer organic farmers aged 65 or over and a greater proportion of young (<45) organic farmers compared to their non-organic counterparts. Perhaps partly as a result of the markedly different age structure of organic farmers, they are also significantly more likely to have achieved a higher education qualification compared to non-organic farmers (51% and 30% respectively – see Table 3.5).

[6] The difference between the mean age of organic and non-organic farmers is significant using t-test.

Table 3.4: The Age Structure of organic and non-organic farmers compared

Respondent's age	Organic farmers	Non-organic farmers	All farmers
< 35	4.7	3.2	3.9
35-44	23.6	16.5	19.8
45-54	42.2	28.7	35.0
55-64	20.9	29.3	25.4
> 65	8.6	22.3	15.9
	100.0%	100.0%	100.0%
N =	301	345	646

Source: Farm Survey

The association between organic/non-organic status and farmer age is significant using Chi Square test.

Table 3.5: Highest level of formal education: organic and non-organic farmers compared

Highest level of formal education	Organic respondents	Non-organic respondents	All farmers
Full secondary Ed	23.7	44.2	34.6
FE 16+	25.1	25.4	25.3
Higher Ed 18+	51.2	30.4	40.1
	100.0%	100.0%	100.0%
N =	299	342	641

Source: Farm Survey
The association between organic/non-organic status and highest educational qualification is significant using Chi Square test.

Although some previous research (e.g. Padel 2001) has suggested that organic farmers are more likely to be women (compared to non-organic farmers) the results from the farm survey do not appear to support that. Indeed, it is clear from Table 3.6 that a slightly smaller proportion of organic farms in the sample were run by women. However, further analysis revealed some important distinctions between these two groups of farming women. In the non-organic sector a number of female respondents were widows who had only become the business principal on the death of their husband, whereas in the organic sector the women farmers were younger (50 years compared to 57 years). The difference in mean age is significant (using t-test) and they were more likely to have made a decision to run a farm on their own account as opposed to inheriting a business on the death of a spouse.

Table 3.6: The gender of organic and non-organic farmers

Gender	Organic respondents	Non-organic respondents	All respondents
Female	13.9	15.4	14.7
Male	86.1	84.6	85.3
	100.0%	100.0%	100.0%
N =	302	353	655

Source: Farm Survey

Inheritance is an important aspect of family farming. Many farmers succeed to and eventually inherit their farm while many also 'inherit' the occupation of farming but farm away from the core family farm. Three quarters of the sample operated *established family farms*[7] and managed 90% of the total farmed area captured by the survey (of this, 52% was in non-organic production and 38% in organic production). Family occupancy of the current farm or local farmland was often long term, with 22% of the sample tracing their family's occupancy of the farm to 1900 or earlier. The operators of organic farms however, were less likely to have such long farming connections in the area and 44% were the first generation of their family to farm the current farm compared to 37% of non-organic farmers. In other words, organic farmers were more likely to be new entrants.

It is well established that there are relatively few new entrants in UK agriculture (e.g. ADAS 2004). Clearly, it is possible to operate a range of definitions of new entrant and also to distinguish between 'new entrants' and 'recent entrants'. For example, in a strict sense, a new entrant can be defined as a farmer who is the first member of his/her family to farm the current farm and who has not previously farmed elsewhere. This definition can be further refined to distinguish recent new entrants; people who match the above definition and have been farming five years or less. On the basis of these definitions, it can be seen from Table 3.7 that the 'recent new entrant' operators of organic farms form 5.6% of the organic sample and are responsible for farming only 0.8% of land farmed organically. If the definition is extended to include all new entrants, a further 12.8% of organic land, compared to 6.5% of non-organic

[7] Established family farms are defined as those operated by at least the second generation of the family to farm, either operating the original family farm or farming in the immediate area of the first family farm.

land, is farmed by those new to agriculture. Given the greater importance of new entrants among the organic sub-sample, it is not surprising to discover that organic farmers are also more likely to have previously worked outside of farming (60% compared to 48% of non-organic farmers[8]).

Table 3.7: Entry into farming: organic and non-organic farmers compared

Entry into farming	Organic respondents	Area farmed	Non-organic respondents	Area farmed
Recent new entrant	5.6	0.8	4.6	1.5
New entrant	25.3	12.8	16.4	6.5
Recent established farming entrant	5.6	4.6	5.6	5.8
Established farmers	63.5	81.8	73.4	86.2
	100.0%	100.0%	100.0%	100.0%
N =	288	288	323	323

Source: Farm Survey

A further dimension of the distinctive socio-economic characteristics of organic farmers themselves is revealed through a series of proxy indicators of the degree to which respondents can be said to be embedded in their local community and locality. The recent interest in embeddedness stems from an interest in the sociology of economic behaviour, particularly the work of Granovetter (see Chapter Two). The postal questionnaire employed three proxy measures of embeddedness: distance from place of birth, distance from majority of close family and distance from majority of close friends. Looking at Tables 3.8 to 3.10 a consistent picture emerges indicating, on the basis of these measures, that the operators of organic farms are less embedded in their local community than their non-organic counterparts. For example, 49% were born either on their current farm or within ten miles compared to 64% of non-organic farmers. Similarly, 28% described most of their close family as living over 100 miles away compared to 18% of non-organic farmers. While a comparable proportion of organic and non-organic farmers reported that most of their close friends live within 10 miles of their farm, in relative terms organic farmers were more likely to have most of their close friends living at least 100 miles away. These

[8] The association between organic/non-organic status and having previously worked outside of farming is significant using Chi Square test.

results are also consistent with the emerging picture of at least a significant proportion of organic farmers being new entrants who had previously worked outside of agriculture and who have frequently moved a considerable distance from the roots of their kinship networks. The results do not mean that organic farmers are less involved in social networks, rather they suggest that they may be embedded in networks that are less 'local' and perhaps less geographically bounded (e.g. virtual/mediated networks).

Table 3.8: Embeddedness by place of birth: organic and non-organic farmers compared

Embeddedness by birth	Organic respondents	Non-organic respondents	All farms
Same location	32.7	43.0	38.3
Within 10 miles	16.3	21.1	18.9
Within 25 miles	8.0	10.5	9.4
Within 50 miles	5.3	4.8	5.1
Within 100 miles	9.0	4.0	6.3
Over 100 miles	28.7	16.5	22.1
	100.0%	100.0%	100.0%
N=	300	351	651

Source: Farm Survey
The association between organic/non-organic status and distance from place of birth is significant using Chi Square test.

Table 3.9: Embeddedness by distance from family: organic and non-organic farmers compared

Embeddedness by family	Organic respondents	Non-organic respondents	All farms
Same location	11.5	16.7	14.4
Within 10 miles	27.2	31.1	29.3
Within 25 miles	12.9	18.4	15.9
Within 50 miles	7.8	7.8	7.8
Within 100 miles	12.2	8.4	10.1
Over 100 miles	28.2	17.6	22.5
	100.0%	100.0%	100.0%
N=	294	347	641

Source: Farm Survey
The association between organic/non-organic status and distance from close family is significant using Chi Square test.

Table 3.10: Embeddedness by location of friends: organic and non-organic farmers compared

Embeddedness by friends	Organic respondents	Non-organic respondents	All farms
Same location	7.2	13.4	10.5
Within 10 miles	37.9	34.9	36.3
Within 25 miles	22.9	27.6	25.4
Within 50 miles	7.2	7.3	7.2
Within 100 miles	10.6	5.8	8.0
Over 100 miles	14.3	11.0	12.6
	100.0%	100.0%	100.0%
N=	293	344	637

Source: Farm Survey
The association between organic/non-organic status and distance from close friends is significant using Chi Square test.

Community participation and networks of association

As discussed in Chapter Two, social scientists are increasingly interested in the concept of social capital as an explanatory factor in rural development. Social capital is a broad concept and is difficult to define in simple terms (see Chapter Two). It can be thought of as the rules and customs that govern behaviour, the institutions and organisations people participate in and the networks of association that bind people together, provide bridges to other areas and other networks and provide access to contacts, ideas, help and support. The farm survey collected a number of different types of data that can be used as proxy indicators for various elements of social capital. Despite the differences revealed so far between organic and non-organic farmers, as Tables 3.11 and 3.12 indicate, there is virtually no difference in terms of their participation in a range of formal and informal industry and community groups and activities. The only statistically significant difference relates to membership of an environmental organisation. This finding should be treated with some caution as many of the organic farmers may have considered their membership of an organic certification body to be membership of an environmental group.

Table 3.11: Participation in industry and community groups

	Organic respondents	Non-organic respondents	All respondents
NFU member	25.2	22.1	23.5
CLA member	7.0	8.2	7.6
Young Farmers Club	5.0	8.8	7.0
Local Hunt	17.2	15.6	16.3
School Governor	7.9	7.4	7.6
Elected Councillor	16.2	13.0	14.5
Community Village Hall Committee	15.3	11.3	13.1
Parochial Church Council	9.3	8.8	9.0
Political Party	4.6	4.0	4.3
Environmental Group*	15.2	4.2	9.3
Campaigning Group	2.3	2.0	2.1
Sports Club	15.9	15.0	15.4
Other Community Organisations	16.2	21.2	18.9
	100.0%	100.0%	100.0%
N=	302	353	655

Source: Farm Survey

*The association between organic/non-organic status and participation in industry and community group is significant using Chi square test.

Table 3.12: Participation in community activities

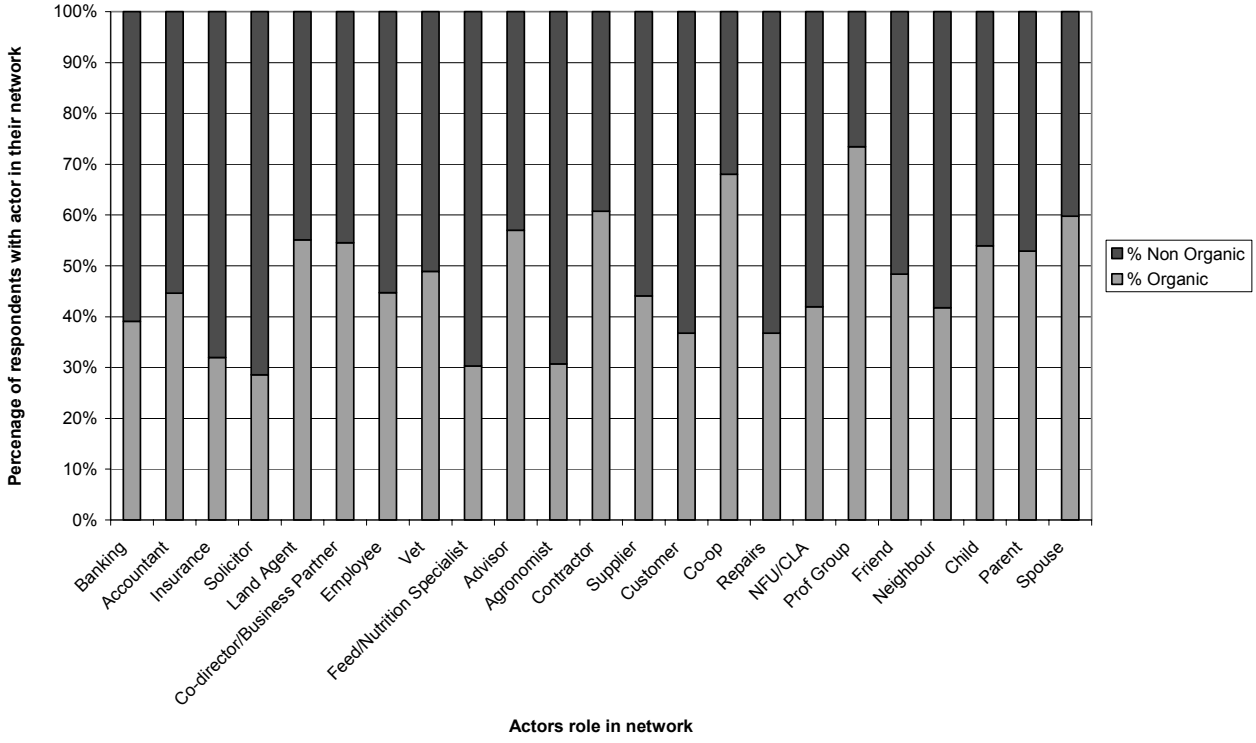
	Organic respondents	Non-organic respondents	All respondents
Regular Competitive Sport	16.6	11.0	12.7
Regular Non-Physical Sport	9.3	10.8	10.1
Other Exercise	30.5	24.1	27.0
Go to Church/Worship	22.2	26.3	24.4
Visit Pubs/Restaurants	54.6	54.7	54.7
Go to Community Events	44.7	39.7	42.0
Involved in Other Community Activity	10.3	13.6	12.1
	100.0%	100.0%	100.0%
N=	302	353	655

Source: Farm Survey

The networks of association that farmers belong to range from the very formal and/or 'compulsory' such as banking, accountants and certain legal requirements like insurance, to relationships with family, friends and neighbours that may be much more informal but nevertheless influential. This spectrum is illustrated by Figure 3.2 in which the most formal and relationships are on the left of the diagram, moving to much more informal relationships on the right. The major difference between organic

and non-organic farms is that organic farmers are more likely to belong to a professional group, which is not unexpected since many are members of the Soil Association or other organic certification organisations. Organic farmers are also more like to name individuals that are associated with co-operatives or co-operative organisations as being important to their personal business networks. This is a reflection of the importance of such organisations to organic farming and is a theme explored in later chapters. Non-organic farmers were more likely to name very formal contacts such as bank managers, accountants and insurers as important business relationships. Finally, kinship is marginally more important to organic farming than to non-organic respondents, which perhaps indicates a more self-supporting attitude to business management by organic farmers.

Figure 3.2: Transition from formal to informal networks of association



Source: Farm Survey

The farm business

The distinctiveness of organic farmers is also reflected in the characteristics and organisation of their businesses. Re-analysis of data collected by the University of Exeter for the DEFRA funded farm diversification benchmarking study (Turner et al 2002) suggested that organic farms were more likely to have diversified and to have diversified into different activities compared to non-organic farms (see Chapter Two). The findings of the current project provide further support for this. As Table 3.13 indicates, organic farms are more likely to have diversified into a range of additional activities. Moreover, the pattern of diversification on organic farms is distinct from that found on non-organic farms. For instance, diversification into the provision of agricultural services, typically contracting, has been widespread in recent years with a well defined group of 'agricultural integrators' diversifying their income earning activities but in a manner which still allies them closely to the changing fortunes of farming (Lobley et al 2002). However, compared to their non-organic counterparts, organic farms are significantly less likely to have diversified into the provision of agricultural services, 9.6% compared to 18.4% of non-organic farms.

Organic farmers, on the other hand, are more likely to have established trading and on-farm processing enterprises, providing the opportunity to capture added value and to develop closer connections with customers. In this way their diversification activities can be argued to be more sustainable, with potentially higher levels of additionality to the local economy and society. (The social impact is explored more fully through a series of case studies in Chapter Five.) Twenty-one per cent of organic farms in the sample operate a trading enterprise compared to just 5% of non-organic farms. Not only does diversification on organic farms appear to be taking these businesses along a different development trajectory, they are also more likely to be involved in multiple diversification (23.2% compared to 15.3% of non-organic farms).

Table 3.13: Diversification activities: organic and non-organic farmers compared

Diversification	% of organic respondents	% of non-organic respondents	% of all farms
Agricultural Services*	9.6	18.4	14.4
Accommodation	15.4	15.3	15.3
Recreation/Leisure	7.6	8.8	8.2
Trading Enterprises*	21.2	5.4	12.7
Processing*	15.8	3.5	9.6
Equine Services	7.0	9.9	5.0
Unconventional Crops	6.0	4.2	7.8
Unconventional Livestock	9.9	5.9	9.6
Any diversification*	56.3	46.5	50.8
Multiple diversification*	23.2	15.3	18.9
N=	302	353	655

Source: Farm Survey

* The association between organic/non-organic status and this diversification type is significant using Chi Square test.

The tendency for organic farms to have diversified into trading and/or processing activities is further revealed by analysis of the 'routes to market' employed by organic and non-organic farms in the sample. Direct and local marketing is a much more common feature on organic farms with 39% involved in one or more direct marketing route such as, farm shops, box scheme, farmers' market, supply of local shops, compared to just 13% of non-organic farms. As Table 3.14 indicates, direct sales through local shops, farm shops, box schemes, farmers' markets and marketing co-operatives are significantly more important routes to market for organic farms with sales via livestock markets still important but less so than for non-organic businesses. Marketing channels are also important because of the implications for local economic impacts. Whilst local marketing may help retain local household incomes, the opportunity cost of this is the potential injection of income into the local economy provided through export earnings (i.e. food sales beyond the 'local' area).

Table 3.14: The importance of different marketing routes: organic and non-organic farmers compared

	% of organic respondents	% of non-organic respondents	% of all farms
Direct/Local marketing*	38.6	13.1	26.0
Local shop*	18.9	6.2	12.1
Box scheme*	11.3	0.3	5.3
Farm shop*	10.9	1.7	6.0
Farmers market*	13.9	2.8	7.9
Contract with processor	19.9	26.3	23.4
Supermarket Contract*	5.6	2.5	4.0
Marketing co-operative*	23.8	15.3	19.2
Livestock market*	19.9	33.4	27.2
Other marketing route	26.2	26.6	26.4
Any with direct sales*	38.4	13.1	25.9
N =	302	353	655

Source: Farm Survey
*The association between organic/non-organic status and this marketing route is significant using Chi Square test.
Columns do not sum to 100% due to multiple responses.

In addition to being more likely to run a diversified business, the operators of organic farms are also more likely to have taken up one or more of a range of rural development payments (excluding organic aid/farming schemes). Sixty-four per cent of organic farms were, or had been, in receipt of rural development funding compared to 49% of non-organic farms (see Table 3.15). Moreover, organic farms are significantly associated with the multiple uptake of schemes. For example, 15% of organic farmers participated on three or more schemes compared to 9% of non-organic farms. Participation in the Countryside Stewardship Scheme (CSS) is perhaps the most striking difference in terms of uptake between organic and non-organic farms identified by the survey. Thirty-nine per cent of the former and just 13% of the latter are enrolled in CSS[9]. The other notable difference relates to participation in the Rural Enterprise Scheme (RES). Although uptake within the sample is low (6% of all farms), 9% of organic farms have secured RES funding compared to just 3% of

[9] There is an interesting 'chicken and egg' question here, which we are unable to easily resolve. What came first, participation in CSS or organic conversion? Clearly some of the 'veteran' organic farms were in organic production long before the advent of CSS but for others, CSS may have been associated with changing attitudes towards farming and the environment and may have been a contributory factor in organic conversion.

non-organic businesses. Clearly, this is linked to the greater likelihood of organic farms to diversify.

Table 3.15: Uptake of rural development payments: organic and non-organic farmers compared

Uptake of rural development payments	% of organic respondents	% of non-organic respondents	% of all farms
Hill Farm Allowance	14.6	13.9	14.2
Extensification	30.5	24.1	27.0
Environmental Sensitive Area	11.6	13.3	12.5
Countryside Stewardship*	39.1	12.7	24.9
Energy Crops	0.7	0.8	0.8
Processing & Marketing Grants	0.7	0.3	0.5
Rural Enterprise Scheme*	8.6	2.8	5.5
English Nature MA	4.0	2.0	2.9
Other payments*	3.0	8.5	6.0
Any payment*	63.6	48.7	55.6
Two payments*	14.6	9.6	11.9
More than two payments*	14.9	9.1	11.8
N=	302	353	655

Source: Farm Survey

* The association between organic/non-organic status and the uptake of rural development payments is significant using Chi Square test.

Dependency on farm income

Despite the significant differences in business characteristics uncovered by the survey organic and non-organic farms emerge as very similar in terms of farm household dependency on farm income (see Table 3.16). For example, approximately 45% of both organic and non-organic farms gain 75% or more of their total household income from farming.

Table 3.16: Comparison of organic/non-organic household income sources

Level of income dependency	High agricultural income dependency (≥75% of income)			Lower agricultural income dependency (<75% of income)		
	% of organic respondents	% of non-organic respondents	% of all farms	% of organic respondents	% of non-organic respondents	% of all farms
Income from agriculture	45.2	44.4	44.8	54.8	55.6	55.2
Income from on farm diversification	3.7	4.6	4.2	96.3	95.4	95.8
Income from off farm business	4.4	5.3	4.9	95.6	94.7	95.1
Income from off-farm employment	12.1	10.6	11.3	87.9	89.4	88.7
Income from private pensions and investments*	2.2	7.3	4.9	97.8	92.7	95.1
Income from social security payments	1.5	2.0	1.7	98.5	98.0	98.3
N =	123	134	257	149	168	317

Source: Farm Survey

*The association between organic/non-organic status and private pensions and investment is significant using Chi Square test.

While organic and non-organic farm businesses seem to be very similar in terms of income dependency on agriculture, there are nevertheless clear and significant differences between their characteristics. For instance, non-organic farm households highly dependent on agricultural income may be thought of as 'traditional' in many ways. They predominantly sell through livestock markets, the farm has frequently been passed down through generations and older and less educated farmers typically operate these farms. Organic farms that exhibit a relatively strong reliance on agricultural incomes are more likely to be new entrants: younger, more highly educated and preferring to sell directly to the public[10]. Furthermore, within the organic sector those households highly dependent on agriculture as an income source are much more likely to farm organically only as long as it remains profitable. In contrast, those who are less dependent on agriculture as an income source exhibit a greater commitment to organic farming regardless of its profitability.

[10] The association between organic/non-organic that have a high dependency on income from agricultural production are significant using Chi Square test for education, age, routes to market and type of entrance into farming, attitudes to production and organic farming.

Technology in the business

It is estimated that 33% of English farmers use a computer on a regular basis, whilst 33% own a computer but do not use it for the farm business (DEFRA 2004). In contrast with other industrial sectors, farming has been slow to adopt information and communication technology (Warren 2004). In such circumstances there is some justification for using the adoption of ICT in the running of the business as a (crude) proxy for the degree of business innovation, and farm survey data points to some significant disparities between organic and non-organic farmers in the use of ICT. As Table 3.17 indicates, for a range of technologies, organic farmers consistently report a higher usage of ICT, with 82% of organic farmers compared to 61% of non-organic farmers employing some form ICT in their business management. At this stage we can only speculate why there should be such a marked difference in the use of ICT between the two groups of farmers. It could be partially a result of the relatively youthful and more highly educated profile of organic farmers, or derive from the previous business and employment experience of new entrant organic farmers. It may also be influenced by the greater use of direct marketing strategies identified earlier in this chapter.

Table 3.17: Comparison of ICT usage among organic and non-organic farmers

Use of ICT in Business	% of organic respondents	% of non-organic respondents	% of all farms
Use a computer in management of farm business*	74.5	53.8	63.4
Use the internet in management of farm business*	59.3	40.2	49.0
Use email in management of farm business*	57.9	39.9	48.2
Use fax in management of farm business*	64.2	45.3	54.0
Use farm accounts software in farm business*	33.4	24.4	28.5
Use of any ICT named above*	82.1	60.9	70.7
N=	302	353	655

Source: Farm Survey

* The association between organic/non-organic status and the use of ICT in farm business management are significant using Chi Square test.

Summary

The postal survey yielded a diverse and robust sample on which to base subsequent analysis. While there is some indication that the survey may have over-represented larger organic farms, the 302 organic respondents to the survey represent approximately 19% of all registered organic farms in England.

The analysis presented in this chapter has revealed some important distinctions between the characteristics of organic and non-organic farms and farmers. Arguably, most of these differences do not stem directly from differences in farming systems but, rather, reflect considerable differences in the people who operate organic farms as well as distinctive business configurations (in terms of diversification, routes to market, etc). The people who operate organic farms are typically younger and more highly educated than their non-organic counterparts and a significant proportion have entered agriculture as an entirely new 'career'. It is reasonable to assume that this distinctive group of organic farmers brings with it different skills and aptitudes (as perhaps is reflected in their greater use of ICT) and possibly also a different attitude to operating a farm business. There is evidence that the operators of organic farms function within different networks of association, although their participation in a range of rural organisations and social activities is no different to that of non-organic farmers. The next chapter will consider the extent to which this distinctiveness is also reflected in the economic impacts of organic farming.

Chapter Four: Economic impacts of organic farming

Introduction

It is almost received wisdom amongst the bodies that promote organic agriculture that, in addition to its undoubted environmental impacts, organic farming contributes to rural development through a distinctive contribution to local economies and employment. Evidence of the actual role of organic farm businesses in local economic development however is scarce. This chapter draws on data collected through the farm survey to explore the trading patterns of different types of farms and their impact on employment. Together with data on other social and socio-economic characteristics, the economic impact data combines to develop a picture of the socio-economic footprints of organic and non-organic farms that are explored in detail in following chapters.

Economic impacts

Farm business purchases

Analysis of purchasing links provides a method of exploring the extent to which farms (or indeed, any business) of different types are connected to local economies. There are a number of ways in which the concept of economic connectivity can be approached. Earlier studies of economic linkages (e.g. Curran and Blackburn 1994) focused on the proportions of sales and purchases by businesses within certain localities where as Errington et al (Errington and Courtney 2000; Courtney and Errington 2000) extended that approach to include the monetary values of sales and purchases. Following the work of Granovetter and others reviewed in Chapter Two, this project represents an extension to this approach by collecting data on the networks and embeddedness of respondents as well as sales and purchase data.

In measuring economic connectivity (both in terms of purchases and sales) data was collected on the proportion (by value) of sales/purchases made by a business locally, regionally, nationally, internationally and also the actual value (totals and means) of these economic transactions. Consequently, it is possible to distinguish between

businesses that are 'highly connected' in terms of the proportion of their sales and purchases made locally but which nevertheless make a relatively small impact due to low sales and purchase values and business which may be associated with a greater local impact even though their business is orientated towards more distant markets.

A total of 505 respondents (246 Organic and 259 non-organic) supplied details of the value of business related[11] purchases (excluding labour) made in the most recent year for which information was available. Together these respondents spent over £65m in purchases for their businesses. In fairly simple terms this clearly represents a significant injection of money into the economy although following the economic linkage concept it is important to understand where that money was spent and whether agricultural and related businesses purchases represent a source of leakage from local economies or an injection of spending that will be associated with local multiplier effects.

A smaller number of respondents (462) were able to supply spatial estimates of where they made their purchases. These respondents spent over £56m on purchases and it is on this smaller group which most of the subsequent analysis is based (unless stated otherwise). As Table 4.1 indicates, for all farms in the sample supplying detailed data, 28% of purchases (by value) were made very locally (within 10 miles) and a total of 68% were made either very locally or within the rest of the county. These results are in marked contrast to those from other studies, which suggest that agricultural businesses are not well integrated into their local economies (e.g. Courtney and Errington 2000).

There are a number of possible explanations for these findings. The first relates to definitions of 'local'. This project employed a ten mile radius to define 'very local', with the county boundary used to delimit a wider local area. In hindsight, while pragmatic and easily understood by respondents, perhaps neither are ideal and changing the definition of local will clearly have a impact on results. There is no fixed definition of local and distances travelled to access 'local' services will vary considerably between remote upland areas for instance compared to urban fringe countryside. In one of

[11] Household purchases were excluded.

their studies Curran and Blackburn (1994) defined local as within a ten mile radius, as has the New Economics Foundation (NEF) on occasion (Ward and Lewis 2002), although following the NEF 'leaky bucket' approach, 'local' is defined by stakeholders. More recently Pretty et al (2005) define the "local food system" as existing within a 20km radius although also point to the need to recognise "degrees of local-ness" (Pretty et al 2005:16). Another explanation for the apparent discrepancy relates to the farm size structure of the sample. Harrison (1996), in a study of agricultural linkages, suggested that smaller farmers were more strongly tied to local economies. The organic sub-sample is on average smaller and contains a number of very small and micro-holdings and, following Harrison's findings, these may be 'distorting' the overall results. Another explanation exposes a limitation of the methodology based on a self-completion questionnaire. Purchases may be nominally local but in reality may be from an outlet of a regional, national or even international supplier and apparent local spending will largely and quickly leak from the local economy to the parent company.

Table 4.1: Purchasing patterns: all farms[12]

	Value of purchases	% of purchases	Mean purchases per hectare
Within 10 miles	£15,584,419	28%	£665
Within rest of county	£22,497,134	40%	£591
Within rest of region	£10,573,102	19%	£443
Elsewhere in UK	£6,539,770	11%	£275
Beyond UK	£970,018	2%	£175
Total	£56,164,443	100%	£1,952

Source: Farm Survey

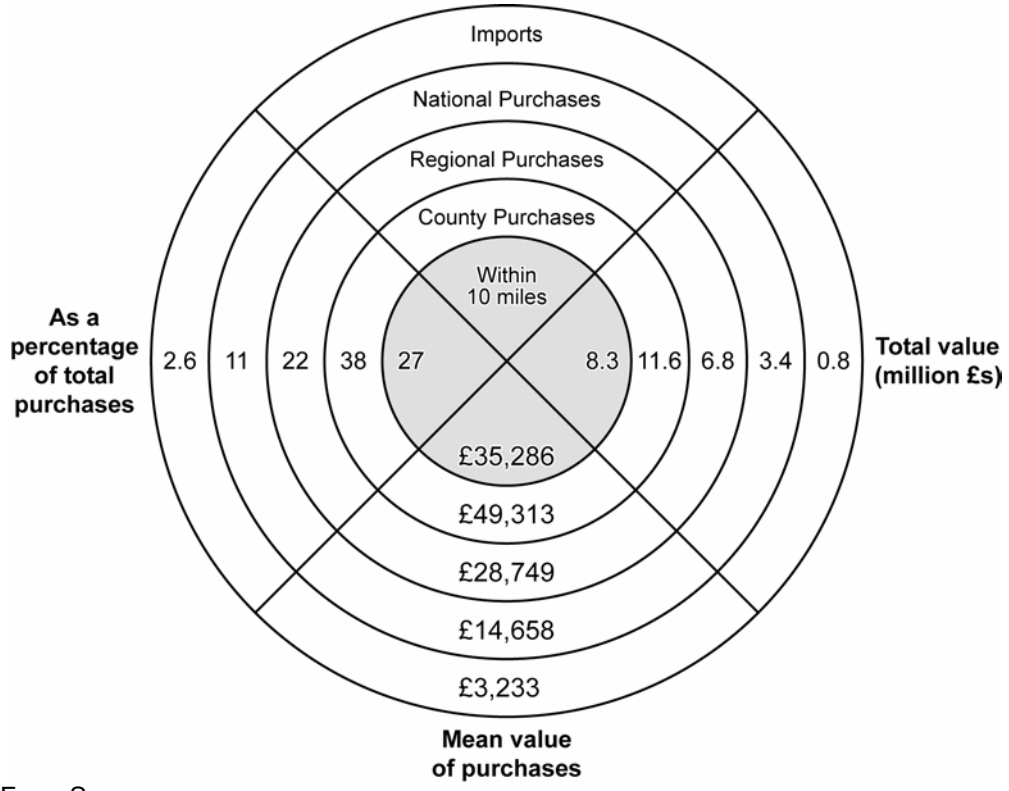
Looking at purchases in more detail, Figure 4.1 presents data for non-organic farm businesses only. Non-organic respondents able to provide detail of the spatial pattern of farm business spending were responsible for purchases of approximately £31m. In terms of value, 27% of purchases were made very locally (within 10 miles of the farm) while a total of 65% were made either very locally or within the county. The average (mean) value of purchases in the county was slightly larger than those at the very local level (£49,313 and £35,286 respectively). That only 11% of all purchases

[12] This refers to the percentage of respondents that buy at least some of their inputs within each spatial category and not a proportion of the value bought in each category.

by value were made in the national economy appears to point to limited leakages although this is subject to the qualifications made above concerning the limitations of the methodology. Purchases in the national economy were also considerably smaller on average: the mean value of national purchases was £14,658 compared to £48,695 for purchases made within the county.

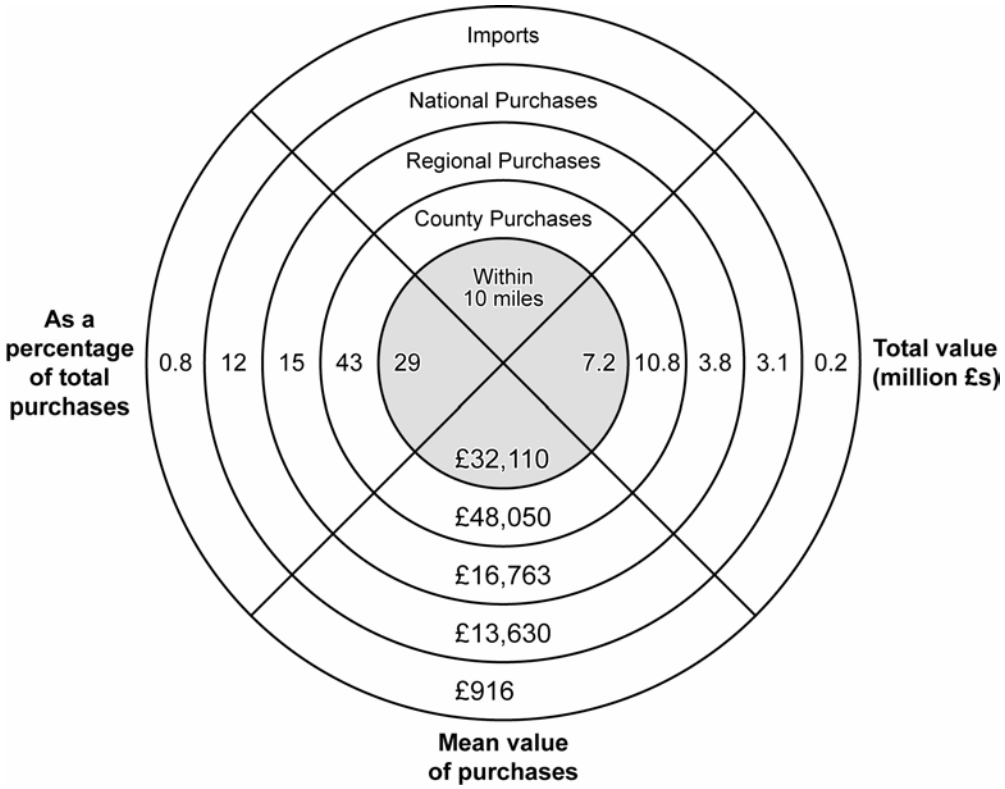
Figure 4.2 presents the same data but for organic farm businesses. The organic businesses supplying spatial data recorded £25.2m of purchases for the most recent year. The lower value of total purchases compared to non-organic farms is partly a function of the slightly lower sample size and may partly be a reflection of the purchasing requirements of organic farm systems. However, it is apparent from Figure 4.2 that the mean values are not greatly different and neither is the proportion of purchases sourced very locally (within 10 miles) or within the county. On average organic farms made purchases of £32,110 within 10 miles of the farm compared to £35,286 for non-organic farms. Measuring economic connectivity in terms of the proportion of all purchases made within 10 miles reveals very little difference between organic and non-organic farms (29% and 27% respectively) although if the concept of local is stretched to the county boundary then the difference becomes larger; 72% compared to 65% for non-organic farms. Although the total value of purchases made by non-organic farms is greater, the size of the non-organic sample is also larger. When mean purchases per farm are considered, again there is little apparent difference between organic and non-organic farms.

Figure 4.1: Purchases by non-organic farm businesses



Source: Farm Survey

Figure 4.2: Purchases by organic farm businesses



Source: Farm Survey

Looking in more detail at different farm types however, Table 4.2 (see also Table 4.3) reveals variation both within the organic farming sector and between organic and non-organic farms. In terms of their purchasing behaviour some types of organic farm (such as horticulture and lowland livestock) purchase a much greater proportion of inputs and services locally compared to arable and pig and poultry organic farms. On the other hand, while organic horticulture farms source a significant proportion (42%) of their inputs locally compared to non-organic horticulture farms, organic lowland livestock and pig and poultry farms are less well connected in this sense compared to their non-organic counterparts.

Table 4.2: Farm business purchasing behaviour by farm type and organic/non-organic status

	Total purchases		Local purchases			County purchases			Regional purchases			National purchases			Imports		
Farm type	Value	Mean	Value	%	Mean	Value	%	Mean	Value	%	Mean	Value	%	Mean	Value	%	Mean
Organic farms																	
Arable	£3,058,587	£179,917	£485,839	29	£30,365	£1,440,473	35	£90,030	£725,554	23	£45,347	£286,020	13	£17,876	£30,000	1	£1,875
Horticulture	£2,412,080	£92,772	£416,356	42	£18,102	£587,120	17	£25,527	£425,928	17	£18,519	£432,533	21	£18,806	£80,121	3	£3,484
Dairy	£3,557,598	£127,057	£1,237,674	41	£49,507	£1,056,474	33	£42,259	£578,733	15	£23,149	£421,717	11	£16,869	£49,500	1	£1,980
Lowland	£843,238	£26,351	£372,817	46	£12,427	£220,696	40	£7,357	£97,115	8	£3,237	£113,460	6	£3,782	£6,150	0	£205
Pigs& Poultry	£1,395,299	£116,275	£124,858	26	£10,405	£335,648	31	£27,971	£521,650	25	£43,471	£412,831	18	£34,403	£313	0	£26
LFA	£1,457,690	£41,648	£694,078	42	£22,390	£427,632	39	£13,795	£172,804	10	£5,574	£78,994	5	£2,548	£6,000	0	£194
Mixed	£14,791,225	£170,014	£3,882,367	41	£48,530	£6,777,096	33	£84,714	£1,241,951	14	£15,524	£1,331,890	12	£16,649	£34,997	0	£437
Other	£82,600	£9,178	£42,893	65	£4,766	£14,050	11	£1,561	£24,633	21	£2,737	£2,955	4	£328	£0	0	£0
Non-organic																	
Arable	£12,862,921	£207,466	£3,229,793	31	£54,742	£3,898,987	34	£66,085	£2,592,394	25	£43,939	£1,220,508	9	£20,687	£274,138	1	£4,646
Horticulture	£2,122,500	£265,313	£293,650	24	£41,950	£391,400	17	£55,914	£471,450	21	£67,350	£544,200	21	£77,743	£399,150	16	£57,021
Dairy	£3,603,525	£124,529	£1,163,741	44	£46,550	£1,001,522	29	£40,061	£716,743	19	£28,670	£366,852	7	£14,674	£29,000	0	£1,160
Lowland	£2,732,982	£78,085	£446,722	51	£13,537	£1,682,545	23	£50,986	£299,836	17	£9,086	£287,879	8	£8,724	£9,000	1	£273
Pigs& Poultry	£485,000	£161,667	£147,500	57	£73,750	£26,250	25	£13,125	£10,000	5	£5,000	£41,250	13	£20,625	£0	0	£0
LFA	£1,379,274	£41,796	£346,671	45	£11,556	£798,798	40	£26,627	£136,998	13	£4,567	£69,400	2	£2,313	£0	0	£0
Mixed	£13,038,318	£241,450	£2,347,359	30	£46,027	£3,517,510	42	£68,971	£2,445,805	18	£47,957	£846,412	11	£16,596	£51,650	0	£1,013
Other	£1,179,511	£33,700	£352,102	62	£12,141	£320,932	22	£11,067	£111,508	8	£3,845	£82,868	8	£2,858	£0	0	£0
Total	**£65,002,348**	**£128,718**	**£15,584,419**	**41**	**£33,733**	**£22,497,134**	**32**	**£48,695**	**£10,573,102**	**16**	**£22,886**	**£6,539,770**	**10**	**£14,155**	**£970,018**	**1**	**£2,100**

Source: Farm Survey

Table 4.3: Sales and purchases of organic and non-organic businesses

	Organic farm businesses		Non-organic farm businesses		All farm businesses	
	Value of purchases	Value of sales	Value of purchases	Value of sales	Value of purchases	Value of sales
Within 10 miles	£7,256,881	£6,664,111	£8,327,538	£11,701,564	£15,584,419	£18,365,675
Within rest of county	£10,859,190	£12,731,252,	£11,637,944	£13,031,798	£22,497,134	£25,763,050
Within rest of region	£3,788,368	£9,583,398	£6,784,734	£10,036,759	£10,573,102	£19,620,157
Elsewhere in UK	£3,080,400	£5,124,861	£3,459,370	£8,355,059	£6,539,770	£13,479,920
Beyond UK	£207,081	£48,970	£762,938	£390,168	£970,018	£439,138
Total	£25,191,920.00	£4,152,872	£30,972,524.00	£43,515,348	£56,164,443.00	£77,667,941

Source: Farm Survey

Labour use on organic and non-organic farms

One of the most common claims made for organic farming in a rural development context relates to employment creation. Quite simply, employment is necessary in order to earn income to purchase other goods and services. In addition, employment also brings with it a range of less tangible benefits such as social contact and a feeling of self worth. While employment is not the only goal of rural development, it can be seen as a principal means of meeting several objectives.

As Table 4.4 indicates, the farms in the sample employed a total of 3,230 people, of which organic farm businesses accounted for 57%. On average organic farm businesses employed 6.4 people per farm compared to 4.6 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. However, while absolute numbers of people employed may be taken as an indicator of rural development impacts at the farm level, it obscures differences in terms of full-time labour, part-time, causal and seasonal employees. For example 48% of labour on non-organic farms is provided by full-time, 19% by part-time and 33% workers compared to 33%, 17% and 50% respectively on organic farms.

Table 4.4: Labour use on organic and non-organic farms

	Total family labour	Total non-family labour	Total labour (family + non-family employees)	Mean total family labour	Mean total non-family labour*	Mean total labour (family + non-family employees)*
Organic farm businesses	676	1157	1833	2.4	4.0	6.4
Non- Organic farm businesses	676	711	1397	2.2	2.3	4.6
All farms	1352	1868	3230	2.3	3.2	5.5

Source: Farm Survey

* Means between organic and non-organic farms are significantly different using t-test.

Given the differences in the composition of the total labour force within the survey, a more meaningful comparison is to standardise labour into Full Time Equivalents (FTEs).[13] In these terms the surveyed farm businesses employ 2,133 FTEs, of which 1151 (54%) are found on organic farms. As Figure 4.3 shows, on average organic farms employ more FTEs (55% Compared to 48% for conventional farms excluding the 'other' farm type category)[14] and this employment effect is even more marked when looking at FTE per ha (Figure 4.5). These differences are at least partly explained by differences between farm types with some organic farms employing significantly more labour in FTE terms than comparable non-organic farms. For example, organic arable, dairy and pig and poultry farms all employ more FTEs than their non-organic counterparts. A further explanation for the observed employment effect relates to the very different business model adopted by some organic businesses. As Chapter Three demonstrated, organic farmers are more likely to be involved in diversification, on-farm processing and direct sales, all of which could be expected to have an employment impact. Indeed, 27% of organic farmers report increasing employment following conversion, employing on average an additional 1.73 FTE labour units.

[13] 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).

[14] The 'Other' category of farm type, while capturing an important aspect of rural society, does not necessarily represent 'typical' employment in agriculture, as many did not include any commercial agricultural functions. For example, one respondent listed those working in the hotel business as farm employees, while another recorded school bus drivers as farm employees. Clearly, while these enterprises are important for rural employment opportunities and those particular businesses, they are not agricultural in nature and as such have been excluded from the employment analysis to provide a more precise picture.

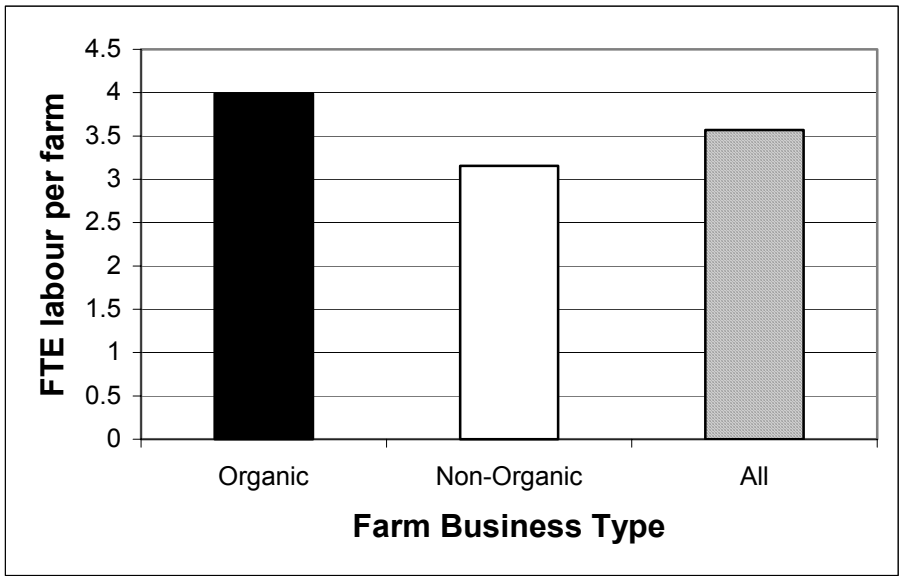
Table 4.5: Labour use by FTE/HA by farm type

Organic and farm type	FTE Employee/HA*	FTE Family/HA*	FTE per ha excluding other*
Organic			
Arable	0.01	0.01	0.02
Horticulture	0.32	0.47	0.79
Dairy	0.01	0.02	0.03
Lowland	0.01	0.03	0.04
Pigs & Poultry	0.15	0.23	0.39
LFA	0.00	0.03	0.03
Mixed	0.01	0.05	0.06
Non-organic			
Arable	0.01	0.01	0.02
Horticulture	0.45	0.29	0.73
Dairy	0.01	0.04	0.05
Lowland	0.01	0.05	0.06
Pigs & Poultry	0.02	0.28	0.29
LFA	0.01	0.04	0.05
Mixed	0.01	0.03	0.04
Total	0.04	0.06	0.10

* Means between organic and non-organic farm types are significant (t-test, p <0.05).

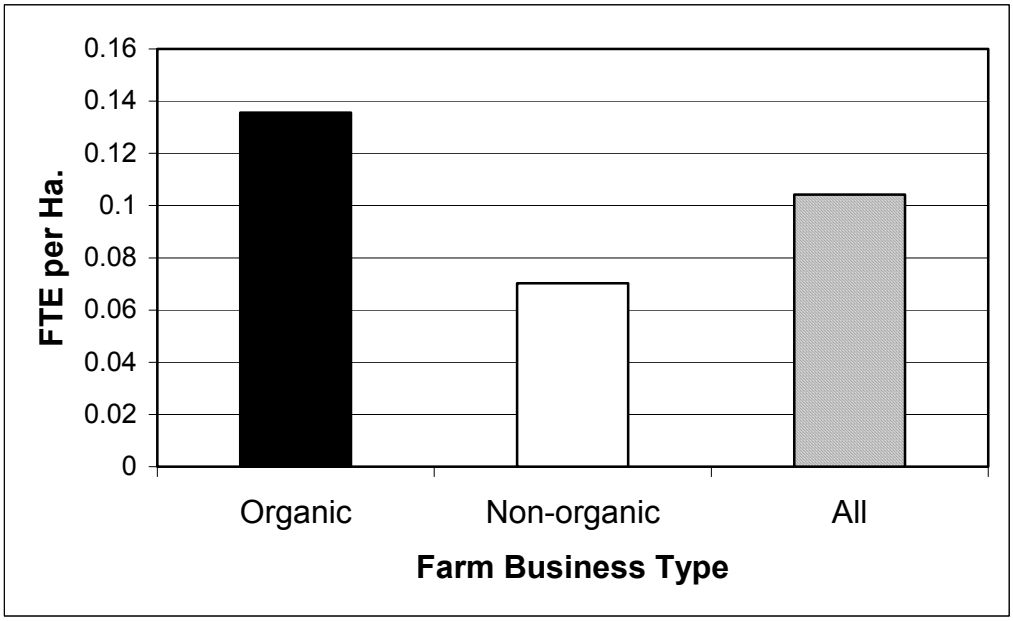
As well as supporting greater employment, as Figure 4.5 indicates, organic farm businesses employ significantly more non-family FTEs, supporting employment in the local economy rather than just their own family.

Figure 4.3: Mean FTE labour use: Organic and Non-organic farms compared



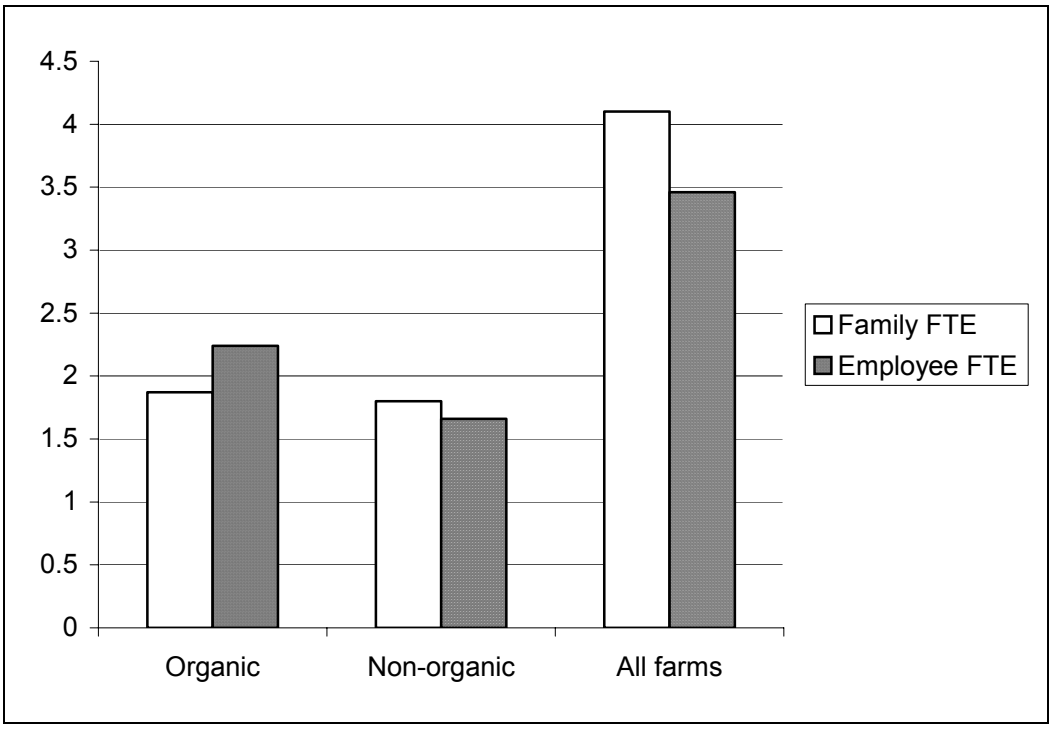
Source: Farm Survey

Figure 4.4: Mean FTE use per hectare: Organic and non-organic farms compared*



Source: Farm Survey
* Means between organic and non-organic farms are significantly different using t-test.

Figure 4.5: Mean FTE labour on organic and non-organic farms compared



Source: Farm Survey

Establishing the number of jobs supported by organic and non-organic farms is necessary but it is also important to identify rates of pay for family and non-family employees. Together, the organic and non-organic farm businesses in the survey have an annual salary bill of approximately £5.25m. As Table 4.6 indicates the salary per FTE is approximately £4000 lower for organic farms although this is largely accounted for by low family wages as non-family labour is paid slightly higher than compared to non-organic farms. The data on the salaries of family labour must be treated with some caution, particularly where this represents a farmer and spouse as many farmers do not pay themselves a wage that is easily comparable with salaried workers either within farming or beyond. Bearing that in mind, Table 4.7 presents salary information for organic and non-organic farms of different types and reveals considerable differences both within the organic sector and between organic and non-organic farms of the same type. It can be seen that the higher aggregate salary figure for organic non-family FTEs is accounted for by higher rates of pay compared to non-organic farms in the dairy and upland livestock sectors (and lower pay in other sectors)[15]

Table 4.6: Salary levels: organic and non-organic farm businesses compared

	Total salary bill (FTE basis)	Salary/FTE*	Salary/family FTE*	Salary/non-family FTE
Organic farm businesses	£2,382,273	£9,176	£9,479	£11,276
Non-organic farm businesses	£2,870,380	£13,288	£13,634	£11,108

Source: Farm Survey

* Means between organic and non-organic farms are significant (t-test).

[15] Caution should be exercised in interpreting the results from Table 4.7 as many of the farm type categories contain an insufficient number of farms to provide a robust statistical analysis. For more information see Appendix 2.

Table 4.7: Salary levels on organic and non-organic farms of different types

	Total salary bill (£ million)	Salary/FTE*	Salary/ family FTE*	Salary/non-family FTE*
Organic				
Arable	£221,815	£13,863	£10,438	£12,660
Horticulture	£135,428	£7,128	£7,780	£8,286
Dairy	£376,572	£13,449	£13,167	£13,131
Lowland	£214,362	£7,392	£7,317	£6,132
Pigs & Poultry	£118,603	£9,884	£9,732	£10,338
LFA	£311,325	£11,119	£14,549	£10,553
Mixed	£888,121	£10,573	£13,103	£8,309
Other	£116,048	£12,894	£4,894	£11,803
Non-Organic				
Arable	£1,123,881	£20,434	£14,907	£20,722
Horticulture	£93,521	£11,690	£12,313	£11,795
Dairy	£275,464	£8,886	£12,372	£6,345
Lowland	£232,545	£10,111	£5,171	£10,279
Pigs & Poultry	£41,356	£10,339	£15,833	£11,391
LFA	£206,642	£8,984	£8,911	£8,724
Mixed	£621,331	£11,949	£11,194	£13,918
Other	£275,640	£13,782	£7,704	£15,512

Source: Farm Survey

* Means between organic and non-organic farms are significant (ANOVA).

Generating value: farm business sales

So far the analysis has considered economic impacts in terms of injections of money into the local economy through purchases of inputs and services and employment creation. This section looks at sales as an indication of the ability of farms to generate value in the economy and in terms of economic connectivity. At the aggregate level, the 497 respondents supplying sales data generated sales of £90.5m. Again a slightly smaller number of respondents (454) were able to supply information on the spatial destination of sales. These respondents recorded sales totalling £79m or an average of £171,672 per farm. As Table 4.8 indicates 35% of sales were made locally, 30% within the rest of the county and just 12% in the 'national' economy.

Table 4.8: Sales patterns: all farms[16]

	Value of sales*	% of sales†	Mean sales per hectare**
Within 10 miles	£18,365,675	35%	£779
Within rest of county	£25,763,050	30%	£471
Within rest of region	£19,620,157	22%	£568
Elsewhere in UK	£13,479,920	12%	£401
Beyond UK	£439,138	1%	£6
Total (N= *497, †483,**484)	£77,667,941	100%	£2401

Source: Farm Survey

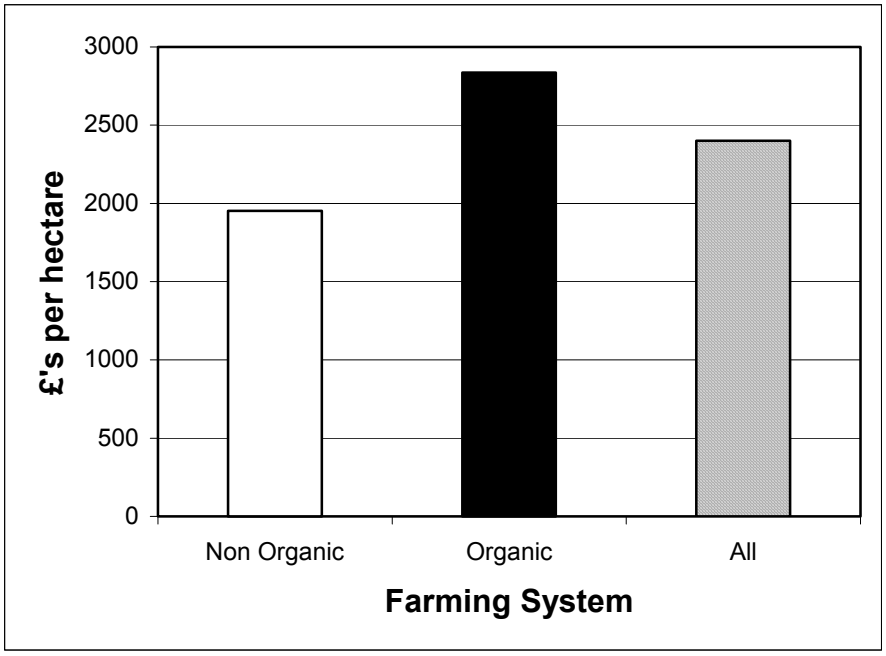
Turning to the sales from organic and non-organic farms, 42% of all sales by value (£37.9m) were associated with organic farms. Mean sales per farm were higher for non-organic businesses at £211,005 compared to £152,862 for organic farm businesses (although the difference is not significant in a statistical sense). In both instances though, the wide range of farm sizes, including some micro businesses and some very large businesses distort the mean and as such the median figures of £70,000 and £48,293 respectively give a less misleading picture. Indeed, given the differences in the farm size structure of the organic and non-organic samples comparing the values of sales generated per hectare provides a more robust basis for comparison. As Figure 4.6 shows, organic farm businesses generate sales of substantially greater value per hectare compared to non-organic farms (although this varies considerably by farm type – see below).

Figures 4.7 and 4.8 present data on the spatial economic connectivity of sales behaviour for organic and non-organic businesses. A first point to note is that while the mean values and absolute values of sales differ, in terms of their very local and county connectedness the two sub-samples differ very little. Indeed, 57% of the value of sales from non-organic farms were made either within ten miles of the farm or within the county compared to 56% for organic farms. Organic farms however, are slightly less locally orientated than their non-organic counterparts with the value of very local sales accounting for only 19% of the total sales made by organic farms compared to 27% for non-organic farms. On the basis of this measure organic farms are no more connected to their local economy than non-organic farms and the value of their sales is less. One interpretation of these results is that on the basis of this

[16] This refers to the percentage of respondents that sell at least some of their produce within each spatial category and not a proportion of value sold in each category.

measure, organic farming does not lead to a benefit to rural economies over and above that of conventional agriculture. Despite the increasing importance of the 'local food' market and the greater use of local and direct sales routes by organic farmers (see Chapter Three), a lower proportion of their sales are located in the local area. One explanation may relate to the definition of local[17] although an alternative explanation is that treating both organic and non-organic farms as a homogenous mass obscures important distinctions which may be revelled by exploring differences associated with farm type clarifications or indeed alternative methods of categorising farm businesses.

Figure 4.6: The value of sales per hectare: organic and non-organic farms compared*



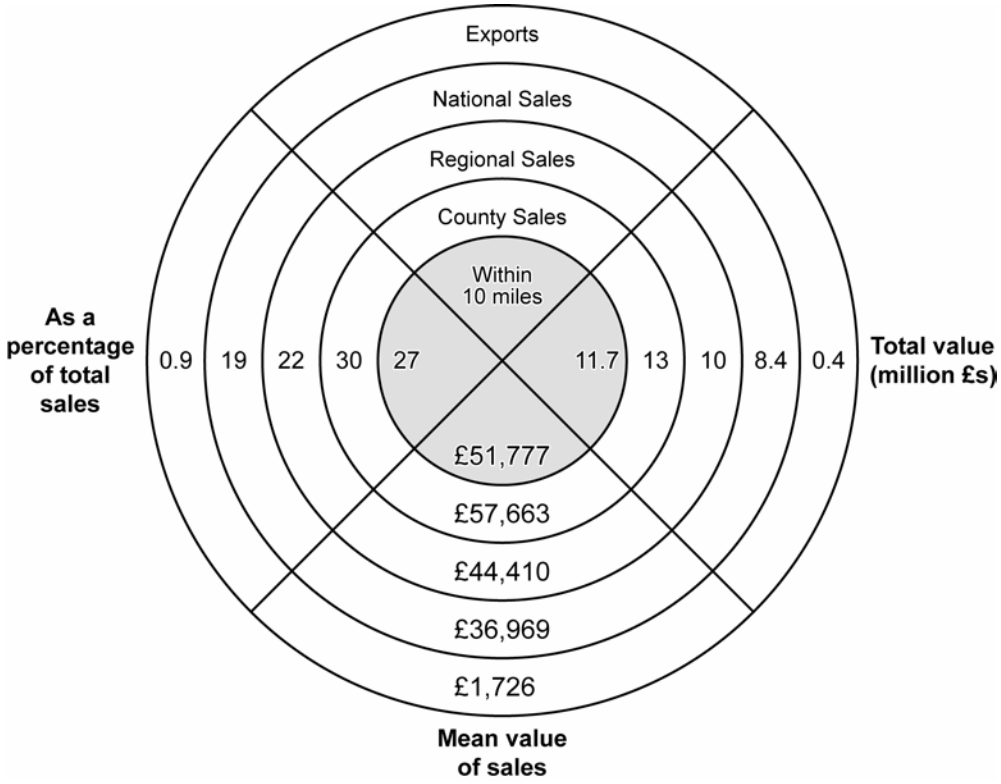
Source: Farm Survey
* Means are significantly different between organic and non-organic farms for sales per ha (t-test, $p<0.1$).

Further analysis indicates substantial differences, in terms of economic connectivity, between organic and non-organic farms that are ostensibly of the same type. And, as with purchases, there are considerable differences between different types of organic farm. For instance, horticultural organic farm businesses appear highly connected to their local economy with 67% of sales (by value) going to the immediate area local

[17] Farmers may be travelling further than ten miles to participate in farmers' markets for instance.

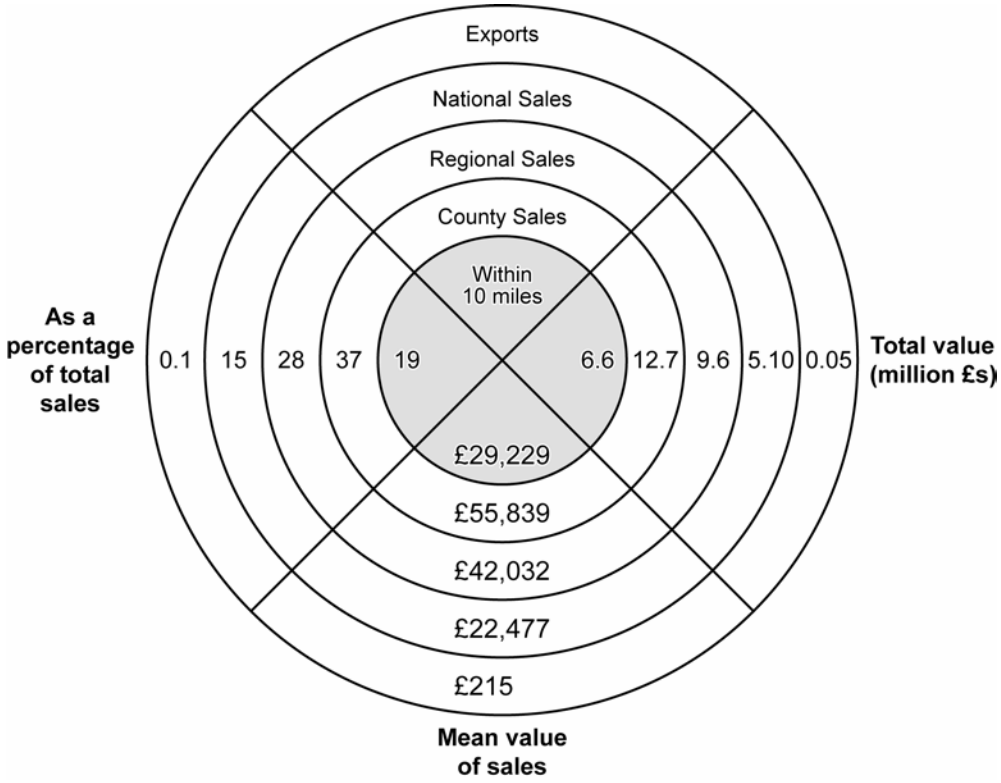
area (within a radius of 10 miles) and with mean local sales of £930k per farm (see Table 4.9). Non-organic horticultural farms on the other hand made only 33% of sales locally with a significantly lower mean value of £33k per farm. Non-organic horticultural farms in the sample are much more focused on national sales (which account for 48% of sales). Within the organic sector, as would largely be expected, arable farms and dairy farms are much less locally connected in terms of sales patterns compared to other types of organic farms with 16% and 18% of sales made locally compared to 47% for lowland livestock farms. Although there is also some variation within the non-organic sector the differences are less pronounced (excluding the category of 'other' farms).

Figure 4.7: Non-organic sales



Source: Farm Survey

Figure 4.8: Organic sales



Source: Farm Survey

Table 4.9: Farm business sales patterns by farm type and organic/non-organic status

	Total sales		Local sales			County sales			Regional sales			National sales			International sales		
Farm type	**Value**	**Mean**	**Value**	**%**	**Mean**	**Value**	**%**	**Mean**	**Value**	**%**	**Mean**	**Value**	**%**	**Mean**	**Value**	**%**	**Mean**
Organic farms																	
Arable	£4,585,536	£280,721	£281,957	16	£17,622	£2,424,757	25	£151,547	£1,324,209	28	£82,763	£434,318	28	£27,145	£26,295	2	£1,643
Horticulture	£4,044,554	£152,880	£929,613	67	£37,185	£500,206	14	£20,008	£1,598,186	16	£63,927	£697,000	2	£27,880	£0	0	£0
Dairy	£4,938,561	£175,768	£761,880	18	£29,303	£848,529	23	£32,636	£2,038,631	39	£78,409	£920,936	20	£35,421	£0	0	£0
Lowland	£844,124	£25,871	£193,591	47	£6,453	£163,511	27	£5,450	£261,700	15	£8,723	£156,572	12	£5,219	£750	0	£25
Pigs & Poultry	£1,977,442	£138,434	£494,000	44	£44,909	£290,398	21	£26,400	£369,100	21	£33,555	£368,678	14	£33,516	£600	0	£55
LFA	£1,589,013	£45,161	£377,781	31	£12,186	£491,217	41	£15,846	£206,637	12	£6,666	£317,350	15	£10,237	£7,000	0	£226
Mixed	£19,772,639	£221,320	£3,590,298	33	£44,879	£7,956,664	32	£99,458	£3,767,035	20	£47,088	£2,204,066	14	£27,551	£14,325	0	£179
Other	£158,002	£14,978	£34,992	56	£3,888	£55,970	23	£6,219	£17,900	12	£1,989	£25,940	9	£2,882	£0	0	£0
Non-organic																	
Arable	£18,176,926	£280,097	£6,786,583	27	£115,027	£4,786,239	37	£81,123	£2,700,720	24	£45,775	£2,061,266	12	£34,937	£190,918	1	£3,236
Horticulture	£4,843,380	£691,911	£33,204	33	£4,743	£166,338	3	£23,763	£1,245,088	15	£177,870	£3,387,750	48	£483,964	£11,000	3	£1,571
Dairy	£5,490,506	£212,814	£1,181,131	32	£51,354	£1,258,370	26	£54,712	£2,063,525	30	£89,718	£391,690	10	£17,030	£0	0	£0
Lowland	£3,075,879	£92,693	£337,068	38	£10,214	£1,747,115	20	£52,943	£635,207	33	£19,249	£333,989	9	£10,121	£5,500	0	£167
Pigs & Poultry	£620,000	£135,000	£132,500	38	£66,250	£13,500	5	£6,750	£124,000	33	£62,000	£0	23	£0	£0	0	£0
LFA	£1,453,432	£44,685	£212,835	33	£6,651	£942,442	42	£29,451	£264,047	24	£8,251	£10,600	1	£331	£0	0	£0
Mixed	£17,297,058	£240,971	£2,498,967	24	£54,325	£3,436,007	35	£74,696	£2,829,422	24	£61,509	£2,137,514	15	£46,468	£182,750	1	£3,973
Other	£1,583,032	£58,699	£519,275	60	£21,636	£681,788	31	£28,408	£174,750	4	£7,281	£32,250	5	£1,344	£0	0	£0
Total	**£90,450,085**	**£171,672**	**£18,365,675**	**35**	**£40,453**	**£25,763,050**	**30**	**£56,747**	**£19,620,157**	**22**	**£43,216**	**£13,479,920**	**12**	**£29,691**	**£439,138**	**0**	**£967**

Source: Farm Survey

Summary

It is apparent from the analysis presented in this chapter that both organic and non-organic farms generate a considerable amount of economic activity in terms of sales, purchases and employment. The employment dividend associated with organic farming in previous research is reflected in the current sample. However, it is clear that much of this relates to the greater use of casual labour, which may be less desirable from a rural development perspective, although without knowing the other employment opportunities facing casual staff it is not possible to fully assess the implications of this finding. What is clear is that organic farms are more likely to employ non-family staff and for some organic sub-sectors (e.g. dairy and mixed) employees are paid more than their non-organic counterparts. On the other hand, family staff tend to take lower wages than both non-family employees and their non-organic counterparts.

In terms of the sales and purchases of the two groups of farms, the organic farms generate higher sales values when expressed on a hectarage basis but in terms of economic connectivity with the local area there is little difference between organic and non-organic farm businesses. That said, greater differences are apparent when looking at different types of organic and non-organic farms (e.g. organic horticulture farms are more closely connected to their local economy than other organic farms and non-organic horticulture farms). The wide variation both within the organic sector and between farms of a similar a type in the organic and non-organic sector is explored more fully in the following chapter.

Chapter Five: Understanding socio-economic impacts

Introduction

The analysis so far points to a complex scenario with organic farming playing a distinctive role in generating farm based employment and a higher value of sales per hectare but being less differentiated from non-organic farming in measures of local economic connectivity. In terms of many other social and economic indicators (e.g. age, education, entry route into farming, diversification) organic farmers themselves are much more distinctive. To some extent considering all organic farms compared to all non-organic farms has obscured the impact of organic farming. When the two sub-samples have been disaggregated by main farm type greater differences have become apparent at both inter-sector and intra-sector levels. Further analysis revealed that along with farm type and a distinction between organic and non-organic farms, the way in which the business is configured and, in particular the approach to marketing has a significant influence on economic impacts and that, in turn, this is associated with a distinct socio-economic profile of the farmers themselves. This chapter draws together the analysis so far, identifying the key characteristics of the socio-economic footprint (SEF) of different types of farm and exploring the differences in these footprints. This part of the analysis also draws on data gathered during in-depth face-to-face interviews with 22 and stakeholders. Before considering the SEF of different types of farm, the chapter begins with an overview of some of the issues facing the supply chain in different organic sectors.

Integration with the national supply chain

> *Retailers made the point very forcefully that British farmers needed to overcome their natural reluctance to cooperate in the marketing of their products.* (CRER :107*)*

Throughout the interviews with those involved in the supply chain for organic products, which largely involved serving the multiple retailers, a similar range of issues were raised. Unusually for the UK, apart from the dairy industry, the supply of organic products has involved a range of producer co-operatives. These have been

used to assist producers overcome problems with infrastructure, to simplify relations with larger scale customers and for the client to ensure some continuity of supply. The following sections consider aspects of the supply chain for each major organic sector. The analysis is based on interviews with a number of market analysts. Because of the commercial sensitivities of these discussions all of the informants are anonymous.

The dairy sector

The problems of the dairy sector in general have been well reported given dairy farmers obvious reliance on the price of milk, which has been volatile and the main route to market which is dominated by the multiple retailers. In the organic dairy sector there has been a situation of over supply for several years as the amount of milk outstrips the demand for dairy products and for some producers there are remain some problems of infrastructure. Milk that cannot find a market in the organic sector has been simply combined with the non-organic milk pool. Farmers were attracted by the relatively high price for organic milk that has been on occasion offered and comparatively low barriers to conversion. The market is reportedly due to enter a period of balance where demand meets supply (OF4) as a result of a fall in the number of organic dairy producers.

The experience of organic farmers in the dairy sector is farm from uniform, whilst some farmers are obviously thriving and building their businesses, the experience for others has been less satisfactory:

> *The Organic Farming scheme led to disaster i.e. too fast expansion of organic milk. The low organic milk price means we have lost three times as much off the bottom line as we had from OFS over last three years.*
> *Lack of profit = lack of capital investment for diversification*
> *Son and wife work off farm more*
> *We work stupid 90 hour weeks*
> *(OF196)*

Whether this point of view is objectively valid is difficult to substantiate but for some farmers it is obvious that organic farming rather than farming in general is perceived

to be the problem. This diversity of experience and opinion is a constant feature of organic farming.

The livestock sector

In the livestock sector the problems of serving the national supply chain revolve around issues of the quality and how it is defined. There was agreement from the informants that to be a good organic farmer you have to be, as one interviewee said 'bloody good'. Equally, he was sure that not all of those involved in the chain were that good and that the benchmarking measures that had been taken demonstrated this to be a problem, as farmers were not maximising their returns and the abattoirs were not able to source the product they wanted. The genesis of this problem had started a few years before:

> *It stems from, and this is my own opinion, that in organic red meat demand was far outstripping supply and any organic would do, so we are now completely the other way and now we are in a situation where supply is outstripping demand.* (OF1)

The co-operatives had sought to improve the quality of the advice they were giving their producers and were seeking to source extra technical advice about how best to use the organic farming system. The problem did not lie solely with the producers as the clients often changed their demands without reference to what was available:

> *You are having to look not at what is happening tomorrow, as I've got people's calves hitting the ground now, … what processors and retailers completely forget with livestock farming where those animals have a life, you can't say two years down the road you can't say those animals you produced two years ago we want those animals 50 kilograms lighter they have to have an awareness and a responsibility that what they might want in two years we can supply.* (OF1)

Other organic advocates argued that the quality measures of the abattoirs were about the confirmation of the animal, the shape of the body and the availability of prime cuts. They argued that quality in the organic system was intrinsic to the animal through the way it had been raised and rejected body confirmation as a meaningful gauge of quality (OF3).

The relationships between the meat producer co-operatives, the national supply of meat and the direct sale of meat are complex. Certainly a number of farmers interviewed did not use the co-operatives, some sold directly to the local livestock market on occasions where there were no particular arrangements to sell organic

animals. Others, particularly in the North of England, sold to brokers who supplied the major abattoirs and processing plants in the Southwest of England and had little direct knowledge of the market for organic meat (OF11, OF12). Away from the South West limited access to local abattoirs where animals could be slaughtered under organic standards meant that considerable obstacles faced livestock producers. One producer in the north of England personally took his animals to Scotland for slaughter (OF13). It also meant that most producers were at least one step from the market information that they needed to make a fully informed decision. Some of the direct sellers used the meat producer's co-operatives for animals that they could not sell directly. On occasions however, lack of supply in particular parts of the non-organic sector meant that prices were so high that the same return could be gained as recognising its organic status, so organic meat was sold as non-organic.

Although the situation is undoubtedly complex in the livestock sector, the questions of co-ordination through the national supply chain were becoming central for many producers. A lack of local infrastructure in the form of abattoirs was limiting the options for individual producers and consequent to that was a dearth of market information. That clients often failed to recognise the temporal limitations on the supply of meat, particularly under an organic system, all helped to make this situation less predictable.

Arable producers

The supply chain for arable products is divided between a variety of actors in what is a dynamic situation. There are a number of organic producer co-operatives, several merchants who have a long-term commitment to organics and a range of merchants who deal in organic arable products. Demand for organic arable products is very strong, as one informant explained:

> *We are grossly undersupplied in the UK on the cereal side, in some products 60 – 70% has to be imported, you can see why there is such a hype on lets bridge the gap between home grown and imported [is that technically possible?] it is technically possible but not in the way that things are going at the moment it is just not happening, it is just purely that the UK in the last 5 years hasn't caught up with consumption and just like everything else that which isn't produced domestically is imported. It has fed the growth and if we hadn't had that we would have struggled to survive.* (OF 14)

The domestic market for arable products for human consumption is very strong but the situation for crops that are principally fed to animals has grown since the feed compounders started to produce organic lines:

> *That changed overnight and the message that was sent out continuously to all of the producers was that whatever you want to grow whatever cereal rotations there is a market for everything, some odd things perhaps not but your barley, your wheats, your triticales, your farmer could go through a normal rotation and know that there would be a market for everything.* (OF14)

Such a strong market does produce a number of co-ordination issues within the market and these have a range of consequences.

The merchants committed to organic lines, and who made considerable investments in the supply chain have noted the arrival of other feed merchants. They argue that these later entrants cross-subsidize their dealings in organics from the non-organic trade because the former represents such a small part their overall trade. Simultaneously, those involved in the co-operatives are encouraged by merchants to sell to them (causing problems in supply) often for less than the price they would have received via the co-operative (OF11). The end of the derogation for animal feed can only improve demand, which is already strong for organic arable crops. There is considerable scope for continued domestic growth, although it is unlikely that imports will be supplanted.

Horticulture

If the arable sector is competitive, the horticultural market is again highly differentiated but more dominated by the needs of the multiple retailers. As Morgan and Murdoch noted (see Chapter Two) the multiple retailers have been seeking to minimise the number of suppliers with which they deal. Again this has revolved around questions of quality rather price and the importance of continuity of supply (OF15,16,17). Through this process of reducing the number of suppliers, a number of co-operatives have risen to importance, largely working with wholesalers and box schemes.

The major horticultural grower that provided us with information had already been supplying non-organic vegetables to its major client on a year round basis, using

holdings in Spain and Italy during the English off-season (OF17). At the request of its client they started to convert several hundred hectares of their land (less than 5% of their total hectarage) to organic status. In the interim period they acted as wholesaler to a range of existing organic growers, ending those contracts as their own land came on stream. The client had identified the importance of a consistent supply of vegetables that conformed to their quality standards as being a difficulty of dealing with a large number of suppliers. In short they were searching for the economies of scale that they had realised with non-organic produce. By using an existing large-scale grower the client could assure itself that they would be able to satisfy their requirements. The grower had found that they had learnt technical lessons through organic production that they were able to implement more widely and that their specialist agronomists were finding organic production challenging. They viewed organic production as a part of their overall relationship with the client.

Through network analysis it was possible to identify and interview one of those growers who had lost a supermarket contract through this transition (without breaking confidentiality or anonymity). Their perspective on this change was:

> *we are not selling to the supermarkets any more. At one time we had about six different packers and we went into the supermarkets through six different doors but that has stopped as the supermarkets have started using larger farmers who have come into it for financial reasons, because the supermarkets have wanted them to, they have pushed us out* (OF 15).

These growers had been established for many years in Norfolk, having benefited from the boom in organic sales in the late 1980s and having ridden out the recession in the early 1990s. It had become a family business and they had not found the loss of the supermarket contracts a major blow, having had their best ever year and 'Certainly no problems selling everything, we just haven't had enough' (OF15). It had meant that they had started supplying wholesalers and vege-box schemes, with a change in the crops that they were growing:

> *When we were with the supermarkets we grew seven different lines, I've now worked it out when we grow three varieties of one vegetable and all the herbs and we grow 80 different lines.* (OF 15)

Other aspects of the farm business has become much easier, in particular recruiting and supervising seasonal workers:

> *Actually this year has been better than ever, with these new Eastern European workers, I've given up on English workers I'm afraid, I've got a couple I use*

> *every year but I've just had such trouble, …there is none of that grouching that they have to work on a Saturday, they just take any hours, they are not pissing their money down the pub on a Friday night, I feel that they are genuinely doing it for genuine reasons.* (OF15)

Although long term organic growers, and pleased to be growing for the routes to market other than the supermarkets, they remained acute business people.

The significance of direct and local sales

The analysis presented in the previous chapter suggests that there is not a straight forward answer to the question 'does organic farming have an economic impact over and above that of conventional agriculture'. In part this is due to differences between the organic and non-organic sectors. The latter is larger and therefore almost by definition has a greater impact. On the other hand, employment levels on organic farms are higher and if a comparison is made on a hectareage basis, organic farms achieve greater sales values. Alternatively, in terms of economic connectivity, there is little difference between organic and non-organic farms. Indeed of all the farms in the sample that make 50% or more of their sales locally, 51% are organic and 49% are non-organic. As the discussion of the various sectors above illustrated, it is often not so much the 'localness' of sales that is important but 'directness' (i.e. short supply chains). Certainly, those organic farms involved in direct sales[18], whilst in a minority nevertheless generate significant sales values per hectare (see Table 5.1). Moreover, in terms of the value of sales/ha, organic farms without direct sales are not dissimilar to non-organic farms.

Farms with direct sales activities are in a minority in the sample as a whole (26%), a very small minority in the non-organic sample (10%) and whilst they are numerically more significant amongst the organic farms they still represent only 36% of the organic sample. This suggests that while an organic farming system may be an

[18] Defined as those who indicated the following direct and/or local marketing routes were the most important for their business: box schemes, farm shops, farmers markets, local retail outlets, and internet sales. Each of these is assumed to have a short or distinct and traceable supply chain from farm gate to consumer. Arguably, contracts direct to multiples could also constitute 'direct sales'. However, these have been excluded as these are more formal and break the link between producer and consumer.

important contributory factor in stimulating the development of direct sales activities it is not a sufficient explanation in itself.

Table 5.1: Purchases and sales of farms with and without direct sales

	Farms **with** direct & local sales		Farms **without** direct & local sales		All farms **with** direct & local sales	All farms **without** direct & local sales
	Organic	Non-organic	Organic	Non-organic		
Total value of purchases	£7.5m	£2.5m	£18.3m	£33.2m	£10 m	£51.4
Mean value of purchases per farm	£79,935	£90,050	£128,672	£164,290	£82,257	£149,587
Mean value of purchases per ha	£3,740	£2,085	£996	£2,053	£3357	£1615
Total value of sales	£10.6m	£3.9m	£24.7m	£46.6m	£14.6m	£71.2m
Mean value of sales per farm	£110,849	£145,542	£174,976	£232,838	£118,465	£208,913
Mean value of sales per ha	£4,983	£3,249	£1,382	£1,850	£4622	£1654

Source: Farm Survey

This seeming paradox has been noted in previous studies. For example, the CRER study concluded that about a third of all organic farms were involved in direct sales and that this represented a 'chicken and egg problem' in the way of explanation. In other words they were unable to judge whether organic farming fostered direct sales or if direct sales promoted organic status. As noted above, given the limited, largely economic model of farmer behaviour they were unable to provide a rounder picture of the farm business. This points to a need to understand more about the people who run these businesses, about the nature of the businesses themselves and how they differ from their non-organic counterparts as well as from other organic farms not involved in direct sales.

Socio-economic footprints

The socio-economic footprint of a farm is a form of shorthand for describing the synthesis of a range of indicators concerning the social and economic characteristics of the business. As such it is clearly a simplification. However, the characteristics charted in the footprint relate closely to the earlier discussion of rural development and reflect an interest in embeddedness, social capital and civic participation, diversification and uptake of rural development funding as well as the generation of value and employment. Although the exact footprint of any particular family or business is unique, as the following sections demonstrate there are marked differences between the footprints of different types of farming business.

Figure 5.1 presents the socio-economic footprint for all organic and non-organic farms in the survey. These unusual 'radar' or 'spider' graphs show multiple axes. Each axis is a measure formed using data collected in the survey (see Table 5.2) and each is independent of one another. The outer line is formed by connecting the end of each axis and thus represents an illustrative boundary. The inner line is the footprint of the group of farms. This allows comparisons to be made between different groups of farm businesses in terms of their typical footprint.

Considering each axis in turn: clockwise from of *community activity and membership of groups*, this measures how active respondents are in their community and civic life. *Informal Network Ratio* is the ratio of informal (family and friends) to formal business relationships in a respondent's social network. A score of one indicates that the number of informal and formal relationships equate. *Family Embeddedness* and *Birth Embeddedness* are both measures based on how close the family live and how close the respondent currently lives to where they were born. Together these measure the depth to which the business operators are embedded in their communities by family ties. The next indicator is that of *Salary per FTE employee*, this is to measure the level of remuneration that employees receive. Next is the measurement of *value of sales per hectare*, followed by the number of FTE jobs generated per hectare by the farm business. This is followed by the number of *routes to market* operated by the business and a measure of the *number of diversified activities*, including processing,

within the portfolio of businesses based around the farm. The final axis reflects the uptake of ERDP and similar public support programmes (excluding the Organic Farming Scheme).

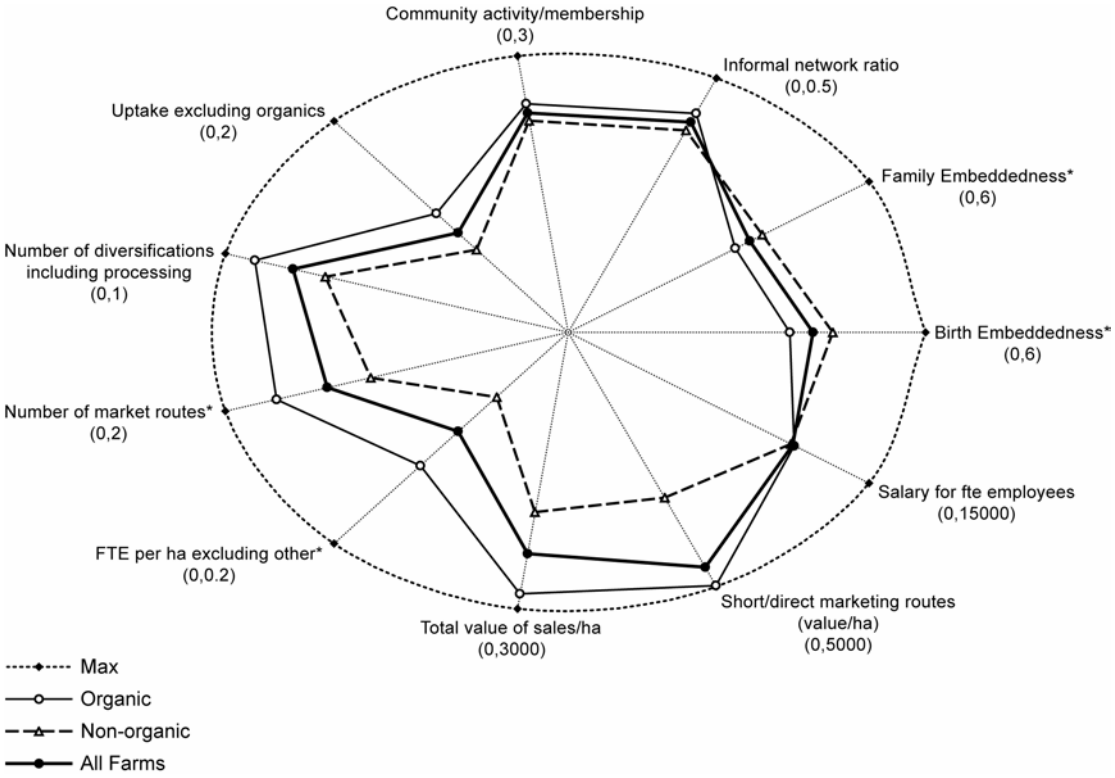
The footprints of all organic and all non-organic farms (Figure 5.1) reflect the less embedded nature of organic farmers, the greater diversity of marketing channels and their greater propensity to diversify and drawn down grant aid. That said, the differences are not particularly striking, certainly not striking enough to claim that organic farms provide a natural vehicle for delivering rural development.

Table 5.2: Measures used to construct socio-economic footprint diagrams

Measure	Maximum Potential Value
Community activity/membership	The highest participation recorded by one farmer in the survey is 10 groups, the mean is 2.38.
Informal Network Ratio	The ratio of informal to formal relationships named in the farmers list of business contacts. The lower the number the more formal contacts. The mean is 0.4139, indicating formal business relationships are more important.
Family Embeddedness	A way of assessing how many members of the farmers immediate family live locally.
Birth Embeddedness	How close to their place of birth they currently live.
Salary for FTE employees	A value of the salaries of those employed in the farm business, the mean is £11,197.
Total Value of Sales/ha	The maximum total value of sales per hectare of farmed land, the mean is £2,401.
FTE per ha excluding other	The maximum FTE labour units supported by a hectare of farmed land the mean is 0.01.
Number of market routes	The number of routes the produce of the farm takes to be sold, the highest number routes in the survey is 7, while the mean is 1.4.
Number of diversifications incl. processing	The other businesses run on the farm, the highest in the survey is 8 while the mean is less than 1 (0.8).
Uptake excluding organics	The number of ERDP and similar schemes in which the farm is involved. The highest in the survey is 5, while the mean is less than 1 (0.94).

Source: Farm Survey

Figure 5.1: Social and Economic Footprints compared[19]



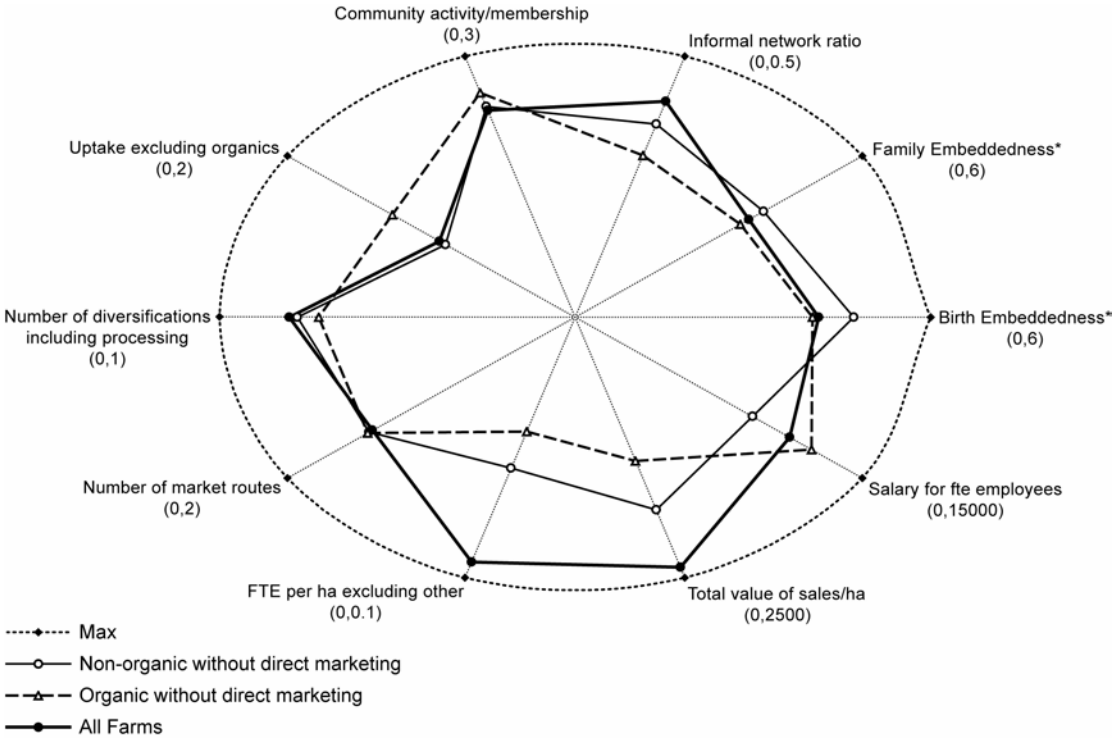
Source: Farm Survey

The footprint of farms without direct sales

Figure 5.2 presents the SEF of organic and non-organic farms without direct sales. Comparing the two, it is immediately apparent that the differences between the two groups of farms are quite marginal. The non-organic farmers are slightly more embedded in their localities and their use of public funds is lower than their organic counterparts, other than that they are broadly similar. This is perhaps not surprising considering that although the farming systems may be radically different, the configurations of the businesses and their routes to market are not. It would seem that many of these farmers have a lot in common. Although the organic farmers are on average younger (50 compared to 54 for non-organic farmers without direct sales), similar proportions of both groups inherited or succeeded to their farm (85% and 78% respectively for non-organic and organic farmers) and they are equally likely to be operating a large farm (>200 ha).

[19] For all social economic footprints significance differences between means is indicated by * and detailed in Appendix 2.

Figure 5.2: Footprint of organic and non-organic farms with no direct sales[20]



Source: Farm Survey

Farms with direct sales

> *They had told everyone that a pair of macro-biotic teachers from [the city] had bought it, which was unfair really because a, we weren't teachers, b, we weren't from [the city] and macro-biotics didn't come into it all ….*(OF10)

Farms with direct sales accounted for 17% of the value of sales made in the sample and are associated with a greater value of sales per ha of the farm business and also greater levels of purchases. Not only are these businesses configured in a different way but they are also run by people with a very different background and attitudes towards what they are doing.

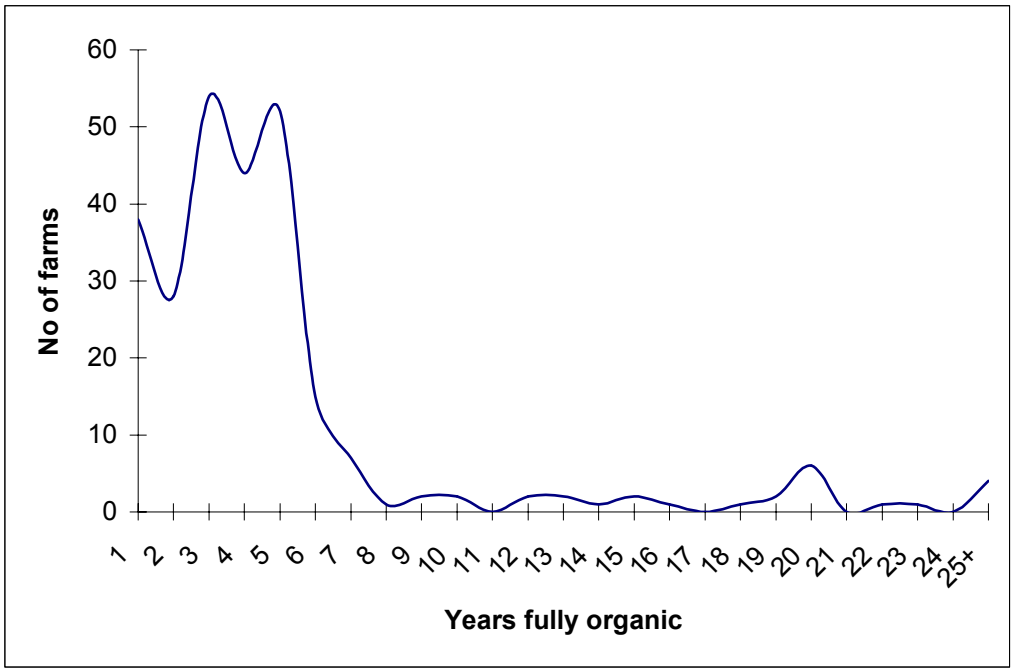
[20] Details of significant differences between means for direct and non-direct sales (Figures 5.2 and 5.4) are detailed in Appendix Two.

Distinctive people

A first point to note is that farm survey evidence provides strong support for the notion that the organic direct sales sector is composed of quite different people both compared to organic farmers following more conventional marketing routes and non-organic farmers. Almost half (46%) are new entrants compared to 22% of other organic farmers and 15% of non-organic farmers without direct marketing activities. Moreover, 10% are recent new entrants taking up farming for the first time in the last five years compared to just 2-3% of farmers in the other categories. Not surprisingly, given the higher proportion of new entrants among organic farmers with direct sales, they are also less embedded in their immediate locality in terms of distance from the majority of their family and their place of birth. Together this suggests that, in line with the discussion in Chapter Two, these business operators have access to a different set of flows of information and a wide range of generic business skills.

Although they are more likely to be new entrants and recent new entrants, organic farmers with direct sales on average have been in organic production for slightly longer, 5.6 years, than their other organic peers, 4.7 years. As can be seen from Figure 5.4 most of the farms (89%) in the survey have entered full organic production in the last eight years, and so made the decision to become organic in the last ten years, allowing for conversion. Despite being in organic production for slightly longer, organic farmers with direct sales have been in charge of their business for a shorter period of time than organic farmers without direct sales (14.3 years and 18.1 years respectively). This is a reflection both of the significance of new entrants in the organic direct sales sector and the proportion of organic farmers who have entered agriculture specifically to practice organic farming (44% have never farmed any way but organically compared to 11% of organic farmers without direct sales). In addition, with a mean age of just under 50, organic farmers with direct sales are the youngest in the sample. Forty-seven per cent are aged between 45 and 55 and 30% are under 45 compared to 29% and 20% respectively of non-organic farmers without direct sales.

Figure 5.3: No of years in full organic production



Source: Farm Survey

In addition to being younger and having a distinctive entry route into farming, organic farmers employing direct marketing routes are also far more likely to have taken part in higher education. Sixty-three percent reported obtaining a degree or higher diploma compared to 44% of other organic farmers and 28% of non-organic farmers without direct sales. Again, this suggests that for at least part of their life those involved in direct sales have lived away from their home area and have been involved in a wider network of contacts. Previous research suggests that a high level of formal educational attainment is frequently an indicator of a willingness to embrace new business opportunities (Lobley et al 2002). In the present survey 34% of organic farmers with direct sales described themselves as being “the first to try out new ideas” compared to 25% of other organic farmers and just 9% of non-organic farmers.

This pattern of difference and innovation is repeated in the use of ICT in the management of the business. There is a strong association between organic direct sales farms and the use of ICT in the management of the business. Of all the different groups of farm businesses they are mostly likely to make extensive use of

ICT, with a statistically significant association between the establishment of a website, the use of the internet for the business and use of a computer in the management of the business and organic direct sales (See Table 5.3). The use of the internet as a 'shop window' is far more common in all organic farm businesses, with 27% of all organic farms having a website compared to 15% for non-organic farms. Organic farms with direct sales are more likely to have a website compared to other organic farms although the difference is marginal (31% compared to 25%). Organic farms that have direct sales make more use of ICT than any other group of farms. This reinforces the picture that they are not only often a different group of people but also operate their businesses in a very different way.

Table 5.3: Farms using ICT and websites in business management

	Organic farms with direct sales	Organic farms without direct sales	Non-organic farms with direct sales	Non-organic farms without direct sales	All farms
Percentage using some form of ICT in business management	84.3	85	72.2	68.5	76.9
Percentage that have established a business website	30.8	25.1	17.1	14.5	21.3

Source: Farm Survey

Distinctive businesses

Those organic businesses using direct marketing were often running much smaller farms. For example, 39% operated farms of under 20 ha compared to 18% of non-organic farms and 11% of organic farms without direct sales. Not only are the farms smaller but they also use a greater number of routes to the market place, an average of three main marketing routes compared to one for all farms without direct marketing. Evidence from the face-to-face interviews suggests that many of these businesses use a range of marketing routes that interlink and create synergies. For example, Farmers Markets and Council Markets are frequently used to create customers through mail order or via the Internet. One business had dispensed with other forms of advertising: *I don't do any advertising now, but apart from the website*

which is a successful form of advertising we know that, we do several sites (OF7). Some produce that cannot be sold through regular customers or outlets is sold through local wholesalers, markets or goes to an organic co-op. The reverse is often the case with farmers involved in direct sales who frequently need to broaden what they supply and so form links with other farmers (see Case Study 2). These alliances are often quite informal, in that they involve not contracts but are based on trust between the farmers and growers. This thicket of interconnections is the basis of increased trust between these producers and potentially the emergence of important new aspects of the rural economy. As one respondent explained: *"Our trading pattern is sort of based on trust and long term trading relationships and whatever, and we've just taken a huge amount of costs out of the whole thing"* (OF10).

Many of the farms involved in direct sales also conduct some basic processing of their produce. This ranges from simply washing vegetables and packing them through to some relatively sophisticated butchery, hanging meat for longer, producing cuts with more fat on the supermarkets, their own sausages and burgers. In total, 32% of those conducting direct sales have some processing on their farm compared to just 10% of the whole sample and 6% of organic farms without direct sales. In addition, if the facility is certified for organic processing it is often let out to other farmers (see Case Study 2). The provision of processing facilities for other organic farmers is seen as contributing to the development of a network of direct suppliers rather than primarily being a diversification into providing agricultural services for other farmers. Indeed, organic farmers with direct sales were the least likely to have diversified into the provision of agricultural services with only 7% reporting this type of diversification compared to 22% of non-organic farms without direct sales. On the other hand, 51% reported a farm-based trading enterprise compared to just 15% of the whole sample. These range from farm-gate kiosks through to shops supplying a range of food products. In some cases the development of processing and trading enterprises had been grant aided with 13% of organic farmers undertaking direct sales in receipt of an RES grant compared to 7% of other organic farmers and 3% of non-organic farmers without direct sales. In total, 41% of all farmers with RES funding were organic farmers undertaking direct sales.

Table 5.4: The association between direct sales, on farm processing and trading enterprises*

	Farms **with** direct & local sales		Farms **without** direct & local sales		All farms **with** direct & local sales	All farms **without** direct & local sales
	Organic	Non-organic	Organic	Non-organic		
Farms with processing	31.5%	5.6%	6.4%	2.9%	25.0%	4.4%
Farms with trading enterprises	50.9%	25.0%	4.6%	3.8%	44.4%	4.1%
Farms that offer agricultural services	7.4%	22.2%	11.6%	21.8%	11.1%	17.5%

Source: Farm Survey

* The association between organic/non-organic status, processing, trading and agricultural services and direct sales are significant using Chi square tests.

The final distinguishing factor relating to farm businesses with direct sales concerns farm type. Clearly not all types of farm easily lend themselves to direct supply and retailing and as Table 5.5 shows all farms with direct sales are much more likely to be horticultural businesses and that a significant proportion of organic farms with direct sales are mixed farms (itself a reflection of an organic farming system).

Table 5.5: The association between direct and indirect sales and farm type

	Farms **with** direct & local sales		Farms **without** direct & local sales		All farms **with** direct & local sales	All farms **without** direct & local sales
	Organic	Non-organic	Organic	Non-organic		
Arable Cropping	4.6%	16.7%	9.2%	22.3%	7.6%	16.8%
Horticulture	23.1%	13.9%	1.2%	2.1%	20.8%	1.7%
Dairying	5.6%	5.6%	13.3%	12.6%	5.6%	12.9%
Lowland Cattle and Sheep	12.0%	13.9%	16.8%	15.5%	12.5%	16.1%
Pigs and Poultry	5.6%	2.8%	4.6%	1.3%	4.9%	2.7%
LFA Cattle and Sheep	8.3%	8.3%	15.6%	15.5%	8.3%	15.6%
Mixed Farms	34.3%	27.8%	35.8%	20.6%	32.6%	27.0%
Other Farm Types	6.5%	11.1%	3.5%	10.1%	7.6%	7.3%
Total	100.00%					

Source: Farm Survey

* The association between organic/non-organic status, farm type and direct sales are significant using Chi square tests.

The direct sales farms in the sample were involved in a range of forms of direct sales activities (see Tables 5.5 and 5.6). As Table 5.6 Indicates direct supply to local shops was the most common activity for both organic and non-organic farms with other forms of direct sales relatively more important for organic farms. In the organic sector in particular co-operatives formed a distinctive feature of the supply chain. These co-operatives are formally constituted in a way similar to those focussed on the national supply chains but they focused on supplying box-schemes, retailers and possibly wholesalers. One retailer described their role as providing a venue for smaller growers:

> *we provide a market place for small and medium sized growers, the sort of people who couldn't do a farmers' market because they either don't grow enough or have enough range* (OF16).

In the survey these co-ops were typically in the horticultural and field scale vegetable sectors.

Table 5.6: Direct sales activities

	Farms **with** direct & local sales		All farms **with** direct & local sales
	Organic	Non-organic	
Local Shop Sales*	52.8%	58.3%	54.2%
Box scheme*	31.5%	2.8%	24.3%
Farm shop	30.6%	16.7%	27.1%
Farmers' Market*	38.9%	27.8%	36.1%

Source: Farm Survey

*The association between organic/non-organic farms with direct and local sales using local shops, box schemes, farm shops and farmers' markets are using Chi square test.

Direct retailing was often undertaken in combination with others in order to make up a breadth of produce. The site of this retail activity was frequently one of, or a combination of, Farmers' Markets, Council Markets and Farm Shops depending on the scale of the business and the opportunities available. Box schemes provided a relatively more important marketing route for organic farms with direct sales compared to their non-organic counterparts. Box schemes take two forms; the first is the more familiar, with weekly payments in return for a box of seasonal vegetables and possibly fruit. Some are very 'strict' only selling produce grown on the farm and taking a break during the 'hungry gap'. Others provide a year round service, buying in produce to augment their own or that grown by the co-operative. The second form of box scheme represents an extension to the 'traditional' vege-box through the provision of meat products, with customers making regular payments and then ordering, as they need, and either collecting or having the meat couriered to them. The box schemes in both their forms require an extra commitment from both the producer and the customer but offer a reliable cash flow for the business and a way of developing a relationship with a particular market.

The final form of direct sales identified involved use of the Internet and mail order, sending produce directly to the consumer. Other studies have shown that this

relationship is often built firstly in person and then supported through the mail order system. For example, a study of organic farming in Cornwall revealed that most of the farms with a website reported that it rarely initiated business but acted as a support for it (Reed et al 2003).

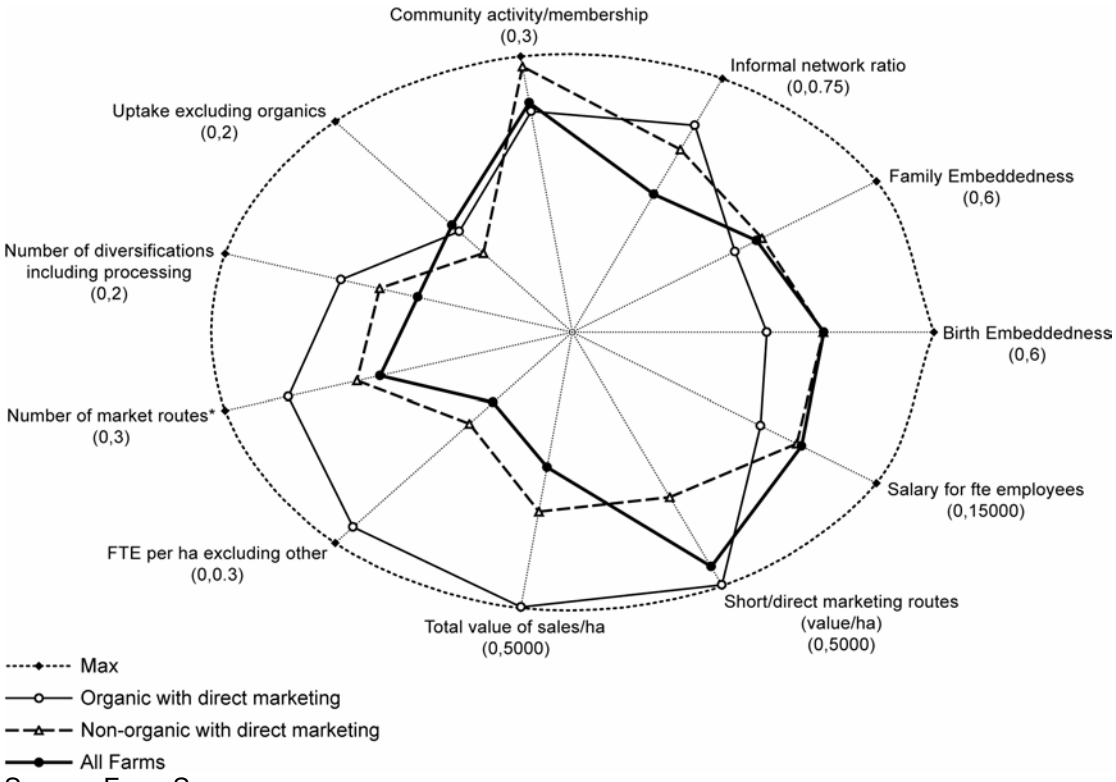
Table 5.7: Types of direct sales activity

Operation	Route to market	Sector
Co-operatives	Box-schemes, wholesalers and retailers	Horticulture, Field scale vegetables
Retailers	Farmers' Markets Council Markets Farm Shops	Horticulture, Field scale vegetables Livestock Dairy products
Box Schemes	Box Schemes	Vegetables Livestock
Mail-order	Orders via post, telephone or internet	Livestock

Socio-economic footprint of farms with direct sales

The individual characteristics of farms with direct sales builds towards the socio-economic footprint illustrated in Figure 5.5. It is immediately apparent that organic farms with direct sales have a very distinctive SEF both compared to other farms with direct sales and the sample average. Moving clockwise from Family Embeddedness and Birth Embeddedness it is apparent that the organic direct sales farms are 'less local' than the sample as a whole and their non-organic counterparts. This is entirely consistent with the evidence of a high number of new entrants, and may also suggest they use different flows of information than other farmers. The issue of the salaries to employees is important, as it is obviously lower for those involved in direct sales. One explanation is that the salary levels reflect the employment of staff in quite different roles such as shop assistants or in basic food processing.

Figure 5.4: The footprint of organic and non-organic farms involved in direct sales



Source: Farm Survey

Given that those involved in direct sales were often operating a portfolio of businesses, a wider range of tasks would exist on their farms compared to others. This is reflected in the greater number of people employed per hectare and the number of diversified activities (such as the incidence of processing and trading enterprises). This brings into question the observations about the quality of employment made in the CRER report, namely that employment on organic farms may be part-time or seasonal. Whilst this may be certainly true of the agricultural work available on the farm – often related to vegetable production, not all of the work available is agricultural. Many of the jobs are working in the processing of food – butchering, packaging but also in the retailing of food either through farm shops or supporting delivery schemes. There are also more skilled tasks ranging from consultancy in advising start-ups through to website design. As one farmer who had set up a Café noted, '*Over the years I have been lucky to find local people with a*

great deal of skill and knowledge' (OF7). For him these people were key in taking his business forward '*we couldn't do that until we had somebody who was behind it as much as we are' (OF7).* Several business operators reported that they had employees who were key to particular enterprises that they ran and whilst they might not be full time employees or formal owners of the business they were stakeholders in them beyond their formal job description. The field research revealed a range of posts running from the mundane and poorly remunerated through to the varied and well rewarded. Given the diversity of these businesses it is difficult to draw any generalised conclusions.

The metrics of wider community involvement demonstrate that those who use direct marketing are more intertwined with their communities. Non-organic direct marketing businesses in particular are more likely to take part in formal civic organisations and this is often associated with age and embeddedness. The importance of informal networks is striking in both groups who use direct marketing. Part of this may be a reflection of the greater complexity of the farm business, as a wider range of advice and information is sought the informal network becomes more important. Secondly, informal arrangements are important in gaining extra products (see below). Thirdly, with the high level of new entrants in organic direct sales, extra-local contacts will remain in place from previous businesses or networks.

The rural development benefits of direct sales

The businesses focused around direct sales appear to offer considerable rural development benefits, generating higher value sales (per ha), employing a greater number of people and frequently operating a portfolio of farming and non-farming enterprises. Non-organic farmers are obviously more integrated into their communities and would appear to offer the continuity of community that many commentators identify as the core of a rural community. Yet others identify this stability with a lack of dynamism within the agricultural sector. Certainly, the new entrants in the organic direct sales group are highly dynamic, although it must be noted that not all of the organic direct sales farms are operated by new entrants. The development of direct sales enterprises would appear to be an alliance between the

well established and the new entrants and in following the same configuration of farm business they are offering a model that maximises the farm-centred rural development opportunities open to their community.

Those involved in direct sales were frequently more committed to organic farming as a set of principles rather than simply an economic survival strategy, with 46% reporting that they would not farm any way but organically compared to 22% of organic farmers without direct sales. For many, working to benefit the local economy created a virtuous circle that the benefited their community and their business:

> *everything we get is delivered as part of a round which is really good as it is employing lots of local people which in turn brings people here. They say 'I didn't know you were here – I'll come down on Sunday' – so you have a knock on effect by using local businesses but also you are saving yourself an incredible amount of time and effort, they are already driving past so from the point of view of being sustainable you are already doing a better job, you just have to be organised (OF6)*

In a similar way the commitment to organic farming was a mixture of business pragmatism and wider ethical commitment:

> *it seemed like a logical step [organic conversion], that I know from the people who come here that they will pay a premium for an organic product and it seemed to me from moral and ethical grounds that I ought to be going in that direction (OF7).*

Often the moral/ethical was again a mixture, mostly of the environment and the local community.

Those involved in direct sales also shared a number of other attitudes and characteristics. The first of these can be characterised as an impatience with the subsidy system, or rather the mentality that they perceived this created:

> *Agriculture has been de-energised by decades of subsides, and I take no pride in filling in these forms so that further taxpayer/EU money can be directed in the direction of farmers. (OF136)*

This was not only directed towards farmers but towards others within the rural arena who do not demonstrate the entrepreneurial approach they seek to embody.

> *The facilitation of obtaining grants, which I would have thought would have been uppermost in their minds, apart from the last lady who was pretty good has been diabolical…they are most interested in ticking their boxes. They won't facilitate the obtaining of grant money… if I was giving money I would want to see the project get enthusiastic about it and that way I would be confident about the money, but they seem to sit back in their offices and they seem to rely on figures and covering their backsides, an absolute waste of time (OF2)*

This is not to suggest that they do not use grant assistance or take part in schemes (as has been seen, they are the most likely to have obtained RES funding) but rather that they perceive themselves as representing a different approach to the business of agriculture compared to their peers. A familiar figure of speech was that someone had "got off their backside" and demonstrated the energy that a farmer, consultant or government officer should in the circumstances.

The second perspective they shared was that they were running a business that was based on a realistic assessment of the market. There was often wonderment that many farms were still in business, *"conventional farmers I don't know how they are in existence, and in 10 years they won't be"* (OF10). This was matched by equal passion by a farmer leaving the organic system:

> *I think I was being a bit fluffy and typically urban organic before I got up here, as a family with one young child we had got used to buying organic, that was slightly naive, as a practical person we are coming out, I don't care what people say it is not financially viable organic farming – it is fine for smallholders and large estates basically the large estates lose money on it…, the smallholders its just a hobby (OF2)*

Even those dedicated to organic farming held the perspective that in the interests of their business they had to have something more to offer:

> *This farm has got the extra business with it, and you have to find a farm with the extras to make it pay in this day and age – tourism or something that is a bit more going (OF13)*

Business focus was part of the conviction about the validity of the farm business in that it did not just make sense as a meaningful activity for those operating it but that through the affirmation of the market place it gained a seal of credibility. This conviction was always expressed in a forthright manner, but few interviewees sought to disguise the evolution of the business and the changes they had made to it.

Often the measure of this market was not just price, but a quality of business practice that ran throughout the operation. As one business operator explained it:

> *People are beginning to realise that it is not just about price but it is about people, about people who know their business. If we go to the local greengrocer, he will get things that we can't get from any supermarket, there is a communication going on there and you get to know each others needs (OF6)*

Frequently the business operators set quality thresholds that held their place in the market and refused to allow these to be compromised. These varied between

business but included refusing to allow others to sell their products, removing their produce from processors who failed to reach standards to attending courses to learn to process and store their own produce. In a similar vein they sought out businesses that followed the same strictures of quality in their own spheres as they did in food production.

Direct sales were often viewed as a way of retaining value on the farm and at least for one interviewee in counterbalancing a lack of experience in farming. He explained that part of the reason he made the decision to sell direct to consumers was to capture this opportunity:

> *We've got to find a niche, there is no way I will farm as well as the existing people, I'm a novice but I've got a marketing background and I knew that I had to produce a product I could get a premium for (OF2)*

Another interviewee, a well-established producer, was building his direct sales business around an already successful diversification, encouraged by his advisors:

> *I want to be in a situation that I not only have the restaurant here but a shop running alongside it, so not only are we selling people stuff in the restaurant but that we have stuff they can buy, which again is making use of the fact that people come here and have pleasurable experiences and want to buy into that, what my bank manager called increasing your 'wallet share' which sounds like real business speak. (OF7)*

It is not possible to judge whether this tactic is more successful than engaging with the national supply chains However, these farmers were running what they felt to be successful businesses and believed that it gave them a competitive advantage.

The third shared perspective was the importance of both the farm environment and wider environmental sustainability. Whilst the market provided verification of the validity of the business configuration, the environment provided further confirmation of the validity of the enterprise:

> *as far as I am concerned it is about sustainability, the whole reason we are growing organic is our past experience and it just seemed that a rotation of crops and using animal manure, seems to be sensible (OF10)*

Most of these concerns were expressed about the practicalities of their particular farm environment. As Mr Pearson, who farms the fells in Cumbria explained in some detail, he was preserving 'his' fell through farming it carefully (OF5). The fell had never been fertilized or re-seeded and the meadow was only cut after the grasses and flowers had set seed. Through rotating his sheep every three weeks he kept the

disease burden of his animals very low and their effects on the complex ecosystem in balance. Mr Pearson insisted on keeping local breeds as they were better suited to his environment and caused less damage to the land. The importance of the environment found very practical expression on the immediate surroundings of the farm, rather than in statements of global aspiration.

Most of those involved in direct sales that were not under organic certification were using another form of environmental accreditation, such as LEAF. Those who were not organic had also adopted some of the positions of the organic farmers, ensuring they used GM-free feeds or labelling their production methods as 'traditional'. The environment was used as a marketing tool but it was also of fundamental importance to those running the business.

The point of separation between organic and non-organic farmers involved in direct sales was their criticism of contemporary mainstream farming. The criticism of the organic direct sales farmers at times also included their fellow organic farmers. Many were driven by what they saw as the interconnection between human health and poor farming practices which they saw as the root of the recent 'food scares':

> *We wanted to go that line, after running the organic farm in H-, it felt right and it is the way that society is going to be honest, so it felt right….personal belief and it makes you more so once you've got kids, once you see how animals are kept under conventional standards it is just so wrong.(OF10)*

Food scares or concerns about food quality were often collected together to express a mixture of anxieties and aspirations. In the following example food miles and food quality are joined:

> *[Growth was] Led by a lot of the food scares, from our angle that we are a co-op and we will always sell local food, we will never sell you something that could [otherwise] have been grown here (OF16).*

The organic farmers believed that organics offered something more than conventional farming and they were pleased to demonstrate that through their business. At the same time they did not take the view that organics alone was sufficient, and were often highly critical of those who had taken up organics without consideration for the wider ethos of the farming system:

> *organics doesn't have to be expensive, but I don't know, we hire out our butchery and I was looking at her diced lamb and it was £11.20 a kilo and*

> *mine is £6.50, I was thinking hold on there is something seriously wrong here (OF13).*

The thoughts of this new organic farmer were matched by those of one who had been in organic production for more than twenty years:

> *anyone who is in organics and in league with the supermarkets needs their head examined because they are only doing it for short term gain, if they have seriously looked at the problems they can't be doing it for the long term at all as far as I am concerned (OF10).*

Those farmers engaged in organic direct sales demonstrated a vocal commitment to organic farming that was about more than the environment and incorporated an often fierce rejection of the multiple retailers. In this there was a co-incidence of self-interest and ideology, but this does not detract from the sincerity of their belief.

Trust and connection was central to many of the businesses. As noted above it is viewed as central between the businesses that form these informal supply networks but also between producers and customers. Multiple retailers again provide an important mirror against which to make comparisons. Many had confidence in the importance of face-to-face communication:

> *[when customers go to] Tesco's or whoever you cannot get over the fact that they are mass catering and their truck goes up and down the countryside picking stuff up, even if they do have pictures of farmers besides their displays there is no way it can give them the same sense of trust that they would get by going onto a farm and buying something, there is an integrity about it that they just cannot match* (OF7).

This often fuelled what the producers felt was a reconnection or in most cases a connection for the first time between the methods of production and the customer.

> *I want to be able to grow the food we are serving here. It is a change of emphasis on the farm, but it does mean that we will be making the maximum return. I have discovered, I discovered very quickly in fact, that people like to be able to eat what you have grown, they like the traceability, they might not want to see the cow they are about to have on a plate, but what they want to see is the field or the meadow where it is grown and that it is done in a way that they can relate to* (OF7).

Another business operator, who ran a catering venture, spoke of how customers were changing their wider relationships with food production:

> *They can see it out there, when they come in here they can see you. The man who is making their coffee also raised the beef they had for their lunch and that is something.. they view you as a friend. Everyone knows who Bernard Matthews is, doesn't mean that they trust the guy, this is about trust, you can actually speak to this producer, I know that they really appreciate that* (OF6).

This building and re-building of trust was viewed by those involved in direct sales as being one of the most personally rewarding aspects of their business. But also many associated it with a broader improvement in the community:

> *Maybe accepting a little bit of inconvenience will make them feel better about what they are doing and give them a better product at the end of the week. If you are complaining your sausages from the supermarket aren't very good you have to go somewhere else, walk down the street but you might bump into someone you know and have a conversation, stop for a coffee, see some real life, if you inconvenience yourself a little bit you can find that your life becomes more interesting and more valuable* (OF6).

These bonds of trust had developed in this instance to the point where discussions were held about the importance of supporting the rest of the local community. These were not necessarily bonds that had existed previously but were often new ones forged through the direct sales businesses. Importantly, these were relationships that were establishing a solidarity and fellow-feeling that many had obviously felt to be absent or seriously eroded.

Case studies

Many of the individual characteristics and attitudes discussed above are found in the following case studies. These examples illustrate how different factors combine to produce a distinctive rural development impact, generating economic activity and also having a wider impact on local communities. The case study examples are not presented as models of farm based rural development but as illustrations of the possibilities created through direct sales and connection with customers. Two of the examples are 'real life' businesses and have been included here with the permission of the business owners. One of the examples is based on a business contacted during the research but certain details have been changed in order to perverse the business owner's anonymity.

Riverford Farm and Box-Scheme

The first case study example (see Box 1) is the most well known and certainly has the largest scale impact of all the businesses featured in this chapter. The Riverford Farm and a number of the farms in the South Devon Organic Producers co-operative

were part of the random sample of farms for the postal survey reported earlier. The very scale of Riverford and the co-operative that is the marketing outlet is the first important rural development point to be made. Whilst it might be possible to argue that many of those involved in direct sales offer only local or even 'boutique' solutions, Riverford demonstrates clearly the possibilities at a regional or increasingly national level. It also demonstrates the power of networks of businesses mediated increasingly by a combination of internet technologies and personal trust.

Box 1: Riverford farm, co-operative and box scheme

The Riverford vegetable box-scheme is well known in the South and South-West of England as it is one of the largest such schemes to operate in this area. Few people however, are as familiar with how the co-operative operates and the benefits it brings to the local community.

Riverford is not only the base farm of the enterprise but also the brand that integrates the various elements of the business into one easily manageable concept for the consumer. The business was founded by Guy Watson, on the family farm in Staverton, Devon in 1985 with 3 acres of certified land. Vegetables from this small area were delivered to local shops in the Totnes area, the amount of certified of land steadily grew and in 1988 the Riverford Dairy Farm was founded by Oliver Watson. For sometime the Riverford vegetables went to a multiple retailer but that relationship grew increasingly unsatisfactory, as the supermarket sought to dominate the farmers. Riverford is part of the South Devon Organic Producers, a co-operative of 13 family farmers, which shared machinery, labour and growing expertise and it now acts as the marketing arm of the co-operative. Gradually the importance and sophistication of the box-scheme was extended to replace the role of the multiple retailer, with 800 certified acres at Riverford farm alone, making the co-operative one of the biggest independent growers in England.

The growth of the box scheme has been achieved through a franchising system run by Riverford as a way of providing a distribution arm for the co-operative's produce. Franchisees buy a territory, with some pre-existing customers and the full support of the Riverford core services. These core services included customer support telephone lines, a website, an extranet to allow the franchisees to manage their business and training about organic farming and the scheme. Boxes are picked and packed at Riverford, then taken to local distribution hubs, where they are collected by franchisees for distribution to their customers. Customers can manage their accounts through leaflets in the box, by telephone or on-line, each box also includes a weekly leaflet with farm news and recipes for the produce in the box.

Riverford now supplies 22,000 boxes a week and has become so successful that it has helped to establish a sister box scheme Rivernene.

The base of production for the Riverford box scheme is the Riverford farm and the South Devon Organic Producers, all of whom share equipment and labour. The rural development impacts are immediately obvious in that they are amongst the few vegetable producers in Devon, so these business are being secured by the box scheme in an area that otherwise would see little vegetable production. Secondly, by pooling labour it creates a secure supply for co-operative members but also greater continuity for those employed. Although there are formal contracts between the co-operative and Riverford, these are generally 'left in the draw' as producers have come to trust one another. The Riverford home farm has become the venue of a farm shop and a field kitchen that acts not only as a face for the whole venture but also a tourist attraction in an area that has a large volume of visitors, who may later become customers. Guy Watson the MD of Riverford, obviously has considerable skill and flair for promoting the business, allowing others in the co-operative to take up other equally important 'backstage' roles. Over time the box scheme has become a meaningful alternative for the large-scale supply of vegetables.

The second area of rural development relating to the box scheme is that of the franchisee's. It would be hard to claim that these are exclusively rural beneficiaries but they eloquently illustrate the interconnections that direct sales operations often produce. Each of the franchises is a micro-business that is fostered and promoted by Riverford, with opportunities being available from as little as £18,000. This form of business is obviously of interest and available to entrepreneurs with limited means and not necessarily any previous business experience. Through the use of an extranet the franchisee's are able to co-ordinate their businesses with the Riverford core services, meaning that physical distance is transcended. Further research needs to be conducted on those taking up these opportunities but it is a clear benefit of this form of direct sales that is beyond the farm gate of the co-operative.

Riverford offers a viable model of how direct sales need not necessarily be small scale or confined to one locality. For the producers in the co-operative this immediately apparent in that they are able to achieve good rates of return in an

environment where there are obviously high levels of trust and reciprocity. The proportion of the value returned to the immediate area is higher as the shareholders are the co-operative members and the Watson family who own the Riverford farm. Employment is generated locality, not just in agricultural work but also in the back office that supports the whole of the box scheme, which ranges from box packing through to website support. It also provides the support structure for a range of other micro-businesses that distribute the boxes. Although not as direct as some forms of direct sales it is an intermediate position between the multiple retailers, or high street retail and farmers' markets where there is direct contact with the farmer.

Whiteholme Farm

Whiteholme Farm (see Box 2), situated on the banks of the River Lyne in North East Cumbria, is a remote upland farm. The business has sought to overcome its physical isolation through the creation of a network of customers with whom they have a reciprocal relationship through a box scheme. The box scheme allows the Perkins' to plan their cash flow and have a consistent core of customers, removing some of the risk from the business. The benefit for the scheme members is priority of supply and a lower price than they otherwise might pay. In rural development terms this anchors a farm in a remote rural area. The benefits to date have been largely focussed on the farming family but recently staff have been employed on the farm as it has developed and expanded. Through the scheme and its meetings a new network of customers is being established who visit the farm, connecting it with a wider group of people.

Box 2 – Whiteholme Farm

Whiteholme Farm

Whiteholme Farm is situated on the River Lyne in the North East of Cumbria and is an organic livestock farm run by Jon and Lynne Perkin. The farm has a number of aspects that serve to make Whiteholme Farm an excellent example of farm level rural development. As a Soil Association registered organic holding the Perkins produce beef, lamb and pork from rare breeds that are particularly suited to the upland environment of the farm. There are a number of routes through which the produce of Whiteholme Farm reaches its customers. The first is the meat box scheme that the Perkins run, which parallels the more familiar vege-box scheme, except that rather than weekly deliveries, members can order to suit their needs and support the farm through regular payments. These customers are welcome to visit the farm whenever they would like and are invited to an annual barbecue at the farm to meet the Perkins and other scheme members. Secondly, Whiteholme farm also sells its meat through farmers' and council markets in the area. Finally, there is the facility to order meat boxes through the Farm's website.

Jon and Lynne Perkins always stress the importance of the quality of their produce taking care great in the husbandry of their animals and the environment in which they are raised. This concern extends to the butchery of the animal and the quality of their processed products such as sausages. To that end the Perkins have established an on-farm organic certified butchery. The final aspect of the Perkin's operation is the accommodation offered at the farm. They have a self-contained self-catering house that offers accommodation for up to 12 people but can also be used for group visits or day meetings. Whiteholme offers an example of the integration of high quality food production, with environmental protection and outreach to a wide group of people who can become involved in food and farming in a new way.

The butchery at Whiteholme farm is rented out to other local organic producers and as such provides a very important resource in an area otherwise without a great deal of organic infrastructure. This means that the farm serves partly as a hub for other organic activities, with a vege-box scheme beginning to establish itself from the farm. In an economically depressed area Whiteholme offers an opportunity to reach out to a new base of customers within the region and further a field to support the farm, but through that the benefits of the farm beyond the farm-gate. The self-catering facilities at the farm also provide an important extra source of revenue and re-enforces the opportunities for further connection between the producers and consumers of food.

Curtfield Café

Curtfield is a clear example of how the direct selling of food products can intersect with a tourism diversification (see Box 3). The café offers an example of a business that is slowly evolving. From originally offering basic facilities at a remote beach, it has increasingly become a meeting space for the local community and a venue for special occasions. The customers have led the way towards direct supply as they have asked for produce from the farm and this has stimulated the business operators to consider the possibilities of converting their farm to organic production. It is noticeable that in their account of the change in their business that the Curtfields noted that they had to learn to talk to people about their farm and its environment. Once that dialogue was initiated it led to a series of changes through to the core business of the farm itself. By direct communication with customers they began to understand and adapt to their market place.

Box 3 – The Curtfield Cafe

The Curtfield Cafe

Curtfield Cafe is on the Lincolnshire coast, next to a remote beach which until recently was not easily accessible to the public. The Curtfields have farmed the area for several generations and have used the beach for family events for some time but only opened access to the beach across their land after entering an agri-environmental scheme. As part of the scheme Mr Curtfield found himself explaining to the visitors the changes and improvements that were being made to the farms ecology, in turn they told him how much they had enjoyed the visit and in particular the path to the beach but they would like more facilities. With help from the local Tourist board the Curtfields accessed funding that allowed them to have an assessment of the property's potential carried out by a consultant, who recommended converting some older buildings into visitor facilities and a catering facility.

With match funding from European funds the Curtfields converted the buildings as advised and created a small car park to help visitors access the site. Over the past few years many local people have become regular and all year round visitors to the café, encouraging the Curtfields to open for longer and to open as a restaurant on weekends. The café only serves food that has been sourced locally or bought through people who trade locally when the produce cannot be found within the immediate area. In the past year after discussions with regular customers and summer visitors the Curtfields have put half of their farm into organic conversion with the aim of supplying not only the Café but also setting up a farm shop selling their produce.

The café employs a range of part time employees, all of whom live in the villages nearest the farm and it has become an important meeting space for the community. Gradually the Curtfields are changing the focus of their farm business to fall into step with the Café. They have entered into a shared management scheme for the management of the farm with their immediate farming neighbour, securing the jobs of their farm workers, to allow them more time to focus on developing their new businesses. The Curtfields are convinced that by following through this dialogue with their customers that the farm business will benefit and become even more profitable.

The distinction between tourists and visitors has been relatively easy for the Curtfields to understand until recently. With a strictly seasonal trade of tourists to the area and the beach in particular, these customers represent a passing group. On the other hand, local people who visit the Café all year have come to form a loyal customer base and help guide the business to greater integration with the local community. It has been the regular customers who have requested local food and then organic production, shaping the farm business in an on-going dialogue. This has been encouraged by a number of advisors, most strikingly in this instance by the

Curtfield's bank manager who has encouraged them to increase their 'wallet share'. The support of the local community has been central in the process of turning the farm away from the national supply chain to the local customer base. In this small community the Café has led to changes to the outlook of the Curtfields and equally a change in the community has it has responded to the opportunity that they have offered for greater connection with local food producers.

Rural development implications

The three case study examples have captured elements of the processes of rural development that are associated with farms engaged in direct sales, whether they organic or not. Whilst the role of new entrants to this area of farming is of central importance, none of the case studies are of people from that background, rather they are of people of a farming background but who have not taken over the family business directly. Each case study demonstrates a different scale of enterprise and different scale of ambition. Riverford represents a large number of farms and has a suitably large scale goal, whilst the Perkins are seeking to build up their own business through forging links with a wider community of organic consumers and the Curtfields have found that their interaction with their community has led to changes in the farm business.

Certainly the directness of the interaction between the Curtfield's and Perkin's businesses is far more intimate than that of Riverford and it can be argued that the rural development benefits are that much deeper. This suggests that scale is an important factor in creating and sustaining these processes, with inter-personal contact an important element. There needs to be recognition of the limitations of these systems, it is very unlikely that all the customers of the Perkin's or the Curtfield's would know each other, but they will all know the farmers who run either the box scheme or the Café. Rather than considering it to be a zero-sum game, it is important to reflect on the degrees of proximity between producer and customer. Some local sales will be small scale, with close reciprocal bonds between producer

and customer, others will be less tightly bound but against the comparator of the multiple-retailer all of these relationships retain a greater element of social proximity.

The second shared aspect of these case studies is the importance of the process of interaction between different actors. Each of these examples is continuing to evolve and change in response to the processes that it has set in chain. Riverford has reached the limits of its extension and has set up a network farm to extend the model. This no longer uses the Riverford brand and is developing along its own lines from the infrastructural model of Riverford, adapting as it progresses. In part this reflects the changes that the co-operative and Riverford have undergone, the whole structure retains a degree of flexibility and responsiveness to change. The Perkins interaction with their customers has led to relative few immediate changes as they recruited a group of supporters who were already largely aligned to the importance of organic production. The challenge to this model of community-supported agriculture is to maintain the interest and loyalty of the customer base. If the success of the vege-boxes schemes has been based on relatively low investment by customers in monetary terms and a saving in terms of convenience, any meat box scheme is asking for a much higher financial investment by customers. Both of the box schemes have relied on growing networks of supportive customers that are not necessarily geographically concentrated. In contrast the Curtfields are being influenced by a group of customers who live in relatively close to the farm. Implicitly this community is asking the Curtfields to take a business risk without even the short-term commitment of a box-scheme customer.

Summary

As this chapter has shown (and those that preceded it), in order to identify the rural development potential of organic and other types of farm it is important to differentiate between them on a finer scale than that offered by the farming system. Failure to do so means that the distinctive contribution of certain types of farm and farmers is obscured. Farms with direct sales, particularly organic farms with direct sales reflect a particular business profile that is matched by the distinctiveness of their operators. In combination these characteristics produce a well-defined socio-

economic footprint indicating that organic farms with direct sales can provide important rural development benefits. Beyond the more easily measurable impacts of higher levels of employment and the generation of greater value per hectare, as the qualitative analysis and case studies have illustrated, organic farming combined with direct sales and contact with customers can be associated with a wider range of benefits including greater trust and connection between groups of producers and customers and an incentive for collective working and collaboration. In some cases, such as Riverford and Whiteholme farm, the core farm business effectively acts as an important node or ‘hub’ for other businesses. The implications of these findings are considered in the next chapter.

Chapter Six: Summary and conclusions

Introduction

Organic farming has achieved a high profile in recent years. The growth in demand and supply of organic produce has been argued to offer environmental benefits, health benefits and also benefits to the rural economy through stimulating employment and providing a basis for rural development. Against this background, the research on which this report is based has sought to address the question of whether organic farming provides an additional benefit to the rural economy over and above that of conventional agriculture. In turn, this raises issues of definition and scope. What is organic farming? What is the rural economy? And what constitutes a "benefit" to the rural economy?

For the purposes of the project, the definition of organic farming was based on certified compliance although it is recognised that organic farming can be much more than this. Equally, by defining organic farming, remaining farms have been classified as non-organic although in reality non-organic farms exist on a spectrum of farming systems, some of which are 'near-organic'. Similarly, it is recognised that 'the rural economy' is a contested concept and that there are many economies and many local economies. In terms of identifying and understanding benefits to the economy, the concept of a socio-economic footprint has been developed to illustrate and measure the impact of different types of farm in terms of their economic activities, accessing of grant aid, embeddedness and participation in the local community. This is a much broader conceptualisation of the impact of an individual farm or group of farms and perhaps as a consequence, the results of the research are more complex.

Impacts and characteristics

At an aggregate level, organic farms in the sample spent less on inputs (excluding employment) and generated a lower volume of sales. That said, the organic sample was slightly smaller (302 compared to 353 non-organic farms) and when the value of sales is standardised and expressed on a per hectare basis organic farms out-

perform non-organic farms in the sample (generating mean sales values of £2,837 per ha compared to £1,953 per ha for non-organic farms). That said, it is increasingly recognised that in terms of economic impacts and rural development potential it is not just aggregate values that are important but also how closely business are linked to their local economies, generating multiplier effects and 'plugging leaks'. The economic connectivity of farms was explored through an analysis of the spatial pattern of sales and purchasing behaviour. In terms of both sales and purchases organic farms are not significantly more connected to the local economy. For example, on organic farms 29% of the total value of purchases and 19% of sales are made within ten miles of the farm compared to 27% and 27% respectively for non-organic farms. The definition of 'local' is clearly open to interpretation and is frequently defined in a different manner for different purposes. If the definition of local is widened to encompass the county within which a farm business is located then a total of 72% of purchases and 57% of sales on organic farms were made 'locally' compared to 65% and 56% for non-organic farms. On the basis of this measure of economic impact and connectivity there is little difference between organic and non-organic farms.

The results of this research largely confirm the results of previous studies, in identifying a significant employment dividend associated with organic production, but has also added further detail to the employment impact of organic farming. Organic farms accounted for 46% of the sample but 57% of all people employed in the sample. Standardising labour in terms of FTEs confirmed that, despite being smaller on average, organic farms employ more FTEs per hectare and per farm than non-organic farms. Moreover, they employ more non-family FTEs compared to their non-organic counterparts and it is only on organic farms that non-family FTEs exceeded family labour inputs. Creating and safeguarding employment is clearly an important aspect of rural development as (all other things being equal) it can be assumed to improve individual welfare. However, while employment is higher on organic farms a much greater proportion is accounted for by casual staff (50% compared to 33% for non-organic farms). This may be a reflection of the farm type structure of the two sub-samples as horticultural business account for a greater proportion of the organic

sample. Casual employment may offer flexibility to multiple job holding rural workers but by definition does not offer stability and may be associated with lower levels of pay.

The income effects of these differences in employment levels are difficult to expand on given the complexities of the data involved. It is clear that at an aggregate level there are only marginal differences in the wages paid in the two sectors. However, family labour on organic farms is paid, on average, £4,000 less per FTE compared to non-organic farms and while non-family FTEs receive approximately the same salaries on organic and non-organic farms this varies considerably by farm type with organic dairy and mixed farm non-family FTEs receiving a higher salary than their non-organic counterparts. The impacts of greater employment levels in the organic sector is further complicated by the use of casual migrant labour. This was not a focus of the study but a number of respondents were employing significant numbers of migrant workers. Clearly, while they will spend money in the local economy and contribute to locally cultural vibrancy, many migrant workers will also divert part of their earnings to family at home. Rather than being a problem, this is an example of organic farming promoting well-being, but the effects will not necessarily be felt locally or even within the UK.

While the economic impacts and local economic connectivity of the two farming systems are broadly similar, the operators of the businesses and the way in which individual businesses are configured are significantly different. The people who operate organic farms are typically younger and more highly educated than their non-organic counterparts. On average, organic farmers are 6 years younger than their non-organic counterparts and 51% have a higher education qualification compared to 30% of non-organic farmers. In addition, a significant proportion have entered agriculture as an entirely new ‘career’. 31% of organic farmers were ‘new entrants’ in the sense that when they entered farming they had never farmed before and did not come from a farming family. Six per cent were also ‘recent new entrants’, conforming with the above definition and entering farming in the last five years. Many had never

farmed in any other way but organically and had no intention of leaving organic farming in the foreseeable future.

It is reasonable to assume that this distinctive group of organic farmers brings with them different skills and aptitudes and possibly also a different attitude to operating a farm business. There is evidence that the operators of organic farms operate within different networks of association, although their participation in a range of rural organisations and social activities is no different to that of non-organic farmers. Other research (e.g. Curran and Blackburn 1994) has also found that younger entrepreneurs are not closely involved in social and community activities. The explanation for this two-fold in that they are frequently too busy being entrepreneurial and developing their business interests and at the same time are at a stage in the life-cycle when they have family commitments within the home.

In addition to a distinctive social profile, many organic farmers also configure their business in a different way. They are more likely to run more enterprises than their non-organic counterparts and those enterprises are much more likely to be orientated away from providing services to the agricultural industry and instead are focused on processing and/or retailing. For instance, 21% of organic farms had diversified into a trading enterprise compared to just 5% of non-organic farms. Organic farms are also the sites of clusters of diversified activities with 23% engaged in multiple diversification compared to 15% of non-organic farms. This pattern of difference is repeated in the use of grant aid with 64% of organic farms in receipt of rural development funding (excluding organic support) compared to 49% of non-organic farms. As well as being more likely to participate in an ERDP scheme, organic farmers are more likely to have taken up multiple schemes and are much more likely to have participated in CSS and/or RES than non-organic farmers. The latter is clearly linked to the greater likelihood of organic farms to diversify.

The analysis clearly indicates that, despite quite radical differences in farming system, at an aggregate level the impact and economic connectivity of organic and non-

organic farms is not dissimilar. In many ways this is surprising as the people who operate organic farms are quite different and that might be expected to be associated with a distinctive impact. Two implications stem from this finding. The first is that within the framework devised for this research, there are no appreciable differences in the economic impacts of organic and non-organic farming. The second implication is that a conventional farming system analysis (i.e. organic and non-organic) is too blunt an approach. Treating organic farms (and non-organic farms) as homogenous sectors does not help in identifying rural development potential. In turn, this suggests that searching for a rural development 'magic bullet' is probably a futile exercise: it is diversity that is important, a mixture of local and national sales, connecting businesses and consumers in a local economy together and also generating 'export' income. Different types of business and different business configurations will all have a role to play in this. Moreover, in rural development terms, it is the people rather than the farming system, or rather the interaction between the organic system and market and certain types of people that leads to a distinctive impact.

Whilst recognising the importance of a diverse farming sector, farms operating short supply chains with direct and/or local sales emerged from the analysis as distinctive businesses, operated by a group of distinctive and well defined farmer-business people which, in turn, created a distinctive rural development impact. An important point to note is that it was the directness/shortness of the supply chain that was the most important factor not necessarily local sales. Of course, the two were often combined but as the Riverford example indicates, considerable benefits accrue from direct sales, which cannot be considered local.

In many ways the characteristics of those organic farmers operating direct sales were even more acute than the organic farming population generally. Compared to other organic farmers they were younger, more highly educated and more likely to have diversified. All farms with direct sales recorded a higher value of sales per ha than farms where direct sales were absent but this was even more marked for organic farms. On average organic farms with direct sales generated sales of £4,983/ha

compared to £3,249/ha for non-organic farms with direct sales and £1,654 for all farms without direct sales. These farms also support a larger number of jobs as well as providing a more diverse range of employment opportunities.

In addition to the readily quantifiable impacts noted above, the combination of organic production, in particular, with direct sales is associated with less easily quantifiable impacts that nevertheless represent a bonus to rural development and suggest the possibility of having a re-generative role in the community. Key here is the direct relationship with the consumer which often transforms the operation of the farm business in that it requires there to be trust between the farmer and their customers. The direct contact changes the tenor of that relationship for both parties, as it is without mediation but often based on a face-to-face encounter. That is not to suggest that it is a simple or unambiguous relationship, but it is one that is one that the farmers in the survey report to be hugely rewarding and which transforms their business.

As well as connecting farmers and consumers in a more direct manner, direct sales are frequently associated with improved connections and collaboration between farmers as consumer demand almost always requires farms to act collectively. Most of these relationships are based on a shared understanding rather than a formal contract, meaning that those involved have to trust each other, not only on questions of supply but also of quality. Organic status acts as an important bridge between producers, meaning that questions of quality are almost already established. These low level networks between producers also means that some degree of specialisation can take place, with farmers less confident at dealing with the public able to access the market through those who are.

These networks of trust can help build broader feelings of reciprocity and solidarity. Consumers can feel that they are supporting and building a form of food production that they find to be superior from an environmental and or health perspective, or just convenient, or a combination of all of these. As a result, they can enter a new set of

relationships with those who produce their food. In turn the producers, who are often already acutely aware of their dependency on consumers, can negotiate that relationship face-to-face with their customers. Organic status again acts as a bridge, a social short hand, that helps customers and producers share a feeling of solidarity, before entering into a relationship of relative interdependence. These feelings can be established outside the framework of organic agriculture, but the costs in terms of time and effort will be more considerable. Fellow feeling and mutual dependence strengthen the feelings of community. Although the selling of food directly to the customer is not a complete answer to community development, it can make an important contribution.

It is quite clear from the research that organic farms that sell directly to the end consumer have a distinctive socio-economic footprint and make a significant contribution to rural development. However, this does not imply that they represent a model that can be easily and uniformly copied to boost rural development. Not all farm businesses would find the direct selling of their produce straightforward. For example, finding a way of selling cereal crops directly to the customer would be highly challenging, as would (for many farms) selling milk. The contemporary farm and food economy will continue to be characterised by a diverse range of businesses serving different needs but in a context where public funding is ever more closely connected to the provision of public goods and social sustainability, the combination of organic farming and direct sales should not be overlooked.

Policy implications and recommendations

As the analysis in this report has made clear, configuring farm businesses differently can foster rural development. To date those who have sought to supply customers directly have done so with limited support and have faced the market very directly. All of those engaged in these activities who took part in this research were firm believers in the importance of self-reliance and flexibility in the face of challenges. This type of market facing, entrepreneurial approach closely matches the changing CAP environment and suggests that pioneering farmers such as some of those in the

study could have a role to play in influencing the direction and pace of change in their industry.

Promoting farm business change

As this research has demonstrated, in order to deliver rural development benefits organic conversion alone is not enough. The beneficial impacts identified in the research were associated with organic farms which operated a very different business model. Therefore it is recommended that a *business reconfiguration package* is developed to help farmers reconfigure their businesses to supply customers directly. This package should recognise that it is a process rather than a simple switch and that on-going support will be required. The business reconfiguration package should be available to all farmers but in the organic sector it could be run in tandem with organic conversion. Given the greater benefits associated with the organic direct sales sector (compared to non-organic direct sales), a differentiated rate of support should be available.

While the ERDP and its successor will clearly have a role in promoting farm business change it is also necessary to consider alternative means of levering support into the farm sector. Many of those engaged in growing a direct supply business had received grant assistance but many wished that it had been accompanied by on-going support – both financial and advisory. Given the shortage of external private capital in farming it is recommended that possibility of private co-financing to lever-in funds from outside the farm sector is explored. A *venture grant scheme* could be facilitated with DEFRA acting as the broker introducing those willing to share both risk and reward with farmers wanting to reconfigure their business. Combining funding with on-going business advice would help the grant provider feel a partner in the venture and interested in the long-term success of the project.

Working together

One of the key themes to emerge from this research is the importance of farmers working together in a variety of ways. The operators of existing direct sales organic farms could clearly have a role in providing a demonstration farm and in the provision of business reconfiguration advice. It is recommended that a number of pioneering farmers should be recruited to form part of a *network of demonstration farms* where the emphasis is on understanding the process of changing and sustaining the farm business rather than just the farm system. As part of this system, funding should be available for exchange visits within the UK and possibly further a field.

Closely linked to the need to facilitate interactions and the sharing of experience is the need to support critical mass and infrastructure. Infrastructure is a continual problem for smaller organic producers, often those involved in direct sales, and until now frequently small-scale private initiatives, often backed by grants, have sought to fill the gap. Alongside this are a series of regional initiatives to promote or foster organic farming on a regional basis. It is recommended the concept of developing *organic hubs* is explored through an experimental pilot project. An organic hub would be a single site where organic infrastructure, including advice workers, is located. The hub could provide an organically certified small-scale abattoir, cold-storage unit and warehouse/pack-house facilities. The principle would be to establish a point where infrastructure was available to facilitate the building up of networks of smaller producers selling directly to the customer. Some of the farms in the survey are effectively acting as a mini-hub, providing the site for processing and direct sales for their own business but also renting out facilities to other (organic) farmers.

Information and market intelligence

Clearly, for businesses becoming more market facing it is imperative that they have accurate and timely information about that market. Currently information about the organic market is scattered and often incomplete or partial. Co-ordination and standardisation of information and having it presented in an accessible form is a key part of allowing the sector to grow. While it should not be DEFRA's role to collect

such information there could be a role in co-ordinating and verifying the data. DEFRA has a clearer role in the collection and provision of data on the size and structure of the organic sector. Data should be made available on the farm size, type and tenure structure of the organic sector in order to develop a more detailed understanding of the comparative structural features of the organic sector. Confidentiality may be used as an argument for not disclosing such data at a small geographical scale. If this is the case, regional or even national summaries would represent a step forward. In the longer term confidentially arguments may be harder to sustain in the light of the recent disclosure of the value of subsidies to individual farmers.

Research implications

A number of implications for future research activity arise from this report. Further refinement of the methodology is needed and, significantly, *integration of environmental impacts with socio-economic impacts.* This research explicitly did not consider the environmental impacts of organic farming and how they might relate to rural development. Yet, if the full importance of policy support measures in the creation of public goods is to be appreciated then an integration of the social, economic and the environmental should be a priority. This would require a significant investment of time and resources but the socio-ecological footprints would allow a fuller picture of the role of all farm businesses to be developed. In addition, elements of the methodology could be adapted and applied to other rural (and urban) businesses.

Beyond these methodological concerns there are several easily identified areas where further information and a deeper understanding is required. These include developing an improved understanding of the *networks of support between farmers and important agents of change*. In the organic sector in particular, the decision making process at the farm level often appears to be heavily influenced by example and exemplars. A greater understanding of the role of exemplars as agents of change would be helpful in understanding how change can be facilitated and

encouraged. Linked to this is a need for research into *the role and impact of certifying bodies, public sector agencies and policy measures.* For instance, the south of England is benefiting considerably more from the public monies targeted toward organic farming than the north. An understanding of how the policy context, key actors and policy measures interact to encourage and support the development of organic farming and direct sales to consumers may be useful in facilitating a more even distribution of the rural development benefits of certain business forms.

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