



Soil Association

Organic works

**Providing more jobs through organic
farming and local food supply**



Front cover: Farm workers
changing the tips of a plough
on Lye Cross Farm, Somerset.

Below: Baling and loading
hay for silage. Westmorland,
Northwest England, 1956.



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Transport and General Workers' Union

The T&G is pleased as the UK's leading rural trade union to be supporting the important work of the Soil Association in promoting the organic farming sector. We believe that the development of this vital industry is pivotal to helping regenerate agriculture as a major employer, with a major role in the rural economy.

We believe that now objective research underlines the fact that organic farming provides significant employment potential it is time for key policy makers and practitioners to add vital support to the organic sector and in so doing to the broader rural economy.

www.tgwu.org.uk

Foreword

Farming methods over half a century of agricultural intensification have inflicted a terrible toll on the landscapes of Britain. Nearly everyone is now aware of the lost wildlife. But what about the other type of lost biodiversity – of the human kind?

Our Government has even invented a new language to celebrate the 'achievement' of the removal of labour from British farms. Labels like 'competitive' and 'efficient' are attached to 'successful' farmers who eliminate farm workers in the quest for ever lower unit production costs. As a consequence, today's countryside can be a lonely and soulless place.


Yet there is cause for hope. This report reveals that organic farming as a system of food production has the capacity to reverse these trends. In the view of the Soil Association the number of people employed in farming and food production is a crucial indicator of the health, vitality and security of a nation's agriculture. As *Organic works* reveals, organic farms employ more people of a younger average age undertaking more diverse and interesting work.

This is an economic and cultural revolution in the making, with tremendous implications for the future.

But the statistics give rise to a crucial underlying question. What is the percentage of a nation's work force that ideally should be devoted to the production and distribution of its food? Is it 60% (the current proportion in many developing countries) or 1% (the statistic in the UK and USA).

The debate about agricultural employment, and its relation to economic competitiveness in a globalised food economy, has profound consequences for the future social, economic and ecological well-being of our planet. If most of the rural population of India, China and Africa moved into cities, the impact on resource use, global warming and social stability would be catastrophic. Yet in the so-called 'developed' countries hardly anyone is discussing these issues.

We hope that this report will be widely welcomed – and that it will stimulate debate about ensuring that as much food production as possible is both local and organic.



Patrick Holden
Director, Soil Association

Executive summary

- 1.** Organic farming in the UK provides 32% more jobs per farm than equivalent non-organic farms. These new findings are based on the first national survey of employment on UK organic farms, carried out by the University of Essex for the Soil Association (Chapter 4). The figure is based on the jobs provided by farms currently converted to organic production, adjusted to represent the balance of commercial farm sizes nationally.
- 2.** Farms currently in organic production, although they include proportionally more extensive grassland farms, provide almost 50% more jobs per farm and over 30% more jobs per hectare than non-organic farms.
- 3.** If all farming in the UK became organic over 93,000 new jobs directly employed on farms would be created. This is sixteen times more people than were employed by the Rover car company when it closed in April 2005, and nearly ten times the number of jobs lost as a result of the closure of rural post offices over the last 15 years (Chapter 4).
- 4.** Organic farming is attracting younger people into farming compared to the farming industry as a whole. On average, organic farmers in the UK are seven years younger than non-organic farmers, whose average age is 56. The proportion of organic farmers aged under 55 is over 20% higher compared to non-organic farmers (Chapter 7).
- 5.** Organic farming is also attracting more new entrants to agriculture. A recent Defra-funded survey of farms in England found that 31% of organic farmers had entered agriculture as an entirely new career and did not come from a farming family, compared to 21% of the non-organic sample (Chapter 2).
- 6.** It is the system of organic farming itself that demands more labour and creates more jobs. The observed higher employment in organic farming could not be replicated in non-organic farming by developing local marketing initiatives. The University of Essex research found that the majority (81%) of the total employment on organic farms was generated by the farming system itself. Of the average 3.08 jobs per organic farm, 2.50 are accounted for by agricultural employment with the remaining 0.57 (19%) being jobs in on-farm processing and direct marketing (Chapter 4).
- 7.** Although the provision of jobs and achieving full employment are generally agreed to be desirable social goals, for more than half a century governments and industry leaders have seen 'shedding labour' as a key measure of the efficiency of the agricultural industry (Chapter 1). This loss of farm workers – with 37 leaving the land every day – has stripped us of the people, skills and

knowledge to produce good quality food, and to care for the British countryside. A skilled agricultural workforce will also be needed to make the transition away from current fossil fuel dependent farming whilst maintaining food production in the UK (Chapter 5). This report shows that in organic farming there is an alternative that increases employment, as well as being economically productive and socially and environmentally sustainable.

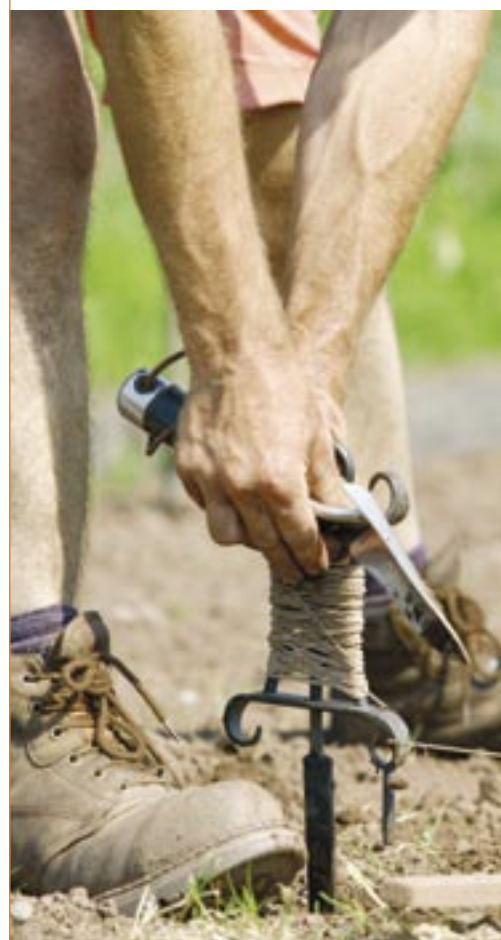
8. These employment differences result from fundamental differences between organic and non-organic farming systems (Chapter 4). Non-organic farming provides fewer jobs because it has: replaced skilled labour with agrochemicals and larger machinery; increased farm size to spread machines and labour over a larger area; and introduced specialised and simplified farming systems. The main elements of organic farming which contribute to higher employment include: small, more diverse farms with mixed systems (crops and livestock); varied crop rotations; careful soil management; maintaining the positive health of plants and animals; rearing farm animals outdoors to high welfare standards; and maintaining habitats for natural predators and other wildlife.

9. Organic farms are also more likely to be involved in on-farm processing, marketing and retailing, building on the trust and connection between farmers and consumers of organic food (Chapters 2 and 4). The Defra-funded research found that organic farms surveyed in England were three times more likely to be involved in direct or local marketing (39%), compared to non-organic farms (13%). The University of Essex survey also found that 39% of all UK organic farms were engaged in on-farm processing or direct marketing. Farms with these additional enterprises supported 64% more jobs per farm compared to farms that did not.

10. The findings of this UK research have significant implications for developing countries. In developed countries, 1 to 2% of people are employed in farming. In many developing countries, around 60% of the population are subsistence farmers. The large-scale replacement of their labour and livelihoods with agrochemicals and machinery would cause the breakdown of communities, mass migration and urbanisation on a large scale. This would also dramatically increase poverty, and increase greenhouse gas emissions from these countries (Chapter 6).

11. Government policy for UK food and farming should state explicitly that farming systems that provide greater employment in agriculture, and in farm-based or local food processing and retailing, are to be welcomed and will be encouraged.

12. The Government's priorities for the reform of the Common Agricultural Policy, and the Department for International Development's policies for international aid and agricultural development, must not continue to encourage the introduction of farming systems and agricultural technologies that reduce farming jobs and the potential for local marketing. Instead, they should prioritise and actively promote farming systems that maximise rural employment (Chapter 6).



1. Introduction

“... Farms will get bigger and that’s a good thing. A lot of agricultural reformers, like the Prince of Wales, want farmers to stand around being subsidised and making thatched roofs. Well, that’s for the birds. Agriculture has got to strive to be more competitive and more productive.”

Lord Haskins, the Government’s former Rural Recovery Czar

For some time the public has been concerned about the impacts of modern farming methods on the UK countryside. Intensive farming has had a devastating impact on the natural environment over the last half a century, including the loss of wildlife and hedgerows. For instance, the Government has reported the loss of over 95% of wildflower-rich lowland meadows and 60% of heathland since 1945.¹ However, there has been a more silent change, often invisible to the public eye. This move towards bigger, more ‘efficient’ farming has also heralded dire consequences for the farmers who work on the land:

- a 40% decline in the number of farms in the past 47 years (1956 to 2003)²
- a 79% drop in farm workers over the past 52 years (1951 to 2003)³
- a 61% decline in the total income from farming and a 39% decline in the average income per person employed in agriculture over the past 30 years (1973 to 2004)⁴
- in 2003, one farm worker committed suicide every seven days⁵
- from being a majority of the UK’s 500,000 farms at the end of the Second World War, ‘mixed farms’ have declined to a minority of less than 14,000 farms in 2003, accounting for just 5% of total holdings.⁶

Unlike the loss and damage to wildlife, the departure of so many farmers and farm-workers have largely gone unnoticed by the public and the media. When a car factory or ship-yard closes its gates, there are powerful images of thousands of redundant workers walking down the road, but farmers and their employees drift away from their farmhouses and tied-cottages in dribs and drabs across the country. Superficially little looks different, as farmland is incorporated into larger units and farmhouses and cottages are sold off to non-farming people.

This loss of farm workers – with 37 leaving the land every day – has stripped us of the people, skills and knowledge to produce good quality food, and to care for the British countryside. A skilled agricultural workforce will also be needed to make the transition away from the current fossil fuel dependent system whilst maintaining food production in the UK. This report shows that in organic farming there is an alternative that increases employment, as well as being economically productive and socially and environmentally sustainable.

1.1 Policy context – the devaluation of agricultural jobs

Although the provision of jobs and achieving full employment are generally agreed to be desirable social goals, for more than half a century governments

Harvesting in the Sussex Downs, 1944
(Picture: Keystone Press)



and industry leaders have seen ‘shedding labour’ as a key measure of the efficiency of the agricultural industry. The trend toward fewer, bigger farms – with a consequent decline in numbers of farmers and farm workers - are seen as an inevitable and indeed desirable consequence of ‘restructuring’. This has been the mind-set guiding UK agriculture over the past 50 to 60 years and is exemplified by Lord Haskins’ characteristically blunt quote. It is reflected in the decline in farmer and farm-worker numbers with, on average, 12 farmers going out of business⁷ and 37 farm labourers leaving the land every day over that period.⁸

The twin objective of ‘restructuring’ UK farming alongside reducing agricultural jobs was reiterated by the Government in response to the report of the Policy Commission on the Future of Farming: “The UK’s slow productivity growth partly reflects a slower pace of restructuring in UK farming. Reductions in the number of farms and in the numbers of people working in farming have generally been at a slower pace in the UK than the rest of the EU.”

That may be true, but the end result is still a depressed, moribund and desperate farming sector that is not attracting or encouraging new entrants, with those remaining in farming getting older. Chapter 3 sets out the key trends in UK agriculture in more detail.

1.2 Reversing the decline

Increasingly, however, policy-makers are questioning the economic model that has driven this destruction of both countryside and the people who farmed it. The emphasis of Common Agricultural Policy payments has shifted from supporting output in terms of tonnes of grain or head of livestock per hectare, to rewarding farmers for providing public goods of environmental management and natural resource maintenance. Jobs on farms and farming-related businesses provide a wide range of benefits for the national and regional economy, including community cohesion, social stability and cultural identity. These benefits are discussed in Chapter 5.

From both the European Union (EU) and the United Nations (UN)⁹ there is official recognition of organic farming’s social and economic benefits. In 1999, the Council of the European Union recognised that organic farming provides “a combination of positive environmental, social and economic effects”.¹⁰ In 2004, the European Commission also recognised that organic farming delivers “social and rural development” in its action plan to expand the market for organic food in the EU.¹¹ But a narrow interpretation of economic ‘efficiency’ still dominates the UK. The payments for environmental management are recognition that farmers need support to achieve the apparently conflicting objectives of being commercially viable and looking after the countryside

The evidence in this report directly contradicts this narrow and negative thinking which has dominated agricultural policy for the past 60 years. In contrast, it argues that farming jobs are a positive indicator of a healthy and vibrant farming model – modern farming can be both profitable and increase employment. Farming jobs provide significant economic, social, ecological and long-term security benefits to society as a whole. By providing more jobs than any other farming system and meeting strong consumer demand in the marketplace, organic farming is the most efficient system. Not only does organic farming increase agricultural employment, but it is also economically productive and socially and environmentally sustainable.

¹ Nature Conservancy Council, 1984. Nature Conservation in Great Britain

² MAFF, *Agricultural Statistics United Kingdom: Agricultural Census and Production*, The Stationery Office and Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office

³ *ibid.*

⁴ Defra (2005) *Agriculture in the United Kingdom 2004*. The Stationery Office

⁵ In 2003, 55 farm workers died as a result of suicide or undetermined injury in 2003. Source: Office for National Statistics (2006) *Proportional mortality ratios for suicide and undetermined injury in farmers, etc, persons aged 20-74, England and Wales 1993-2004*

⁶ Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office

⁷ Between 1956 and 2003 the number of farm holdings fell from 511,935 to 304,833, a drop of 207,102 (40%) in 47 years. This is over 4,400 each year, or one every 12 days. Sources: MAFF, *Agricultural Statistics United Kingdom: Agricultural Census and Production*, The Stationery Office and Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office

⁸ Between 1951 and 2003, the number of farm workers (excluding farm owners, partners, directors and spouses) fell from 882,296 to 183,600, a loss of 698,696 (79%) over 50 years. On average, 13,436 workers were lost each year, or 37 per day. Source: MAFF, *Agricultural Statistics United Kingdom: Agricultural Census and Production*, The Stationery Office and Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office

⁹ Food and Agriculture Organisation of the United Nations (1999) *Organic Agriculture*. Item 8 of the Provisional Agenda, Fifteenth Session, Committee on Agriculture. <http://www.fao.org/docrep/meeting/X0075e.htm>

¹⁰ Cited in Commission for the European Communities (2005) *European Action Plan for Organic Food and Farming*. Commission staff working document. http://europa.eu.int/comm/agriculture/qual/organic/plan/index_en.htm

¹¹ Cited in Commission for the European Communities (2005) *European Action Plan for Organic Food and Farming*. Commission staff working document. *Ibid.*

1.3 Restoring jobs on farms through organic methods

The Soil Association believes that organic farming is the best, practical model on to which to build a sustainable food production system, and this view is supported by scientific evidence and shared by leading environmental and public health organisations.¹² Clearly there is a strong public interest in examining the social and economic value of organic farming to society in more detail. However, the Soil Association's focus in this report on agricultural employment is also motivated by a broader concern over the continuing exodus of farmers and farm-workers from agriculture. This exodus not only causes immediate costs to society through unemployment, raised depression and suicide rates, but it is also undermining the capacity of the country to maintain food security in the face of global challenges from climate change and the rising cost of fossil fuels.

It is a generally held view that organic farming requires greater inputs of labour than the predominant model of non-organic agriculture which has replaced the input of human labour with chemical inputs and machinery. This 'requirement' has been seen as a disadvantage, with organic farming systems needing more jobs to make them productive. Certainly this is how proponents of the dominant model of intensive agriculture characterise organic farming. They claim that their chosen model, despite its reliance on chemicals and machinery, is a more efficient and competitive way of producing food. By only accounting for labour's contribution to the cost of production, any reduction in labour is regarded as a good thing.

Organic farming systems provide more jobs per farm and, in general, per hectare of farmland, but these do not represent an inefficient input or the indulgence of philosophy at the expense of profitability. Most organic farms, and certainly those in the survey forming the basis of this report, are commercial enterprises. Their operations utilise more labour, but they can currently bear the cost – because there is sufficient consumer understanding of the values inherent in organic production and the willingness to buy high quality food. In addition, a plethora of on-farm processing and direct-marketing initiatives help to ensure that organic farmers capture a greater proportion of the final sale price of their produce. Public payments in recognition of the environmental benefits delivered by organic farming also make a modest contribution to the extra cost of organic production.

What makes organic farming unique is that it is a management-based system of producing food, rather than one that is heavily input-based. Organic farming promotes and harnesses natural biological and ecological processes on the farm, instead of using synthetic chemical inputs. To optimise the health of plants, animals and people, organic farmers build up soil organic matter to maintain a biologically active soil and encourage natural predator populations. This positive health approach is extended to farm animals using sound nutrition, stockmanship and high levels of animal welfare. This report demonstrates that it is the system of organic farming itself that delivers extra jobs. In addition, organic farms deliver extra employment benefits since they are more likely to be involved in business innovation activities like on-farm processing, marketing and retailing, building on the trust and connection between farmers and consumers of organic food.

1.4 The organic employment dividend

There have been several studies over the years indicating that labour use per hectare is higher on organic farms in Europe (see Table 1). These are reviewed in more detail in Chapter 2. But until now there has been no up-to-date national research into employment on UK organic farms. The Soil Association has

¹² The Government's Sustainable Development Commission has acknowledged that organic farming represents 'the gold standard' for sustainable farming. Jonathan Porritt in *Sustainability Implications of the Little Red Tractor Scheme*, Report for the Sustainable Development Commission, January 2005

commissioned new, independent research from the Centre for Environment and Society at the University of Essex to gain a comprehensive assessment of the additional employment and wider socio-economic benefits generated by organic farming in the UK. The results of this study have now been published in a peer-reviewed journal and underpin our arguments as set out in Chapter 4.¹³

Chapter 4 explains how organic farming provides a greater number and diversity of jobs. These deliver a range of social and economic benefits to both rural and urban communities. Calculations by the Soil Association based on the University of Essex research shows that organic farming provides 32% more jobs per farm than non-organic farms in the UK. If organic farming, currently active on 4% of UK farmland, was adopted by all UK farmers, it would produce an additional 93,000 on-farm jobs on top of the total 288,000 people employed on commercial farms in 2003.

As well as providing the most accurate and recent picture of organic farming's role in job creation, this report assesses the social, economic and environmental benefits that more farming jobs would provide both in the UK and internationally. In 2002, the Department for Environment, Food and Rural Affairs (Defra) acknowledged the positive social and economic impact of organic farming, including "benefits [for] rural employment through the particular farming practices and through development of new marketing systems".¹⁴ But greater employment generation is not yet generally acknowledged as an inherent benefit of organic farming. In comparison, the biodiversity benefits of organic farming have been widely recognised by the Government and environmental organisations. Organic farmers in England now receive an extra £30 per hectare for environmental stewardship compared to non-organic farmers due to the scientifically-proven higher numbers and greater diversity of fauna and flora found on organic farms.¹⁵ The evidence outlined in this report provides a compelling case for the expansion of organic farming.

1.5 Agricultural employment in the developing world

Looking beyond our shores to the developing world, employment in agriculture is an issue of global humanitarian importance. In the UK, the Soil Association is pioneering a farming system and local food infrastructure that provides good jobs and livelihoods for a greater number of people. Organic farming is also helping to revive local and regional economies, as well as laying the foundations for a food production system that is resilient and diverse enough to adapt to the challenges of climate change. But in the developing world, intensive agriculture is still regarded as the means to save people from poverty and hunger. Chapter 6 demonstrates that this is the wrong model and that a skilled agricultural workforce is vital to safeguard livelihoods and ensure global food security.

Over one billion people in developing countries are dependent on small-scale, traditional farming to sustain their livelihoods. Displacing these people to urban slums and shanties in Africa, Latin America and Southeast Asia to make way for industrial-scale cash cropping for export would be an economic and social humanitarian disaster. A key resource those countries have is a large and experienced agricultural workforce. Rather than replacing this valuable human resource with increasingly expensive and scarce inputs of oil-based agrochemicals and fertilisers, developing countries should adopt and develop sustainable food production systems that keep people working on and living off the land.

¹³ Morison J, Hine R and Pretty J (2005) 'Survey and Analysis of Labour on Organic Farms in the UK and Republic of Ireland', *International Journal of Agricultural Sustainability*, Vol 3, No 1, pp24-43

¹⁴ Department for Environment, Food and Rural Affairs (2002) *Action plan to develop organic food and farming in England*. Department for Environment, Food and Rural Affairs

¹⁵ Defra quantified actual biodiversity value of organic farms at £130 per hectare



Ashlyns Organic Farm, Essex

A diverse enterprise in an intensively farmed landscape

Ashlyns is a 600 hectare organic farm near Bobblingworth, near Ongar, West Essex. Only ten minutes from the end of the London Underground, you can be in the City in just over half an hour. The Collins family have been farming at Ashlyns since 1970 and in 1997 they began the process of converting their land to organic. The farm was previously in an arable rotation growing only wheat, barley and oilseed rape. Now the farm produces an incredibly diverse range of produce – vegetables, potatoes, wheat and onions, as well as pigs (Essex Saddlebacks), chickens (Black Rocks), 100 cattle (Lincoln Reds) and pygmy goats.

The staff on the farm includes four full time agricultural workers and around ten seasonal staff for summer fruit-picking. Opened in 2002, the on-farm shop provides income for a further four full time and 12 part time employees, many of whom are local school leavers or students who appreciate an interesting and hands-on job in the holidays. Following the amalgamation of its box scheme with another scheme, Ashlyns is now concentrating on farm shops sales and has opened two new farm shops, in Hertfordshire in December 2004 and north Essex in April 2005. These employ four full time and 12 part time staff between them.

This local demand for their produce is linked to the trust in food created by its organic status. The diversity of food produced by the farm is mirrored by the way


“Staff benefit from the challenging roles at Ashlyns and the ‘feelgood factor’ of working with nature.”

Ashlyns Organic Farm

it interacts with the local community. As well as providing a range of jobs, it runs educational farm tours, including many for schoolchildren, and supplies around 20 local schools with fresh organic fruit and vegetables. Ashlyns strengthened its commitment to education and health by setting up the first training kitchen for dinner ladies, located on the farm, launched by Jamie Oliver and Jeanette Orrey in October 2005. The knock-on effects of the training kitchen will generate further employment as more healthy school meals are served in local schools.

The farm management believes that Ashlyns has had a massive effect on the local community and that the generation of employment has been part of this effect. Not only is farming organically much more labour intensive, but the range of non-agricultural jobs has also expanded – from maintaining the trails and hedgerows as part of the Countryside Stewardship Scheme, to running educational visits for local school children. Substantial local employment has also been generated by the construction of the farm shop by local craftsmen and a lake to provide irrigation water. Plans to increase the number of livestock on the farm will also boost agricultural jobs.

Staff who have previously worked on non-organic farms have had contrasting experiences. Some remark that organic farming requires a psychological change that can initially be challenging for those accustomed to using agrochemicals. Despite the steep learning curve of conversion, staff are generally positive about farming organically and many enjoy the community feel of living on the farm itself.

- 
- 12 full time staff on the farm and its three farm shops
 - 34 part time and seasonal staff
 - 600 hectares of fruit, vegetables, cereals and livestock
 - Local sales, training kitchen, schools education
- www.ashlyns.co.uk

2. Existing evidence for greater employment on organic farm

“Most studies find that organic agriculture requires significantly greater labour input than conventional farms ... when labour is not a constraint organic agriculture can benefit underemployed labour in rural communities. Furthermore, the diversification of crops typically found on organic farms, with their various planting and harvesting schedules, may distribute labour demand more evenly which could help stabilize employment.” ¹⁶

Food and Agriculture Organization of the United Nations

Various attempts have been made to assess and explain the increased jobs on organic farms, and studies have generally found that organic farms employ more people than non-organic farms (Table 1). However, research on the socio-economic impacts of organic farming is scarcer than research into the environmental benefits, which are widely accepted. Attempts to quantify the employment benefits have varied and, until the recent University of Essex study commissioned by the Soil Association, there was no empirical research into employment on all UK organic farms.

The most recent review of the literature was carried out by the University of Exeter in 2005 and found that the “research on the employment impact of organic farming typically indicates a positive impact”.¹⁷ This is confirmed by the new University of Essex research that, for the first time, provides empirical evidence of the employment benefits of organic farming in the UK. The study’s findings are discussed in detail in Chapter 4.

Calculations by the Soil Association based on University of Essex data demonstrate that organic farming provides significantly more employment than non-organic farms in the UK, supporting 32% more jobs per farm. This figure is based on comparing this data with Government data for all UK farms, adjusted to be representative of the balance of farm sizes nationally. Unlike previous studies, this figure takes account of the large number of non-commercial holdings in the UK which have been excluded from the research (see methodology in Chapter 4). Without taking account of differences in farm size, the farms currently in organic production are providing almost 50% more jobs per farm and nearly 30% more jobs per hectare (Table 1).

2.1 Previous studies of employment on organic farms

Table 1 summarises the findings of key studies into the employment benefits of organic farming. Existing studies have largely focused on organic farms in Europe. A review of over 40 European studies between 1990 and 1997 found that labour use per hectare is, on average, 10% to 20% higher on organic farms, although there is considerable variability between countries and studies.¹⁸ The authors found that the employment benefits were dependent on the type of farm. They found that employment was consistently higher on organic arable and mixed farms with particularly high levels on horticultural enterprises.



However, they claimed that the data was less certain about livestock farms and, for instance, there was little available data for pig and poultry farms.

The research into employment and organic farming in the UK is much more limited. Attempts to quantify the organic employment dividend have not looked at all farm types and regions in the UK and therefore findings have varied. In 1995, a Friends of the Earth report concluded that “low input and organic ... farming practices require both more skilled and unskilled labour than conventional farming”.¹⁹ Based on European studies indicating an average of 20 to 30% more jobs, they estimated that if just 25% of UK farming went organic, agricultural employment would increase by 30,000 to 45,000 jobs. A 1997 estimate by the SAFE Alliance (now Sustain) based on a simple model suggested that organic farms provided, on average, 3.6 persons per 100 hectares compared to 3.3 on non-organic farms – 9% higher.

One five-year study for IGER examined labour in more detail on ten commercial dairy farms in England and Wales. It found that there was, on average, a 17% increase in labour use following conversion to organic production. Wage costs for paid labour increased by 27%.²⁰

SAFE also calculated that the conversion of 30% of UK farming to organic production would result in 16,600 additional jobs.²¹ Calculations by the Soil Association based on the University of Essex data indicate that this was a conservative estimate. In fact, if 30% of total UK farming converted to organic this would result in an estimated 28,000 extra jobs, rising to 93,000 jobs if all UK farming switched to organic production (Table 4a). See Chapter 4 for further detail.

Table 1 Previous research on employment in organic farming

Study	Extra jobs in organic (per farm)	Extra jobs in organic (per hectare)
Friends of the Earth (1995) Estimate for the UK based on European studies <i>"If just one-quarter of UK farming was converted to organic production, employment in agriculture would increase by 30,000 - 45,000 jobs."</i>	No data	20-30%
SAFE Alliance/Sustain (1997) Estimate for the UK based on UK data. 16,000 new jobs would be created if 30% of UK land was organic	No data	9%
Offerman and Nieberg (2000) Review of over 40 European studies between 1990 and 1997	No data	10-20%
University of Exeter (2005) A regional Defra-funded survey of 302 organic farms in three English regions	39%	64%
University of Essex (2005) First national survey covering 1,018 UK organic farms and comparing them with Government data	140%	14%*
Soil Association (2006) Comparison of University of Essex organic survey and Government figures accounting for non-commercial holdings and the national farm size distribution.	47%	31%**

* Figure adjusted for skewing by 40 very large organic farms. Unadjusted figure is -41%.

** Figure adjusted for skewing by 40 very large organic farms. Unadjusted figure is -32%.

¹⁶ Food and Agriculture Organization of the United Nations (1999) *Organic Agriculture*. Item 8 of the Provisional Agenda, Fifteenth Session, Committee on Agriculture. <http://www.fao.org/docrep/meeting/X0075e.htm>

¹⁷ Lobley M, Reed M and Butler A (2005) *The Impact of Organic Farming on the Rural Economy in England*. Final Report to Defra. University of Exeter, p23

¹⁸ Offerman F and Nieberg H (2000) Economic performance of organic farms in Europe. *Organic Farming in Europe: Economics and Policy*, Volume 5. University of Hohenheim, p14

¹⁹ Friends of the Earth (1995) *Working Future? Jobs and the Environment*. Discussion paper. Friends of the Earth

²⁰ Haggard and Padel (1996) *Conversion to organic dairy production*. IGER Technical Review 4

²¹ Hird V (1997) *Double Yield: Jobs and sustainable food production*. SAFE Alliance

2.2 University of Exeter study – summary of findings

A recent study of some organic farms in the UK was conducted by the University of Exeter, which was commissioned by Defra in 2004 to examine the extent to which “organic farming provides an additional benefit to the rural economy over and above that of conventional agriculture”.²² Published in 2005, this study surveyed 302 organic and 353 non-organic farms in three English regions (Devon, East England and North England), accounting for 44% of organic and non-organic farms respectively. This research contributes to our understanding of the impact of organic farming on agricultural employment and rural development in these regions.

For the farms surveyed, organic farms provided 64% more full-time equivalent jobs per farm and 39% more jobs per 100 hectares than non-organic farms (see Box 1). The authors concluded that their research “largely confirms the results of previous studies, in identifying a significant employment dividend associated with organic production”.²³ In addition, 27% of organic farmers reported an increase in labour provision following conversion, employing on average an extra 1.73 full time jobs.

Other key findings indicate that organic farmers represent a discrete group of people who are generally younger, more educated and with a higher propensity for entrepreneurialism and farm diversification. Findings from the new University of Essex survey confirm that organic farmers are younger than their non-organic counterparts across the UK (see Chapter 7).

The study also found that organic farmers were more likely to diversify into other business activities, particularly trading (21%) and processing (16%) enterprises, compared to just 5% and 4% of non-organic farmers respectively. This can open opportunities to add value and make closer connections with customers. The authors identified that these “diversification activities can be argued to be more sustainable, with potentially higher levels of additionality to the local economy and society” (p53).

Box 1 Key findings from the University of Exeter study for Defra

- 39% more jobs per farm in organic systems (6.40 compared to 4.60)
- 64% more jobs per hectare in organic systems (4.21 compared to 2.56 per 100 hectares)
- Organic farmers are, on average, five years younger than non-organic farmers
- 31% of organic farmers are new entrants to farming, compared to 21% of non-organic farmers
- Better educated – 51% of organic farmers have been through higher education, compared to 30% of non-organic farmers
- Greater business diversification – 56% of organic farms, compared to 45% of non-organic farms
- More direct and local marketing – 39% of organic farms, compared to 13% of non-organic farms
- More computer literate – 82% of organic farmers use ICT, compared to 61% of non-organic farmers
- The survey covered 302 organic and 353 non-organic farms in three catchments in England: Devon, East England and North England in 2003. This covered 44% of organic farms and 35% of non-organic farms in these areas, accounting for 12% of organic farms in England and 7% in the UK.

Note: ICT – information and communication technology. Includes computers, the internet, email and fax.

²³ Aggregate jobs per 100 ha have been recalculated by the Soil Association using University of Exeter data by dividing total FTE jobs by total farmed area. This is consistent with the methodology in the University of Essex study

However, the University of Exeter report for Defra suggested that the distinctive impact of organic farms on the rural economy was primarily related to the types of people and enterprises on organic farms (more on-farm processing, direct marketing, entrepreneurialism of young and more highly-educated 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” (p59).

The role of organic farming in fostering direct marketing

In addition to increased business diversification, organic farms are more likely to be involved in direct marketing and retailing. Organic farms in England surveyed by the University of Exeter were three times more likely to be involved in direct or local marketing (39%), compared to non-organic farms (13%). This confirms the findings of an ADAS report prepared for Defra, *Farmers’ Voice 2004: Organic Farming*.²⁴ This survey of 1,673 non-organic farmers and 98 organic farms in 2004 found that 47% of organic farmers are likely to market directly in the near future, compared to only 19% of non-organic farmers.

The University of Exeter study found that organic certification fosters more opportunities for direct marketing by creating a connection and sense of “trust between the farmer and their customers” (p121). The study revealed that this higher propensity for direct marketing creates benefits for both farm businesses and consumers. Not only does it improve connections and collaboration between farmers, but selling food direct to the customer can make an “important contribution” to community development. Organic farms are especially well-placed to deliver these benefits:

“Organic status again acts as a bridge, a social short hand, that helps customers and producers share a feeling of solidarity ... These feelings can be established outside the framework of organic agriculture, but the costs in terms of time and effort will be more considerable” (p122).

Summary

The University of Exeter study confirms the higher levels of employment on organic farms. It provides a useful insight into organic farming in the three regions it surveyed in England (Devon, the East and the North) and achieved a high response rate (44% of organic farms). These three regions have very different characteristics from each other and the farms surveyed accounted for 12% of total organic farms in England and 7% in the UK. According to the authors, “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 geographic areas that constitute the sample.” In comparison, the University of Essex surveyed 1,018 organic farms across the whole UK representing 25% of all organic farms in 2003, including 674 in England alone.²⁵

²⁴ ADAS Consulting Ltd (2004) *Farmers’ Voice 2004, Summary Report: Organic Farming*. ADAS

²⁵ The study also surveyed 126 organic farms in the Republic of Ireland, representing 14% of total organic holdings



Acorn Dairy, Archdeacon Newton, County Durham

Marketing innovation supporting rural tradition

Gordon Tweddle's family have been farming at Garthorne Farm, near Darlington in County Durham for four generations. They also manage Hallwith Farm, 30km away in Wensleydale, Yorkshire under a contract. Gordon sells organic milk and cream from the farms under his own 'Acorn Dairy' brand which supplies milk, cream and other staples direct to around 3,500 doorstep customers as well as shops, restaurants, the local council, hospital and 20 schools. Both farms had fully converted to organic by 2000, covering a combined herd of 320 Holstein-Friesian cows on around 280 hectares. Since converting to organic, the doorstep delivery service has grown considerably and building a milk and cream processing plant on the farm in 2003 has paved the way for further expansion.

Going organic has brought benefits for the local economy. Acorn Dairy now boasts 19 full time staff, including five agricultural workers, four staff in the processing plant and 10 people who co-ordinate sales and drive vans on the morning doorstep delivery round. It also provides casual work for six people in the local community, including retirees. The dairy's activities have also supported off-farm jobs, for example, by having their brochure printed by a local business. The Tweddles recognise that at the Acorn Dairy, practical agricultural work is

“Labour replaces chemicals and drugs on organic farms – there is simply more to be done on the farm to make sure the herd is healthy and productive.”

Gordon Tweddle, Acorn Dairy

more demanding and skilled, but with this comes benefits for the staff, local economy and animal welfare.

Gordon is clear that organic farming has provided a substantial boost to local employment. The holistic, hands-on approach of organic farming means that improved animal welfare and increased employment go hand-in-hand, "Labour replaces chemicals and drugs – there is simply more to be done on the farm to make sure the herd is healthy and productive. Good management can prevent problems in the first place, but this requires more time spent with the animals", he adds. Farm worker Phil has also noticed the benefits of organic farming for both the staff and the animals, "Before we went organic, we used to have at least five or six cows being treated for mastitis at any one time, but now it's hardly ever, which is really satisfying."

The farm's organic status has encouraged business innovation by creating trust in food and helping the local community to connect with the food they eat. By investing in on-farm processing and developing a loyal local market, the farm has been able to employ more people. Their success is all the more astonishing since the local organic market in Northeast England was virtually non-existent when they began to convert to organic. Not only does direct marketing make good business sense by giving the Tweddles more control over the enterprise, but their customers also benefit from receiving an even fresher product. "I see the demand for local food becoming increasingly important", says Gordon's wife Linda. In 2005, Darlington Memorial Hospital became the first UK hospital to switch entirely to organic milk. Acorn Dairy supplies it with 5,000 pints of fresh milk each week which are served to patients, staff and visitors. Staff have been positive about the switch to organic and have reported that patients noticed an immediate difference in the taste, with some claiming that nightly hot milk helps them to sleep better.

"We contemplated going organic during my first years of farming at Garthorne in the 1970s" says Gordon, "but it wasn't until there was a local market for organic dairy products that it became a viable economic option for us." The turning point for Gordon came after asking friends during a meal why they were not eating their potato skins. "They told me that conventionally grown potatoes are treated with a chemical that stops them sprouting. I learned more about organic farming and now firmly believe that it is the way forward for food production." However, he says that his decision was equally influenced by the wish for a "long term sustainable economic future and job security for my staff and my family". Whilst many young people are leaving the land in search of other careers, Gordon is confident that his son Graham will farm at Garthorne in the future.

- 19 full time staff on the farm and working in processing and marketing
- 6 part time staff
- Processing and selling milk and cream from two dairy farms (280 hectares)
- On-farm processing and local sales

www.acorndairy.co.uk



3. Agricultural employment – the current situation

“52,000 people left the farming and fishing industries over 2002, double the previous year’s drop in the workforce of 26,000.” ²⁶

The dramatic loss of farm workers over the last 50 years – with 37 leaving the land every day – has stripped us of the people, skills and knowledge to produce good quality food, and care for the British countryside. A skilled agricultural workforce will also be needed to make the transition away from the current fossil fuel dependent system whilst maintaining food production in the UK. However, the current situation is characterised by an increasingly isolated and ageing farming population, with few young farmers and hardly any new entrants to the agricultural industry. The wider value of agricultural jobs to economies, communities and social cohesion are discussed in more detail in Chapter 5.

3.1 The decline in agricultural workers

There has been a long, steady decline in overall employment in UK agriculture, not least during the Industrial Revolution (1760 to 1840) when the number of people working on the land declined by around 50% in 80 years. This was seen as a rural and social disaster. But job losses came even faster following the Second World War. The last few decades of the 20th century saw the collapse of the agricultural workforce by nearly 80% in just 50 years.²⁷ Technological changes, underpinned by a support structure of Government grants, drove the shift to the dominant, industrial model of highly mechanised, chemical-dependent farming. Labour inputs of humans and horses were replaced by machinery and chemicals, enabling farmers to move away from the mixed-farming systems they had previously depended on to build soil fertility and supply forage for working horses.

In the desire to increase outputs while reducing costs, jobs have been lost and farm size increased in an attempt to spread costs of machinery and labour over more land. Farms have become fewer in number, bigger in size, and employ fewer people:

- Between 1956 and 2003, the number of farm holdings in the UK fell by 40%, or 207,102 holdings.²⁸ This marks a drop from 511,935 to 304,833.
- On average, over the past 50 years 4,400 farm holdings have disappeared each year. That is 85 a week or 12 a day.
- In 1956, the average holding was under 100 acres (37.8 hectares). By 2003, this had increased by 50% to 140 acres (56.5 hectares).²⁹
- Average field sizes have also increased, by between 39% and 182% between 1945 and 1983.³⁰
- The number of farm workers (excluding farm owners, partners, directors and their spouses) declined from 882,296 in 1951 to 183,600 by 2003, a loss of 698,696 (79%) over 50 years. On average, 13,000 farm workers were lost each year, 258 per week, or 37 per day.³¹

Workers sowing in Hampshire, 1959



With farms increasingly specialising in either arable cropping or livestock production, fewer people with a narrower range of skills were required to run them – and the energy and fertility on which that production depended was bought in as off-farm inputs of diesel and artificial fertilisers. The consequence has been that whereas before the Second World War, around 15% of the UK's population was employed in agriculture, today fewer than 2% of people work directly in producing the nation's food.

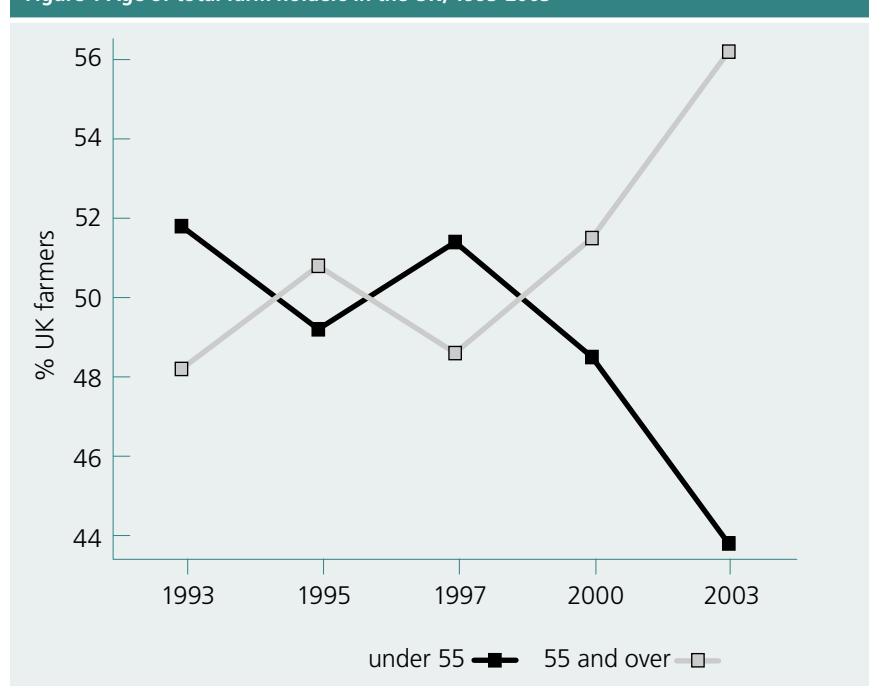
3.2 An ageing farming population

People remaining in farming are consistently getting older, with the average (median) age of farmers rising to 56 in 2003, compared to 54 a decade earlier. Figure 1 illustrates the two-way trend, with increasing numbers of older farmers and fewer younger farmers:

- During a single decade (1993 to 2003), the proportion of farmers aged 55 and over increased from 48% to 56% of total farm holders in the UK.
- At the same time, the proportion of all farmers aged under 55 fell from 52% to 44%.
- In 2003, 28% of farm holders in the UK were aged 65 or over, a further increase on the 1993 figure of 23%.
- Only 3.7% of farm holders were under 35 in 2003, down from 6.8% in 1993.³²

It has been claimed that the rising age of farmers is due to a lack of interest from young people wanting to come into the industry and take up a working life consisting of long hours of hard, physical work, often outdoors in all weathers.

Figure 1 Age of total farm holders in the UK, 1993-2003



Source: EC Farm Structure Survey. Data for all farms including those under 4 ESUs.

²⁶ *Farmers Guardian*, 'Exit numbers double'. 16 May 2003

²⁷ Between 1951 and 2001, the number of farm workers (excluding farm owners, partners, directors and spouses) fell from 882,296 to 198,000, a loss of 684,296 (77.6%) over 50 years. Source: MAFF, *Agricultural Statistics United Kingdom: Agricultural Census and Production*, The Stationery Office and Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office

²⁸ MAFF, *Agricultural Statistics United Kingdom: Agricultural Census and Production*, The Stationery Office and Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office

²⁹ Ibid.

³⁰ Westmacott and Worthington (1984) cited in Environment Agency (2004) *The State of Soils in England & Wales*. Environment Agency

³¹ MAFF, *Agricultural Statistics United Kingdom: Agricultural Census and Production*, The Stationery Office and Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office

³² Defra (2005) *Agriculture in the United Kingdom 2004*. The Stationery Office

Yet a survey by Farmer's Weekly in February 2002 showed that 80% of young people whose families were from rural backgrounds wanted to work in a rural occupation.³³ More specifically 54% of them wanted to work as 'a farmer, farm worker or farm manager'.

However, the number of people choosing farming as a new career is very low. The University of Exeter study for Defra identified that this lack of new entrants has dire implications for UK farming:

"... the low levels of people entering the [farming] 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." (p35)

Organic farming is not only bucking the trend of a declining agricultural workforce, but it is also helping to attract more younger people into farming compared to non-organic farming. This report reveals that, in 2003, the average age of organic farmers in the UK was 49 years, seven years younger than their non-organic counterparts. Chapter 7, *Hope for the future*, reveals more about organic farming's appeal to young people.

3.3 Farmer suicides

"In the UK as a whole a farmer commits suicide every week and 40% do so with their own shotguns - having a convenient method of committing suicide such as a shotgun is a well documented risk factor."³⁴

Farmers have one of the highest suicide rates of all occupations with an average of one farmer committing suicide every seven days. The lack of human contact outside the immediate family can exacerbate feelings of isolation and depression. With only 13% of farms in England employing any labour beyond family members, this is a common situation and problem. Creating the conditions where more farms could afford to employ labour could reduce this sense of isolation. The recent University of Exeter study found that organic farms in England provided 60% more jobs outside the family, supporting on average 6.4 non-family jobs compared to 4.0 on non-organic farms.

The depressed state of UK agriculture is reflected in the shocking statistics of farmer suicides:

- During the 1980s, farmers, horticultural workers and farm managers had the second highest suicide rate after vets. For the period of 1991 to 1996, agricultural suicides dropped to the third highest group, with vets and doctors being the most at risk.³⁵
- Between 1991 and 1996, 190 farmers, farm managers and horticultural workers committed suicide. This meant that one farmer took her or his life every 11 days during that period.³⁶
- In 2003, 55 farm workers committed suicide, raising the average to one suicide every seven days that year.³⁷

Given these depressing general trends, it is all the more remarkable that there is a movement within UK agriculture that is expanding, whose practitioners are optimistic about their future, and which is attracting younger, entrepreneurial new entrants. That movement is organic farming. Based primarily on mixed-farming systems, organic farmers are taking on, rather than shedding labour,

³³ Relf, T, 'Young want to stay in country', Farmers Weekly 2002.

³⁴ Director of Public Health Annual Report 2001, Dyfed Powys Health Authority. www.dyfpws-ha.wales.nhs.uk/dirphanrep2001/ch4_rstress.htm

³⁵ Kelly S and Bunting J (1998) 'Trends in Suicide in England and Wales, 1982-96', *Population Trends*, No 92, Summer 1998. Office for National Statistics

³⁶ Ibid.

³⁷ Office for National Statistics (2006) *Proportional mortality ratios for suicide and undetermined injury in farmers, etc, persons aged 20-74, England and Wales 1993-2004*

directly creating full time jobs and jobs in linked enterprises, as demonstrated by the findings discussed in Chapter 4.

3.4 Small and mixed farms

The move towards larger, more specialised farms means that farms can spread labour and machinery over more land. But this has come at the expense of small, mixed farms which have declined dramatically. From being the majority of the UK's 500,000 farms at the end of the Second World War, 'mixed farms' declined to become the minority, standing at less than 14,000 by 2003 (5% of total holdings).³⁸ This increased specialisation has left individual farmers, particularly those specialising in livestock or dairying, vulnerable to price fluctuations in their particular sectors. Many UK farmers have become specialised producers of large volumes of one or two commodities, whether those be arable crops or the products of intensive livestock rearing.

The decline in small farms and loss of farm jobs has also been driven by the rise of contract farming. For more than 20 years there has been a hidden amalgamation of farms through contract farming deals and farm business tenancies. Under these arrangements, while the farmer and their family may continue to live in the farmhouse they have always occupied, the surrounding farmland is in fact being farmed by a neighbour, or even a farmer some distance away, for a fixed price per acre, plus usually a share of the profits. The contract farmer will therefore spread his own machinery and labour over an increased area.

The University of Essex's findings demonstrates that small organic farms, such as horticultural units, employ a very high number of people indicating a very high productivity per hectare (Chapter 4). These findings are supported by a number of other studies from the US and Europe. A report by the International Sustainability and Environment Council cites studies showing that UK farms under 100 acres provide five times more jobs per acre than those over 500 acres.³⁹

The definition of efficiency most widely accepted by economists is that of "total factor productivity", an averaging of the efficiency of use of all the different factors that go into production, including land, labour, inputs and capital. Studies by researchers at Cornell University give data from the 1960s, 70s and early 80s, showing small farms have greater total factor productivity than large farms in Sub-Saharan Africa, Asia, Mexico and Columbia.⁴⁰

A 1999 report by Food First, based in California, provides the strongest assertions as to the higher productivity of small farms: "... small farms almost always produce far more agricultural output per unit area than larger farms. This holds true whether we are talking about an industrial country like the United States, or any country in the Third World."⁴¹ The Food First report cites data from the US Government's Agricultural Census, which also investigated the relationship between farm size and output per acre, showing that the smallest farms, those of 27 acres or less, had more than ten times greater dollar output per acre than larger farms.⁴² This is in large part due to the fact that smaller farms tend to specialise in high value crops like vegetables and flowers, but also reflects relatively more labour and inputs applied per unit area, and the use of more diverse farming systems.

³⁸ Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office

³⁹ ISEC (2000) *Bringing the Food Economy Home*. Zed Books

⁴⁰ Tomich T P, Kilby P, & Johnston B F (1995) *Transforming Agrarian Economies: Opportunities Seized, Opportunities Missed*. Ithaca, Cornell University Press

⁴¹ Rossett P (1999) *The Multiple Functions and Benefits of Small Farm Agriculture*. Food First, the Institute for Food and Development Policy

⁴² U.S. Agricultural Census (1992) Vol 1, part 51, pp 89-96

Coleshill Organics, Coleshill, Oxfordshire

A small horticultural enterprise supporting a large number of jobs

Pete Richardson has farmed in Coleshill all his life. In 1995, he and his wife Sonia rented just two acres and started to farm organically. Now they farm nearly 30 acres (12 hectares) of land and the couple pride themselves on producing the widest possible variety of fruit, vegetable and salad crops. Most of their produce is sold to local people via their box scheme and farm shop run from within the Victorian walled garden of the National Trust's Coleshill Estate. They also have a weekly stall at the Barnes Farmers' Market in London.

For such a small farm, Pete and Sonia employ a surprisingly large number of people. In addition to the couple, the farm employs two full-time staff and eight part time staff, as well as an extra five or six full time employees over the summer for the potato and onion harvest. Coleshill also provides employment and work experience placements to four students. Labour is definitely Coleshill's biggest investment. The staff are all local – more than half live in Coleshill and the rest live within a four or five mile radius. Employment in the area around Coleshill is good and so Pete and Sonia pay competitive wages. "We wouldn't employ nearly as many people if we weren't organic", says Sonia. Their organic status has been

"We wouldn't employ nearly as many people if we weren't organic. It's a fundamental thing to get involved with the production of your own food – and that is very satisfying."

Sonia Oliver, Coleshill Organics

key to the business' success, "Organic has always been a big draw for our customers and demand for local food is gaining momentum very fast."

The box scheme has expanded from 15 boxes a week nine years ago to around 450 today, and picked up a Soil Association Good Food Award for Best Box Scheme in 2004. Meanwhile, they opened a farm shop in September 2002 that has become a welcome place for people in the village and surrounding area to buy fresh organic food. "Three years ago, it became clear that there was another full time job needed here, as we were doubling our box orders regularly", says Sonia.

So what type of people work at Coleshill, and why? "It's very human scale work", says Sonia. "The job appeals to people who like gardening and growing things rather than farming in the conventional sense." The part time staff do a variety of jobs – packing and delivering boxes, planting, picking, and weeding. "We have a very low turnover of staff. And to this day, none of them have ever called in sick", she says. Sonia puts this down to not only the fact that people enjoy their job at Coleshill, but also because they work as a team and rely on each other.

Linda, who works for Pete and Sonia part time, agrees. "I love the community feel at Coleshill" she explains. "It's an incredibly friendly place to work and I like getting my hands dirty. It feels a very fundamental thing to get involved with the production of your own food – and that is very satisfying." Full time worker Antony Hinks has farmed conventionally all his life but has always had an interest in organic farming. "Five years ago I made the decision to have faith in working organically to support myself, rather than seeing it as just an interest", he says. The differences he describes between Coleshill and his previous jobs are huge. "Here I really work hard – we have so many varieties of traditional fruit and vegetables in a small area and there's a lot of hands-on work to be done. But spending a hot day spraying chemicals on fields with a leaky knapsack sprayer was just horrendous. I much prefer it here", he explains.

The impact of farming organically has spread beyond the farm community itself. Coleshill believes in the importance of food education and over 1,000 school children visit the farm each year. The farm provides vegetables to four schools in Swindon and Sheepdrove Organic Farm provides the meat via the company, Let's do Lunch. As a result, the number of children having a cooked school lunch at one of the schools, Lethbridge Primary, rose from 40 to 250 in a single year.

- 4 full time staff
- 14 part time and seasonal staff
- 12 hectares of diverse fruit and vegetable crops
- Specialising in local sales via box scheme, farm shop and schools

www.coleshillorganics.co.uk



4. Findings of University of Essex survey of employment on organic farms

This chapter presents a summary of the findings of the independent research carried out for the Soil Association by the Centre for Environment and Society and Department of Biological Sciences at the University of Essex, Colchester in 2003. The detailed study, *Survey and Analysis of Labour on Organic Farms in the UK and Republic of Ireland*, was conducted by James Morison, Rachel Hine and Jules Pretty. It has been peer-reviewed and published in the *International Journal of Agricultural Sustainability*.⁴³

4.1 University of Essex survey of organic farms in the UK and Ireland

Background to the survey

The University of Essex conducted the most extensive survey ever carried out of employment on UK organic farms, covering nearly 1,200 organic farms in the UK and Republic of Ireland. In the UK alone, this covered almost 25% of total organic farms and 24% of the total organically managed land (1,018 farms and 177,361 ha surveyed).

This high response rate makes the findings significant and robust. The authors concluded that the survey data was 'representative of organic farms'. The data from the survey of organic farms was compared to the national statistics for farm employment from Defra's 2002 June agricultural census, which records all farm employment excluding sales assistants.

In adopting the approach in the University of Essex paper, this report uses the term 'employment in non-organic farming' in reference to Government data for total farms in the UK which include organic farms. Organic farming is currently relatively small, accounting for 4.3% of the total farmed area and 1.3% of total holdings in the UK, and therefore has little impact on the total farming figures.

The 2002 agricultural census, the latest data available at the time of the survey, found that there were 296,258 farm holdings in the UK employing a total of 550,500 people. Since a large number of people are working part-time or seasonally on farms, Defra calculates that these account for a total of 380,100 full-time equivalent jobs (FTEs) in the UK, with 257,600 of these being in England alone. The University of Essex researchers converted the data from their survey of organic farms to full-time equivalent jobs. A detailed explanation of the methodology can be found in Appendix A.

Double the number of jobs: organic farming's employment dividend

The survey found organic farms provided 140% more jobs per farm compared to non-organic farms in the UK (Box 2 and Table 2). On average, organic farms provided 3.08 jobs per farm compared to 1.28 jobs on non-organic farms, amounting to an extra 1.8 more jobs. It is noteworthy that only a very small



percentage of non-organic UK farms employ any additional labour beyond the immediate farming family. Of the 181,083 holdings in England only 24,373 (13%) employ additional workers, so 87% of non-organic farms in England employ no labour outside the immediate farming family. In terms of employment per 100 hectares of farmland, the job opportunities were 14% higher on organic farms at 2.49 jobs⁴⁴ per 100 hectares compared to 2.19 jobs for non-organic farming in the UK. Appendix B illustrates the survey's findings in more detail, including a breakdown of jobs and farms by geographical area.

Box 2 Key findings of the University of Essex survey of employment on UK organic farms in 2003

- UK organic farms provide, on average, nearly two and a half times as many full time equivalent jobs as non-organic farms in the UK (3.08 jobs per farm compared to 1.28 jobs).
- Jobs per 100 hectares were 14% higher on organic farms at 2.49 jobs compared to 2.19 jobs on non-organic farms in the UK.
- A direct comparison between organic and total UK farms was difficult due to the current imbalance in the type of farms that have so far converted to organic. Using weighting to overcome these differences, organic farms provided 2.52 jobs per farm, 97% more than non-organic farms (1.28 jobs). Organic farms provided 98% more jobs per 100 ha than non-organic farms, with 4.33 and 2.19 jobs respectively.
- Small, organic farms with an average size of 36 hectares supported the greatest number of jobs (5.23 jobs per farm).
- The survey demonstrates that it is the system of organic farming itself that creates and demands more labour. The majority (81%) of the total employment on organic farms was generated by the farming system itself. Of the total 3.08 jobs per organic farm, 2.50 are accounted for by agricultural employment with the remaining 0.57 (19%) being on-farm processing and direct marketing.
- The survey found that a significant proportion, 39%, of organic farms in the UK and Ireland were engaged in on-farm processing or direct marketing. Farms with these additional enterprises supported 64% more jobs per farm compared to farms without them.
- The survey covered 1,018 out of a total of 4,104 organic farms in the UK (25%) and 177,361 hectares out of the total UK organically managed land area of 741,147 hectares (24%).
- In addition, the survey covered 126 of the total 923 organic farms in the Republic of Ireland (14%) and 4,812 ha of the total 29,850 ha of organically managed land (16%).

Table 2 Summary of University of Essex findings into employment on UK organic farms

Study	Organic farms surveyed, 2003	Non-organic farms, 2002	Increased employment on organic farms
Number of farms	1,018	296,258	
Area farmed (hectares)	171,361	17,342,000	
Total people employed	N/A	550,500	
Total jobs (FTE)	3,135	380,100	
Jobs per farm (weighted)	2.52	1.28	97%
Jobs per 100 hectares (weighted)	4.33	2.19	98%
Jobs per farm (unweighted)	3.08	1.28	141%
Jobs per 100 hectares (unweighted)	2.49	2.19	14%

Notes

Weighted figures are adjusted to be representative of the balance of farm sizes nationally. Organic jobs per 100 hectare figures do not include the 40 large organic farms, see Methodology.

⁴³ Morison J, Hine R and Pretty J (2005) 'Survey and Analysis of Labour on Organic Farms in the UK and Republic of Ireland,' *International Journal of Agricultural Sustainability*, Vol 3, No 1, pp 24-43

⁴⁴ Source for jobs per 100 hectares on UK organic farms, excluding Eire: personal communication, University of Essex, March 2006

Methodology

The University of Essex acknowledged that “a direct comparison of the [organic] survey with national statistics is difficult”. In particular, there is a current imbalance in the types and sizes of farms that have so far converted to organic production. “In the UK many of the farms that have converted to organic farming have been extensive grassland farms (because of the ... ease of conversion for such farms).”

The researchers took two measures to overcome this imbalance. Firstly, 40 very large organic farms over 1,000 ha in size were excluded from the jobs per 100 hectares calculation. Including these farms would have had the effect of disproportionately influencing the overall jobs per 100 hectare figure because they employed such a low number of people per 100 hectares. These farms averaged 2,822 hectares in size, with 3.7 full time employees per farm, but only 0.22 jobs per 100 hectares. These farms are not representative of most UK organic farms and are mostly very large extensive upland estates, which tend to employ a small number of people.

Removing these 40 large farms is also justified by the fact that it is likely that most are no longer farming organically. Thirty-one of these farms were in Scotland, where it has been widely reported that a significant number of large extensive grassland farms have decertified from organic production since the survey was conducted in 2003.⁴⁵ Between 2003 and 2005 the number of organic producers in Scotland fell by 13% from 725 to 632, compared to much lower changes for the UK overall.⁴⁶ Some farmers in Scotland came out of organic production when their five-year Organic Aid Payments ended, citing a lack of local outlets and price premiums for store lambs.⁴⁷ Therefore, removing these 40 farms gives a much more representative picture of organic farming in the UK.⁴⁸

Secondly, the organic survey data was weighted to make the figures representative of the balance of farm sizes nationally. This overcomes the current imbalance in the types of farms that have so far converted to organic, many of which are large extensive grassland farms. They calculated the number of jobs “that would be created if farms of all sizes converted evenly to organic”. Using this approach, organic farms provided nearly double the amount of jobs on non-organic farms, with 2.52 jobs per farm and 4.33 jobs per 100 hectares.

Government data includes all types of jobs on farms, including agricultural labour and related jobs like direct marketing and on-farm processing. But it does not break down the types of jobs, which makes it impossible to compare the relative proportion of these non-agricultural jobs with the organic farming survey.

Organic farming system itself is the main reason for more jobs

The University of Essex research also demonstrates that it is the system of organic farming itself that creates and demands more labour. Whilst on-farm processing and direct sales activities are distinctive factors for the success and survival of many organic enterprises, the vast majority (81%) of the total employment on organic farms is generated by the farming system itself.

Of the total 3.08 jobs per organic farm, 2.50 are accounted for by agricultural employment with only 0.57 (19%) provided through on-farm processing and direct marketing. Even if on-farm processing and marketing jobs on organic farms are excluded, leaving 2.50 agricultural jobs per farm, organic farms still provide 95% more jobs than non-organic farms.

⁴⁵The majority of upland estates in Scotland have now decertified from organic production. Source: Personal communication from the Scottish Organic Producers Association, March 2006. This temporary decline in organic farmers in Scotland has also been documented elsewhere: Green M (2004) *Organic food and farming report 2004*. Soil Association; Williamson S and Cleeton J (2005) *Organic market report 2005*. Soil Association; Barclay K and Cleeton J (2005) *Market research study into the market penetration of Scottish organic produce*. Soil Association

⁴⁶Williamson S and Cleeton J (2005) *Organic market report 2005*. Soil Association

⁴⁷Scottish Agricultural College (2006) *Agribusiness news*. Volume 1, Issue 5, March 2006. Scottish Agricultural College

⁴⁸If these 40 farms were included then employment per 100 hectares appeared 41% lower on organic farms, at 1.30 jobs compared to 2.19 jobs for non-organic farms

An obvious reason for organic farming's need for greater labour is that the system aims to minimise, if not avoid altogether, off-farm inputs of artificial fertilisers and pesticides. But organic farming is much more than a 'low-input' system:

- Organic farming is the active management of a farming system that requires a greater range of skills and labour for crop, soil and animal husbandry.
- The organic farming system is much more diverse, mixed and less specialised which means that it is more complex to manage, for instance long rotations require growing several different crops. The greater range of enterprises inherent in mixed farming requires a correspondingly larger number of people and skills to fulfil a diversity of tasks.
- Organic farms tend to have smaller fields as well as a smaller scale of production. This not only enables farmers to grow a more diverse range of crops and livestock, but organic farmers avoid the large fields and the use of monocultures by crop rotations. Effective crop rotations help to build soil fertility naturally and, combined with habitats for natural predators, control pests and diseases without having to resort to synthetic pesticides.
- Small organic farms are more economically viable and support the highest number of jobs, compared to non-organic farming where smaller farms often struggle to survive. These organic farms, with an average of 36 hectares in the survey, commonly grow vegetables, soft fruit or orchards and employ 5.23 people per farm, compared to 3.08 jobs for organic farms overall.
- Organic farming encourages greater business innovation, particularly direct marketing and on-farm processing. These opportunities are created by the ethical approach of organic farmers which generates trust and connection between farmers and consumers of organic food. In addition, the mixed farming approach of organic farms means that they produce a wide range of products, ideal for box schemes, farmers' markets or farm shops.

Examples of the extra job opportunities provided by organic farming are detailed in Boxes 3 and 4.

Box 3 Natural fertility from clover

Instead of bringing synthetic nitrogen fertilisers onto the farm, organic farmers build soil fertility through nitrogen-fixing legumes like clover. The sun's energy fuels the growth of clover, providing food for livestock that, in turn, provide valuable nutrients to the soil in the form of biologically fixed nitrogen and manure for subsequent crops. This requires more skilled farm workers to manage field rotations and livestock as well as other fertility-building techniques like composting.

Box 4 Diverse systems and employment

Organic farming is based on diverse cropping and systems requiring additional labour. Because organic farms are less simplified and specialised towards fewer crops and livestock, they provide a wider range of jobs. 85% of the organic farms surveyed had livestock and 46% overall described themselves as mixed farms utilising rotations of livestock and cropping. This represents a much higher proportion than for non-organic farms, where mixed farming has been in decline for over 60 years. From being the majority of the UK's 500,000 farms at the end of the Second World War, non-organic 'mixed farms' declined to become the minority, standing at just 13,900 by 2003 (5% of total).⁴⁹ For Wales and Northern Ireland, the percentage is even lower, standing at 2% and 4% respectively.

⁴⁹ Defra (2004) *Agriculture in the United Kingdom 2003*. The Stationery Office



Encouraging on-farm processing, marketing and direct sales

Thirty nine per cent of the organic farms across the UK and Ireland were engaged in processing or direct marketing. Organic farms with processing and direct sales operations employed more (3.82 jobs per farm) than organic farms that did not (2.33 jobs), see Table B2 in Appendix B. Thirty seven per cent of organic farms were engaged in direct sales and marketing and 19% were engaged in processing which was spread across meat, dairy, cereal and fruit and vegetables.

Sixteen per cent of farms were engaged in both direct sales and processing. Direct sales were most commonly through farm shops or customer collection (58% of these farms), followed by farmers' markets and local shops (36%). A further 30% of farms doing direct sales were involved in box schemes or other mail order services. Box schemes and mail order are among the fastest growing areas of the organic market, with sales rising by over 50% in 2004 to £78 million.⁵⁰ Pick-your-own schemes accounted for just 1% of the farms involved.

Despite lack of government data on the split of agriculture and agriculture-related jobs, at least two recent studies have shown that organic farms do have more processing and direct sales activities than non-organic farms (see Chapter 2). Defra-funded research by the University of Exeter found that organic farms surveyed in England were three times more likely to be involved in direct or local marketing (39%), compared to non-organic farms (13%). Organic farms are also more likely to be involved in on-farm processing, marketing and retailing, building on the trust and connection between farmers and consumers of organic food. In an ADAS survey of 1,673 non-organic farmers and 98 organic farmers in 2004, only 19% of non-organic farmers were found to be likely to market directly in the near future, compared to 47% of organic farmers.

Positive impact of the smallest farms

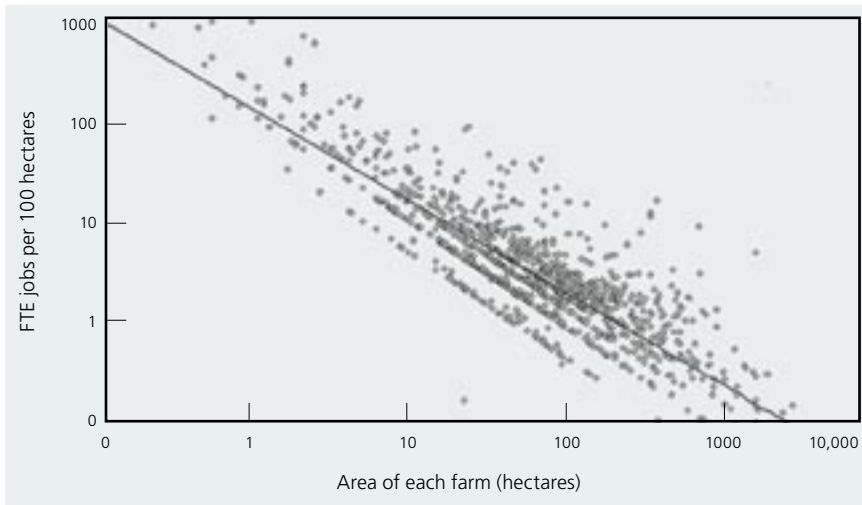
The University of Essex survey demonstrates that, in contrast to the trend on non-organic farms, small organic farms can be productive and provide jobs. In fact, the study found the smallest organic farms employ more people than any other type of farm with 5.23 jobs per farm – 70% more than organic farms overall (3.08 jobs). These farms were, on average, 36 ha and grew vegetables, soft fruit or had orchards. The researchers concluded that “very small organic farms employ considerably more people per unit area than larger farms”.

On average, UK organic farms were 129 ha in size⁵¹ (or 238 ha including the 40 very large farms). The largest proportion of organic farms surveyed in the UK were between 50 and 100 hectares in size (234 farms, or 23%). Less than 7% of the organic farms were under 5 hectares, although 30% (306 farms) fell within the 5 to 50 hectares category range. It should be noted that the survey of organic farms only covered certified farms, which indicates they are all commercial concerns. Figure 2 illustrates that there is a clear inverse relationship between the size of organic farms and the number of jobs per 100 ha – small organic farms have proportionately more labour per 100 ha than large farms. In contrast, small non-organic farms have faced a dramatic decline in the UK and a large proportion of small ‘holdings’ counted in the Government agricultural census are non-agricultural holdings. Remaining small farms are under pressure to amalgamate to increase their size and, inevitably, lose even more jobs to stay ‘viable’. Again, organic farms are bucking this downward trend and small organic farms and horticultural holdings are amongst the most vibrant, viable farm businesses and are actively contributing to job creation.

⁵⁰Williamson S and Cleeton J (2005) *Organic Market Report 2005*. Soil Association

⁵¹Source for average organic farm size figure: personal communication, University of Essex, March 2006. Figure not published in the Morison et al (2005) paper

Figure 2 Relationship between jobs per 100 hectares and farm size for surveyed organic farms in the UK and the Republic of Ireland, 2003



Source: Morison et al (2005). Line is fitted power regression, with reciprocal weighted values: $FTE \text{ per } 100 \text{ ha} = 115.55 \times \text{Area}^{-0.8647}$, $r^2 = 0.7691$.

Additional benefits for natural habitats and woodlands

The organic farms surveyed by the University of Essex also delivered extra environmental benefits through the maintenance of woodland and other habitats which accounted for 10% of land on organic farms in the UK and Ireland. Woodland or other non-farmed land covered a total of 6,000 hectares of woodland and 7,439 hectares of non-farmed habitat, averaging at 5.2 and 6.5 hectares per organic farm, respectively. These woodland areas are substantially higher than the areas on UK farms overall. On average, woodland accounted for 0.71 ha per holding in England, 4.7 ha in Scotland, 1.35 ha in Wales and 0.3 ha in Northern Ireland.⁵² Areas of natural habitat sustain populations of beneficial predatory insects and birds that contribute to the organic farming system. They also provide public goods and services by contributing to a living countryside.

⁵² Defra (2003) cited in Morison et al (2005)

4.2 The jobs dividend from organic farming

Calculations by the Soil Association based on the University of Essex survey, demonstrates that organic farming in the UK provides significantly more employment than non-organic farms, supporting 32% more jobs per farm. Organic farms provide 2.77 jobs per farm compared to 2.09 jobs on non-organic farms (Box 5 and Table 3). For the first time, this research provides a representative and 'like-with-like' comparison between organic and non-organic farms by only looking at commercially active holdings.

These figures are based on farms currently in organic production, adjusted to represent the balance of farm sizes nationally. Therefore, this new research provides the most representative and accurate comparison of employment on organic and non-organic farms in the UK. Without this weighting, farms currently in organic production provide almost 50% more jobs per farm and over 30% more jobs per hectare.



Findings

The Soil Association research overcomes the inherent difficulty in comparing the agricultural labour between farming systems by removing non-commercial farms from the agricultural census. The European Size Unit (ESU) is an official measure of a farm's economic size in terms of standard gross margins (i.e. profit). Therefore all holdings with very low economic activity, i.e. less than 4 ESUs, were removed from the 2003 agricultural census data. Data for the remaining commercially active non-organic farms were compared with the organic farms survey.

In addition, the Soil Association also used the same weighting methodology as the University of Essex in order to represent the balance of farm sizes nationally. For organic farms, the average jobs per farm for each size category was multiplied by the number of commercial non-organic farms (Table 4a). Using this weighting, organic farming provides 32% more jobs per farm than non-organic farming. The number of jobs on each organic farm is 2.77 compared to 2.09 for commercial non-organic farms.

Box 5 Key Soil Association findings on employment on UK organic farms

- Organic farming in the UK provides significantly more employment than non-organic farms, supporting 32% more jobs based on 2003 data (2.77 jobs per farm compared to 2.09). The figure is based on farms currently converted to organic, adjusted to make the figures representative of the balance of farm sizes nationally.
- If all farming in the UK became organic this would create 93,000 new jobs directly employed on farms.
- Without this adjustment, farms currently in organic production provide almost 50% more jobs per farm (3.08 jobs compared to 2.09 jobs).
- Farms currently in organic production also provide 31% more jobs per 100 hectares (2.49 jobs compared to 1.90 jobs on non-organic farms).
- This research compared the 1,018 farms in the University of Essex organic survey with 137,950 non-organic holdings from the agricultural census of the same year (2003). Only farms of 4 European Size Units and above were included to remove non-commercial holdings.

Table 3 Summary of Soil Association findings on employment on UK organic farms,

Study	Organic farms ¹	Commercial non-organic farms ²	Increased employment on organic farms
Number of farms	1,018	137,950	
Area farmed (hectares)	171,361	15,199,802	
Total people employed	N/A	394,526	
Total jobs (FTE)	3,135	288,612	
Jobs per farm (weighted) ³	2.77	2.09	32%
Jobs per farm (unweighted)	3.08	2.09	47%
Jobs per 100 hectares (unweighted)	2.49	1.90	31%

1. Survey conducted by University of Essex in 2003

2. Data for commercial non-organic farms is from the 2003 UK Agricultural Census, excluding holdings below 4 ESUs

3. Weighted figures are adjusted to be representative of the balance of farm sizes nationally.

Without this adjustment for the national balance of farm sizes, the employment for each organic farm remains significantly higher, at 47%. Farms currently converted to organic production in the UK provide 3.08 full time jobs per farm compared to 2.09 jobs for non-organic farms. In terms of jobs per unit area, organic farms provide 31% more jobs per 100 hectares, with 2.49 jobs compared to 1.90 jobs on non-organic farms.

Methodology – comparing like with like

The University of Essex research acknowledged that the official Government statistics for total agricultural holdings actually include a large number of non-commercial or non-agricultural smallholdings, such as people with goats in their backyard or hobby farmers.⁵³ The organic survey only included farms which were certified organic and, therefore, commercially active. These differences are highlighted in the agricultural census data which shows that 32% of total UK holdings were below 5 hectares compared to just 7% in the organic farm survey. ESUs offer the most effective available indicator of a farm's commercial activity, compared to physical measures like farm size which take no account of the intensity of production.

Defra classifies the level of 8 ESUs as the minimum for full-time holdings. However, removing all farms under 8 ESU may act in excluding some small, yet economically active holdings. Therefore, to minimise the risk of 'setting the bar too high', the Soil Association chose 4 ESUs as the threshold for commercially active holdings. Removing holdings below 4 ESUs makes possible a more realistic

Table 4a Weighting organic farms to represent the balance of farm sizes nationally.

Farm size (hectares)	Organic farms – number	Organic farms – jobs per farm	Commercial non-organic farms – number	Total jobs if all farming was organic
Under 2	28	2.34	3,988	9,332
2 – <5	36	3.17	4,000	12,680
5 – <10	51	1.81	5,761	10,427
10 – <20	74	2.06	13,830	28,490
20 – <30	66	2.27	13,631	30,942
30 – <40	56	2.26	11,911	26,919
40 – <50	59	2.82	10,533	29,703
50 – <100	234	2.61	33,912	88,510
100 – <200	180	2.88	24,643	70,972
200 – <300	72	3.67	7,510	27,562
300 – <500	68	6.24	4,856	30,301
500 and over	94	4.78	3,375	16,133
Total	1,018	3.08	137,950	381,971

Source: Organic farm data from the University of Essex, 2005. Data for commercial non-organic farms was from the 2003 Agricultural Census, collected from Department for Environment, Food and Rural Affairs, Welsh Assembly Government, Scottish Executive Environment and Rural Affairs Department and the Department of Agriculture and Rural Development, Northern Ireland.

⁵³ Defra acknowledges that an increasing number of inactive farms are included in the Agricultural Census, for instance holdings which are no longer farming but have retained their land and Defra holding number. http://www.defra.gov.uk/esg/work_html/publications/cs/farmstats_web/Census/q_and_as.htm#q13

comparison between organic and non-organic farms by removing any potential bias resulting from the high proportion of non-commercial smallholdings in the agricultural census. A detailed methodology can be found in Appendix A.

Removing holdings below 4 ESU reduced the total number of UK holdings by 55% from 304,833 to 137,950 (Table 5). Significantly, there was a much smaller reduction in the farmed area, which fell by just 12% from 17,230,476 ha to 15,199,802 ha in 2003. This confirms that a large number of economically inactive holdings are making a relatively small contribution to farming output. A detailed comparison of the jobs on total holdings and commercial holdings can be found in Appendix B.

In common with the University of Essex research, these figures excluded the 40 very large organic farms that are likely to have moved out of organic production since the survey took place. Including these 40 farms, organic jobs per 100 ha falls to 1.30, 38% less than non-organic farming.

If all farming was organic

Organic farming currently represents 4% of farmland in the UK. If all UK farming converted to organic production, this would create an estimated 93,000 more on-farm jobs (Table 4b). There would be over 381,000 jobs compared to 288,000 in 2003. This is almost 16 times more people than were employed by the Rover car company when it closed in April 2005 (Box 6). If organic farming was to increase to just 30% of total farmland there would be an increase of 28,000 jobs – a 10% increase in employment on farms.

The figure of 93,000 jobs is nearly ten times the number of jobs lost as a result of the closure of rural post offices over the last 15 years. Rural shops and services have also declined at the same time as the agricultural sector. For example, the number of post offices in rural areas fell by 31% between 1990 to 2005, from 11,600⁵⁴ to 8,037.⁵⁵ The Soil Association estimates that these closures resulted in the loss of just under 10,000 full time equivalent jobs in rural areas.⁵⁶

Box 6 What if the whole UK went organic?

Widespread conversion to organic farming in the UK would result in an estimated 93,000 more jobs on farms alone – an increase of 32%. There would be over 381,000 jobs compared to 288,000 in 2003. This represents:

- Nearly ten times the number of jobs lost from rural post offices over the last 15 years.
- Sixteen times more jobs than the 6,000 people made redundant following the closure of the Rover car company.⁵⁷
- Around two-thirds of the total 145,000 workforce of Asda supermarkets in the UK.
- Nearly half the 220,000 people employed in Tesco stores in the UK.
- Over one and a half times more than the 59,000 people employed by Somerfield in the UK.

⁵⁴Personal communication, National Federation of Subpostmasters, March 2006

⁵⁵Postcomm (2005) *Postcomm's Fifth Annual Report on the network of Post Offices 2004-2005*. Postcomm, London

⁵⁶This figure is based on research by the National Federation of SubPostmasters which indicates that SubPostmasters, who account for 97% of post offices, employ an average of 4.6 staff, 17% of which are full time. Therefore the Soil Association calculated that a total of 19,390 staff were lost from the 3,563 rural post offices that closed during this period. This is equivalent to 9,588 full time jobs, assuming that 2,786 (17%) total staff were full time and the remaining 13,604 staff were part time which we assume are equivalent to half a full time job each. This is likely to be a generous estimate of the number of jobs lost in rural post offices since these tend to employ less staff than the national average. Source: National Federation of SubPostmasters (2004) *Consultation on the National Minimum Wage 2004. Response to the Low Pay Commission from the National Federation of SubPostmasters*

⁵⁷The collapse of the Rover car company in April 2005 saw the loss of 6,000 jobs. This resulted in the closure of the firm's site in Longbridge, Birmingham and left it with debts of £1.4bn

In addition to these people directly employed on farms in agricultural jobs and, to a lesser extent marketing and processing, more job opportunities would be created beyond the farm. For example, additional off-farm jobs may be created in retailing, catering, food processing and distribution.

Table 4b Effect of converting all commercial UK farms to organic

	Total jobs (FTE)	Increase in jobs	% increase
Commercial non-organic holdings	288,612		
Number of jobs if 100% organic	381,971	93,359	32%
Number of jobs if 30% organic	316,620	28,008	10%

Based on data for commercial UK farms (4 ESUs and above) in 2003.

Table 5 Effect of removing non-commercial holdings from agricultural census data, 2003

	Total UK holdings	Commercial holdings only (4 ESU and over)	Change
Holdings	304,833	137,950	-55%
Area farmed (hectares)	17,230,476	15,199,802	-12%
Total labour	532,791	394,526	-26%
Total jobs (full time equivalent)	365,821	288,612	-21%
FTE/holding	1.20	2.09	74%
FTE/100ha	2.12	1.90	-11%

Source: 2003 Agricultural Census.

Sheepdrove Organic Farm, Lambourne, Berkshire

Business innovation inspired by organic principles

Sheepdrove is a mixed organic farm of 910 hectares set high up in the Berkshire Downs. Owned by Peter and Juliet Kindersley, it has 2,000 sheep, over 400 cattle, as well as 23,000 poultry and 450 pigs along with a range of arable crops. They have a long-term vision of a truly sustainable farm – one that not only supports wildlife and animal welfare, but economic and social sustainability too.

Sheepdrove demonstrates what can be achieved by just one farm if there is the inspiration and consumer demand – and organic farming provides both. The incredible amount of employment generated by the farm – 55 staff, 34 of which are full time – is testimony to Sheepdrove's commitment to making a success of farming organically. The farm has its own certified organic abattoir and meat cutting plant on site, something virtually unheard of in the UK. "Sheepdrove is one of the biggest employers in the village, probably second only to the racing stables", says Peter Kindersley, the farm's co-owner. Both farming and processing at Sheepdrove are extremely labour-intensive activities and there are 10 full time and three part time agricultural workers. "This number would probably be more like five if the farm was conventionally managed", explains Peter. "We need much more intensive labour to farm organically."

"I decided to make the switch to organic because I got fed up with the monotony of intensive pig farming", he says."

Ben, Sheepdrove Organic Farm

Rearing livestock organically requires more labour because its demands on animal husbandry are greater. Gez, the Poultry Enterprise Manager, previously spent 17 years working with intensive broiler chickens in Warwickshire. "At the moment I manage three other people to look after 23,000 chickens, but before it was just me and a flock of 100,000", he explains. Producing chickens organically at Sheepdrove therefore requires around 16 times more labour per bird than non-organic systems. Ben started managing the pig enterprise at Sheepdrove after two decades working on non-organic farms around Europe. "I was sick of injecting pigs all my life and I wanted the challenge of not being constantly reliant on medication", he says. "Here the pigs are moved around a lot less, and when I do move them, I keep them in their family groups which reduces stress." The processing plant employs 16 full time and 14 part time staff, with an extra 10 full time staff in the run-up to Christmas. Five full time and three part time staff make up the sales and marketing team, including customer services staff who take orders from shops, butchers, restaurants and individuals across the country. The rest of the staff is made up of a diverse group of people – conservation officers, gardeners, accountants and a cook. In addition to these 55 jobs, Sheepdrove's own organic butchers shop in Bristol employs three full time staff. It sells meat direct from the farm and is the only organic butchers in the city. The Kindersley Centre offers conference facilities on the farm and employs a further five full time and three part time staff.

Not only has going organic boosted the quantity of jobs, but the quality of employment has been enhanced too. Many staff prefer the organic way since it offers greater challenges and job satisfaction compared to previous non-organic careers. The farm is committed to staff development and they know that training is essential to the demanding job of farming organically. "My average employee has certificates in poultry welfare and handling, hazard analysis, food safety and hygiene, manual handling, forklift driving and first aid", says Martyn Smith, Processing Director at Sheepdrove. Managing the small plant is certainly a big change for Martyn. "I used to work in a conventional slaughterhouse which slaughtered 320,000 birds a week", he explains. "The line ran at 144 birds per minute. Here it's only 15 birds per minute which is much kinder to the birds." The on-farm plant also means that animal welfare is greatly enhanced because the birds are not transported miles to a distant slaughterhouse. Gez enjoys a more challenging, hands-on job. "Before, I wasn't looking after animals, I was button-pressing", he says. "Here, I can walk in and know immediately if something is not right because I spend more time with fewer birds."

Despite their range of backgrounds, the staff have a shared commitment to the environment and good food. Hayley, the Sales and Marketing Manager, describes working for such an innovative business as central to her job's appeal: "Being part of a such a visionary and successful enterprise is amazing."

- 34 full time staff on the farm, processing and marketing
- 11 part time staff
- Three full time staff employed in butchers shop in Bristol
- 910 hectares of livestock and cereal crops
- On-farm abattoir, processing plant and direct sales

www.sheepdrove.com



5. The importance of agricultural employment

“...if that link between the farming communities and their land which has been built up over generations is severed, we will have lost something precious, which cannot be reinvented.”

HRH Prince Charles, speaking during the foot and mouth crisis in 2001

The dominant model of agricultural economics holds that labour is a fixed cost that needs to be reduced as much as possible. This fails to account for the range of benefits from jobs in farming that do not show up on an individual farm business's balance sheet. Farms make a significant contribution to the national and regional economy, community cohesion, social stability and cultural identity. Reversing the decline in the numbers of people working on farms will mark a reversal in the social and economic decline of many rural communities.

5.1 The national and regional economy

“In Cornwall, £500 million per year is spent on food. Seventy five per cent of that is imported from outside Cornwall. If we reduce that by just one per cent, we have invested £5 million in our local economy.” Roger Thompson, Business in the Community in Cornwall.⁵⁸

On the surface, agriculture may appear to make a small impact on the national economy. In crude terms of economic output, agriculture made up just 3% of the UK's Gross Domestic Product (GDP) 30 years ago. By 1998 this had reduced to 1%, dwindling to a mere 0.7% by 2002.⁵⁹ However, this ignores the wider, indirect economic impacts of farming, including the ‘local economic multiplier’ effect.

The wider food industry, including food processing and retailing, accounts for 14% of total GDP. Farmers produce much of the raw material that our food industry, and economic sectors such as tourism, rely upon - the appeal of the British countryside. Tourism is one of the largest industries in the UK, accounting for 3.5% of the UK economy in 2003.⁶⁰ Tourism provides over 1.4 million jobs in the UK, 5% of all people in employment in the UK in 2004.⁶¹

Shifting jobs from rural farms to urban factories is seen by economists as simply relocating labour to where it can be used most efficiently. But looking only at the impact on farming of replacing agricultural labour with intensive farming practices ignores the fact that jobs on farms have a significant, indirect effect on local economies and employment. This impact, known as the ‘multiplier effect’, helps to generate and sustain additional jobs beyond the farm. For example, farms rely on local businesses for supplies and the income for farm workers is spent locally, generating further income in the local community. Without this interaction between local employment, farms and rural economies, income can be ‘leaked’ and is lost from local communities.

Plugging the Leaks, a study by the New Economics Foundation (NEF), found that £10 spent on a local organic box scheme in Cornwall generated £25 for the local economy, a multiplier of 2.5.⁶² In comparison, the benefits for the local economy



were vastly reduced, at just £14, if the equivalent amount was spent on food in a supermarket. "The organic box scheme spent significantly more money locally than the supermarket and ... this extra income to the area was then reinvested many times over by the other people who received it in the area."

Eighty per cent of the money spent on food in a supermarket goes on processing, transportation, packaging, advertising and other marketing services. NEF's research suggested that if every person, tourist and business switched only 1% of their current spending to local goods and services, an additional £52 million would be put into the local economy annually.

A study in 2000 of farms in West Lancashire calculated that for every £1m of agricultural output, there was a corresponding increased output of £0.45m in other local industries.⁶³ The same study showed a similar employment multiplier of 1.5, so for every 100 agricultural jobs, 50 other local jobs are created and sustained in other sectors.

Rural areas do not offer such a diverse range of employment as towns and cities, so for many remote rural areas, family farms still provide the only employment and consistent source of income for service providers, keeping an area economically active. For example, parts of Cumbria and Northumberland, Devon and Cornwall remain highly dependent on farming for employment, with agriculture accounting for up to 30% of the workforce. When farm jobs go, there is far less, if any, opportunity for those without jobs to find alternative work in their area. Consequently costs to the taxpayer rise as former agricultural workers are forced to rely on social security payments.

The University of Essex survey for the Soil Association found that organic farms involved in on-farm processing and direct marketing enterprises employed 64% more people than organic farms without such activities. With a significant proportion (39%) of organic farms engaged in this type of business innovation, organic farmers are at the vanguard of revitalising local and regional food economies.

5.2 Community cohesion

The intensification of agriculture and the loss of jobs on farms also has devastating consequences for community cohesion. In the 1950s, researcher Walter Goldschmidt compared areas in California's San Joaquin Valley dominated by large corporate farms with those where smaller family farms prevailed. In towns surrounded by family farms Goldschmidt identified stronger social fabric, greater community coherence and civic participation. Income circulated among local business establishments, generating jobs and community prosperity. In contrast, there was a general decline in social capital and local employment in communities dominated by large-scale industrial agriculture. Studies updating Goldschmidt's original work in the 1970s, 1988 and most recently in 1996, confirm that his findings remain true today.⁶⁴

Similar negative trends are apparent in the UK, as a diverse network of mixed, smaller farms is displaced by fewer, larger commodity producers. As a result, many rural areas no longer have the population densities to support local services. For example, four out of ten parishes in rural England have no shop or post office, six out of ten have no primary school and three-quarters lack a bus service or health clinic.⁶⁵

⁵⁸ Anna Ross, 'How going organic needn't cost the earth', *Western Morning News*, 29 February 2000

⁵⁹ Defra (2005) *Agriculture in the United Kingdom 2004*. The Stationery Office

⁶⁰ Total spending on tourism was approximately £74.2 billion in 2003. Calculation by VisitBritain based on Government statistics. <http://www.tourismtrade.org.uk/MarketIntelligenceResearch/KeyTourismFacts.asp>

⁶¹ National Statistics (2005) *Labour Market Trends*. November 2005

⁶² Ward N and Lewis J (2002) *Plugging the Leaks. Making the most of every pound that enters your local economy*. New Economics Foundation

⁶³ LAWTEC, May 2000 'The Economic Impact of Agriculture & Horticulture in West Lancashire District'

⁶⁴ Fujimoto I (1977) *The Communities of the San Joaquin Valley: The Relationship between Scale of Farming, Water Use, and the Quality of Life*. Testimony before the House Subcommittee on Family Farms, Rural Development, and Social Studies, Sacramento, CA, October 28, 1977; MacCannell, Dean (1996) 'Industrial agriculture and rural community degradation', in Swanson L E (ed), *Agriculture and Community Change in the U.S.: The Congressional Research Reports*. pp 15-75, Boulder: Westview Press; Durrenberger E P and Kendall M (1996) 'The Expansion of Large-Scale Hog Farming in Iowa: The Applicability of Goldschmidt's Findings Fifty Years Later', *Human Organization*, 55 (4), pp 409-415

⁶⁵ Hird V (2000) 'A Battle in Store? a discussion of the social impact on the major UK supermarkets', *Sustain*; National Federation of Women's Institutes (1999) *The Changing Village*

5.3 Social stability

This erosion of the essential services and infrastructure of rural society is a direct result of the loss of agricultural workers and their families. A negative spiral sets in, as the numbers of jobs and people decline, so those people remaining have less access to the services and infrastructure that gives communities cohesion and stability. Low-employment, low-income rural areas fall prey to the same social problems as many urban areas, including high levels of chronic unemployment, crime and drug abuse. Government social policy is directed at supporting and encouraging social stability to reduce anti-social behaviour and build community cohesion. Supporting farming systems that generate and sustain rural employment would be a productive way of implementing this policy.

A large long-term US study of the children of farming families in Iowa found strong evidence that children raised on farms had certain advantages that would be of benefit to their community.⁶⁶ The researchers found that, overall, young people with ties to the land performed better at college, were more likely to be involved in paid work and civic organisations, and be confident and 'less likely to get into trouble'. That exactly fulfils the aspirations of the Government's policies on citizenship and family. Studies in the UK confirm the findings of US research, that farms offer strong foundations for encouraging education and attainment for their children. For example, 80% of people aged 25 to 34 raised on farms had further education qualifications, compared to the national average of 38% in 1993.⁶⁷

5.4 Distinctive cultural identity

As the previous section shows, farm employment sustains families which build community cohesion and social stability. The continued maintenance of communities over generations in a particular place provides additional benefits for society that cannot easily be quantified, including a culture, identity, character and sense of place. The traditional ways in which farmers interact with the land, their livestock and local community have helped form many of the characteristic features of British rural life as well as the landscapes which are of such value to the tourism industry and for wildlife conservation.

Studies by anthropologist John Gray of the hill farming communities in the England-Scotland borders show how these farmers have created a 'sense of place' around how they live on their farms.⁶⁸ Gray reveals a specific culture and way of life based on the lived experience of family farming, "... the family farm is more a way of being-in-the-world".⁶⁹ Increasingly, people in urban and rural areas are recognising the benefits of having a sense of place and intimate knowledge of locality. These modern values are not romantic notions of beautiful landscapes

⁶⁶Elder G H and Conger R (2000) *Children of the Land: Adversity and Success in Rural America*. University of Chicago Press

⁶⁷DfES, Autumn 1993 statistics, based on Quarterly Labour Force Survey. NatWest (1992) *The NatWest National Farm Survey: Summary Report and Tables*. National Westminster Bank, Agricultural Office; M. Warren (1989) *Farming change in Devon and Cornwall. The Implications for Training and Advice*. Polytechnic South West Seale-Hayne, Faculty of Agriculture, Food and Land Use, Newton Abbot

⁶⁸Gray J N (2000). *At home in the Hills: sense of place in the Scottish Borders*. Oxford, Berghahn

⁶⁹Gray J N (1998) 'Family farms in the Scottish Borders: a practical definition by sheep farmers', *Journal of Rural Studies*, 14 (3), pp 341-356

Box 7 Organic consumers value farm workers

New research demonstrates that consumers value the role of the organic farmers and farm workers:

- When buying organic food, 71% of consumers expect that the farm workers who produced it should have decent pay and conditions
- 79% of consumers believe that it is in keeping with organic values for farmers to be paid a fair price and treated fairly.

Source: Market Tools, zOmnibus UK, March 2006
Sample of 1,000 weighted to reflect the general UK population

linked to nostalgic ideas about traditional rural life, but values that identify with good quality, locally produced food for which there is a growing market.

5.5 Jobs for migrant workers – extending employment across the European Union

The devaluation of agricultural jobs in the UK has driven 78% of farm workers from the land in the last half a century alone. This creates a vicious circle, with younger people increasingly displaced into the cities leaving a smaller pool of new, appropriately skilled people in rural areas to fill the positions needed to keep the remaining farms viable. It could be said that this trend is at odds with the more labour intensive approach of organic agriculture but, in fact, the additional job opportunities created by organic farming are helping to address wider employment needs across the European Union. To fill the gap, many UK farms are employing workers from abroad, particularly Eastern Europe. Home Office statistics show that 36,600 applications (12%) for the Worker Register Scheme between May 2004 and September 2005 were for agricultural jobs.⁷⁰

It is nonetheless concerning that many people in the UK are reluctant to do the physically demanding, all-weather jobs that agricultural work often involves. Many farms, organic and non-organic, find it difficult to recruit skilled farm workers from the UK. For example, it took Tanlawhill Organic Farm in Scotland 18 months to recruit a shepherd. Following dozens of unsuitable candidates, mainly of retirement age, they employed a local 26 year-old who was keen to pursue a farming career (see case study, page 44).

The decline of skilled workers extends beyond farming jobs to other food-related occupations on the farm. River Nene Organic Vegetables, a box scheme near Peterborough, employs a mix of local and foreign migrant labour. “We initially looked to employ all local people to pack our boxes, but found it difficult to recruit the number of people with the skills and enthusiasm”, explains Rob Haward, River Nene general manager. “Our Eastern European staff are well educated, enthusiastic and a joy to have on the team.”

The disenchantment of younger people in the UK with farming is symptomatic of the way in which the industrialisation of agriculture has made farms less diverse and the jobs they support less fulfilling. If, as this report recommends, the wider economic and social benefits of agricultural jobs are re-evaluated, then this could revive the status of farming as a career. The younger average age of organic farmers and farm workers highlighted in this report indicates that the organic approach, characterised by smaller, mixed farms, can lead this revival.

⁷⁰ *Farmers Guardian*, ‘Farmers look east for staff’, 10 February 2006



Tanlawhill Farm, Langholm, Dumfries and Galloway

A livestock farm providing a rare source of employment in an upland area

Ken and Lara Porter run Tanlawhill Farm, a 1,350 hectare upland hill estate spread out amongst forests and Iron Age hill circles and mounds. The Porters have 110 Aberdeen Angus cattle and over 2,000 sheep that are sold as stores for finishing direct to farmers through an agent. They made the move to Dumfries in 2001 to oversee the farm's conversion to organic having previously managed the conversion of a farm in Cumbria.

Tanlawhill employs more people than any other farm in the valley where it is rare to employ non-family labour. Tanlawhill employs two full time staff and three part time staff, including Ken, who manages the farm full time and Lara who works part time. The farm is in an area with very few local employment opportunities and it is relatively isolated being located half an hour from Lockerbie and 15 minutes from Langholm, the nearest town. "Langholm has a good community feel – there are lots of education initiatives, clubs and events, but jobs are scarce", says Lara. "Lockerbie is larger but with less of a community and jobs are still difficult to find."

"I find organic farming more interesting. I've also got two young children and I'm glad they're not growing up in fields sprayed with chemicals."

Ken Porter, Tanlawhill Farm

The organic status of the farm clearly contributes to its role as rare source of local employment. Unusually for the area, Tanlawhill employs both a full time and part time shepherd, a position which reflects the higher labour requirements of maintaining a flock organically. It took Ken and Lara 18 months to recruit their new full time shepherd, David, aged 26, who now lives on the farm. A farm worker also works for Tanlawhill four days a week and employment is generated beyond the farm by using contractors for ploughing and making silage.

In contrast to the ageing UK farming population, it is particularly encouraging that the farm is providing job opportunities for younger people. Unusually for a farm, two of its five staff are under 30. In addition to David, Lara is aged 29 and has been farming organically since she was 19. Ken is 37 years old, 12 years younger than the average age of organic farmers in the UK. The Porters have been active in the local community and helped to set up and run the Dumfries and Galloway Organic Network and Caledonian Organics, which brought local organic producers together to share knowledge and marketing opportunities.

The Porters are firm believers in the benefits of farming organically and supplying locally. Lara says “the overall feeling is that people want organic and local. They want local schools to be eating local produce.” However the market and infrastructure for organic produce are still undeveloped in this area of the UK and the Porters hope that this will start to change. It is a testament to the farm’s success that it supports a family of four and three other employees without any on-farm marketing or processing enterprises. “Farming organically has made sense to me for a long time”, says Ken Porter. But converting to organic is more than a philosophical choice – it also makes economic sense and has encouraged everyone on the farm to expand their skills and education. Ken enjoys the challenge of maintaining healthy grassland and the more complex stockmanship he now practises. “I find it more interesting”, he says, “there’s more reading, more training, we get together with other organic farmers. I’ve also got two young children and I’m glad they’re not growing up in fields sprayed with chemicals.”

In addition to working on the farm part-time, Lara is training for a post-graduate diploma in organic farming. She believes that the financial incentives for organic farming in Scotland will support an expansion of employment on organic farms, “some of the people on my course at the Scottish Agricultural College in Aberdeen are on it for the job prospects. They see it as a widening opportunity.” In her view, regional efforts to get young people into farming have got their emphasis wrong, “Many agricultural training bodies have got funding for training young farmers, but the money is for management training, not teaching the practical stockmanship skills young people actually need. In Cumbria there’s the Young Shepherds’ Initiative – I’d like to see that here.”

- Two full time and three part time staff
- Run by young farmers – two staff are under 30
- 1,350 hectare upland beef and sheep farm
- Building networks with local organic farmers

Dumfries and Galloway Organic Network www.dg-organic.net



6. Sustaining livelihoods and food security globally

“The driving notion of the West – that farm labour should be reduced as closely as possible to zero – is in all ways madness; all except for the fact that in the immediate term, it is profitable. But as a long-term solution to all the world’s problems, it is clearly nonsensical.”

Colin Tudge, *So Shall We Reap*

In developing countries, the model of industrial agriculture promoted by developed nations is totally inappropriate and should be abandoned. Around 60% of the populations of these countries are subsistence farmers. The large-scale replacement of their labour and livelihoods with agrochemicals and machinery would cause the breakdown of communities, mass migration and urbanisation on a large scale. At worst, this would catastrophically increase global poverty and food insecurity; at best, it would cause a large increase in unsustainable lifestyles with a huge increase in greenhouse gas emissions.

6.1 The global perspective – agriculture as the dominant livelihood

Whilst agricultural employment has long been in decline in the UK and other industrialised countries, in the developing world agriculture is still the main occupation and livelihood for billions of people. According to Oxfam some 96% of the world’s farmers are based in the developing world, with agriculture still providing the main source of income and employment for 2.5 billion people – nearly three-quarters of the overall workforce in the less developed countries.⁷¹ This adds up to 600 million people working on the land in India and 400 million in Africa – including, for example, 90% of the people of Rwanda.⁷²

Displacing people from rural areas to the urban shanty towns which surround many cities in the developing world would be catastrophic, and would derail the efforts of the international community and NGOs to ‘make poverty history’. UN statistics already predict that by 2050 there will be more people living in the world’s cities than currently live on the planet in total. Replicating the system of intensive and industrial food production dominant in developed countries will simply increase the numbers of dispossessed poor and hungry people.

6.2 Why intensive agriculture is the wrong development model

Western governments and institutions are promoting to the developing world the very same system of farming that has accelerated the exodus from the land in their own countries. As well as destroying agricultural jobs, the focus on developing countries producing intensive cash crops for export means that less land is available to feed their own populations.

The UK Government recently offered a £65 million aid package to ‘modernise’ the Indian state of Andhra Pradesh’s agriculture. This money was to be used to



introduce a package of technological 'improvements' from more machinery and chemicals to the latest in crop biotechnology. It would also have meant a major restructuring and amalgamating of the existing small family farm units, resulting in an estimated 20 million people being forced off the land. Protests by Indian and international development groups have stalled the project to date.

6.3 Sustaining livelihoods and food security

It is completely irresponsible to encourage countries, particularly developing nations, to adopt intensive farming practises that are highly reliant on the world's dwindling fossil fuel resources. The Food and Agriculture Organization (FAO) of the United Nations recognises that organic farming can increase yields and reduce the risk of crop failure during droughts in developing countries (see Box 8). According to the FAO:

"... when labour is not a constraint organic agriculture can benefit underemployed labour in rural communities."⁷³

"In rain-fed systems, organic agriculture has [been] demonstrated to outperform conventional agricultural systems under environmental stress conditions. Under the right circumstances, the market returns from organic agriculture can potentially contribute to local food security by increasing family incomes."⁷⁴

A shift to more sustainable, low-input farming will, at some point, become inevitable as oil reserves continue to dwindle. This inevitable change will require more people with relevant skills to work on farms to manage the transition. Therefore a skilled agricultural workforce will be vital to ensuring food security.

Box 8 Organic farming delivers benefits for the developing world

Organic farming can deliver a range of economic benefits to rural communities in the developing world. This includes increasing yields, improving food security and reducing dependence on expensive agrochemicals that can damage the environment and human health. These benefits are recognised by the Food and Agriculture Organization of the United Nations:

"In many developing countries, organic agriculture is adopted as a method to improve household food security or to achieve a reduction of input costs."

- **Local food security**

"In market-marginalized areas, organic farmers can increase food production by managing local resources without having to rely on external inputs or food distribution systems over which they have little control and/or access."

- **Drought resistance**

"Organic farms grow a variety of crops and livestock in order to optimize competition for nutrients and space between species: this results in less chance of low production or yield failure in all of these simultaneously. This can have an important impact on local food security and resilience."

- **Yields**

"In traditional rain-fed agriculture (with low-input external inputs), organic agriculture has the potential to increase yields ... These yield advantages have been attributed to more efficient use of nutrients, water and light and a combination of other factors such as the introduction of new regenerative elements into the farm (e.g. legumes) and fewer losses to pests and diseases."

- **Reduced dependence on agrochemicals**

"Reduction in the use of toxic synthetic pesticides, which the World Health Organization (WHO) estimates to poison three million people each year, should lead to improved health of farm families."

Source: Food and Agriculture Organization of the United Nations, see footnotes 73 and 74 .

⁷¹ Oxfam Briefing (2003) *Boxing Match in agricultural trade. Will WTO negotiations knock out the world's poorest farmers?* Oxfam Briefing paper 32

⁷² Colin Tudge (2005) *Can Organic Farming Feed the World?* Lady Eve Balfour Memorial lecture, 12 July 2005

⁷³ Food and Agriculture Organisation of the United Nations (1999) *Organic Agriculture*. Item 8 of the Provisional Agenda, Fifteenth Session, Committee on Agriculture. <http://www.fao.org/docrep/meeting/X0075e.htm>

⁷⁴ Food and Agriculture Organization of the United Nations (2006) *Frequently asked questions on organic agriculture*. <http://www.fao.org/organicag/fram11-e.htm>

6.4 The imperative of finite oil stocks

Non-organic agriculture's dependency on high inputs of oil is increasingly unsustainable in the face of the twin pressures of climate change and dwindling oil reserves. Geologists believe that global stocks of oil and natural gas are running out faster than anticipated:

"The world's oil reserves are up to 80 percent less than predicted, a team from Sweden's University of Uppsala says... Oil production levels will hit their maximum soon after 2010 with gas supplies peaking not long afterwards, the Swedish geologists say... Professor Alekett said that his team had examined data on oil and gas reserves from all over the world and we were 'facing a very critical situation globally.'"⁷⁵

6.5 National food security based on national food production

The UK's self-sufficiency in indigenous food crops and livestock has dropped from over 80% in 1997 to just over 70% presently. For all foods, self-sufficiency has gone from just under 70% to just over 60%. But our Government does not see this as an issue of strategic concern, claiming in 2003 that: "National food security is neither necessary nor is it desirable."⁷⁶ Many, including the Government's Sustainable Development Commission (SDC) disagree. The SDC emphasise that encouraging and sustaining the diversity of our food production system would increase our resilience to withstand the shocks and challenges posed by global instability:

"the need for resilience to potential risks from climate change, global resource (e.g. oil) disruption, transport breakdowns etc. Increases in local sourcing and distinctiveness are seen as cultural benefits; shorter supply chains as a way to cut costs. None of them are recognised as prudent ways to increase security through diversity."⁷⁷

Higher oil prices will mean that importing large amounts of food will become increasingly unviable, both economically and sustainably. For example, the 'food miles' clocked up by produce such as apples, butter and lamb from New Zealand, green beans flown in from Kenya, and beef from Argentina that competes directly with UK foodstuffs in season. UK farmers will need to increase their production to repatriate the food trade gap, but with sustainable, low carbon systems.

During the Second World War, our food security was severely compromised by the German U-boat blockade of our oil and food imports. Much of the latter came from former colonies on which Britain had become dependent for a significant proportion of its staple foodstuffs. What enabled the country to survive was that, despite the agricultural sector being neglected, an existing structure of predominantly mixed farms had survived. These farms continued to produce a range of crops to fulfil some domestic demand, and sustaining a considerable workforce. When necessity demanded, these farms and their labour force were able to gear up production, utilising the banks of fertility stored under fallow grassland to grow cereals.

At the end of the War, the politicians resolved to support agriculture as a vital industry. But successive governments failed to recognise that it was the diversity of individual mixed farms with their range of enterprises, and a body of the people with the skills to manage them, that had provided the fertile foundations

⁷⁵ 'World oil and gas running out', *CNN News*, 2 October 2003

⁷⁶ DEFRA (July 2003) cited in Commons Hansard Debates, 19 Jan 2005 <http://www.publications.parliament.uk/pa/cm200405/cmhansrd/cm050119/debtext/50119-20.htm>

⁷⁷ Sustainable Development Commission (2002) *From Vision to Action - SDC's perspective on the work of the Curry Commission*. Sustainable Development Commission

from which to gear up production. Instead, policy makers set farmers on a path of intensification and specialisation to their and the nation's long-term detriment.

Sixty years on, modern organic farming is recognised as the 'gold standard' for sustainable food production.⁷⁸ Its proven capacity to create more employment and many other economic, social and environmental benefits should make it a priority for Government support. Organic farming and the jobs it provides are crucial to achieving affordable, long-term food security both in the UK and developing countries.

The Government has already signed up to such an objective in principle through Chapter 14 of Agenda 21, the declaration drawn up at the 1992 Earth Summit in Rio, which called for "Agricultural policy review, planning and integrated programming [to be carried out] in the light of the multifunctional aspects of agriculture, particularly with regard to food security and sustainable development."

The organic farming revolution in Ethiopia

Agrochemical-based intensive farming operating on an industrial scale to produce cash crops for export is claimed to be the only model that can lift poor countries out of poverty and provide them with the money to build infrastructure and feed their populations. Yet Ethiopia, a country synonymous with hunger and poverty, is turning away from high-input intensive agriculture to develop farming systems based on traditional and organic methods.

Successive Ethiopian governments have set national programmes to maximise cash crops for export, basing the production targets on optimistic yields from heavy inputs of fertiliser and pesticides. However, much of Ethiopia's fertile land is in the highlands, whose small, dispersed, sloping fields don't lend themselves to routine applications of agrochemicals. With 81% of Ethiopians still living on less than \$1 a day and the average income standing at under £65 per annum, few farmers have any capital to invest in costly off-farm inputs, even with Government credit schemes and subsidised prices for fertilisers. When the world market price for maize, the main crop targeted for increased production, collapsed, Ethiopia's hoped for additional export earnings crashed with it. The legacy of a food production policy based on inappropriate technologies and expensive inputs to grow cash crops for unstable world markets has been to leave Ethiopia with the largest stockpile of redundant pesticides in Africa, amounting to some 3,000 tonnes.

In 2005, Dr Tewolde Berhan Gebe Egziabher, Director-General of the Environmental Protection Authority for Ethiopia, declared that "Organic farming is the way forward for Ethiopia". In 1996 he initiated Project Tigray to demonstrate that food security would be better attained by working at the local, regional level, building on farmers' traditional knowledge, using their 'free' labour and adapting available, local resources. Addressing a recent Soil Association meeting in London, Dr Tewolde emphasised the value of the farmers' own knowledge and labour:

"The shift away from strategies focused around agrochemical inputs is not something that I or anyone in Government can claim to have introduced; we are just responding to and adding to the reality on the ground. It is the farmers themselves and their methods, which have ensured that the chemicals distributed and stockpiled around the country have remained in the stores ...

⁷⁸ Jonathan Porritt in *Sustainability Implications of the Little Red Tractor Scheme*, Report for the Sustainable Development Commission, January 2005

Through Project Tigray we've promoted the use of compost – a new technology to most of our farmers.”

The results have been impressive, with yields doubling, in some cases more, following the use of compost – yields of the common Faba bean increased five-fold from 500 kg/ha to 2,500 kg/ha. Spreading the message to all Ethiopia's 40 million plus small farmers will take many years, but the practical evidence of Project Tigray's increased yields has convinced the Government to abandon agrochemical-reliant agriculture and reorient national food and farming policy towards organic farming.

There is no other economic sector capable of absorbing Ethiopia's 40 million farmers and their families. Whilst having significant export crops of coffee and cotton, Ethiopia cannot earn enough foreign money at stable prices to feed its population. Harnessing the skills and experience of the millions of people already living on the land, utilising their labour to develop a more sustainable form of agriculture based on locally available inputs is therefore the best, indeed only, option for achieving greater food security.

⁷⁹Tress (2000) cited in Haring A M (2001) 'Benefits of Organic Farming for Society' in *Organic Food and Farming: Towards Partnership and Action in Europe. Proceedings*. Danish Ministry of Food Agriculture and Fisheries

⁸⁰In common with labour data, non-commercial holdings below 4 ESU have been removed from all total UK farming age data for comparability with the organic survey. The age of non-organic farmers refers to national statistics for total farms in the UK, in common with the approach adopted in the University of Essex paper and previous chapters. Since the number of farms currently producing organically is relatively small they are not likely to distort the total farming figures. Source of UK total farming data: EC Structure Survey 2003 collected from Defra, Welsh Assembly Government and DARD. No data for farms below 4 ESU were available for Scotland. The median represents the middle value of a data set, in this case the centre of the age distribution of farmers. It is more reliable than the arithmetic mean in data sets which are not evenly distributed

7. Hope for the future

“A new breed of former professionals who have entered organic farming is breathing fresh life into the countryside ... Members of the distinctive, highly educated group, many of whom have left cities in pursuit of a better life in the country, have used their business and marketing skills to make their farms successful.”

The Daily Telegraph, 19 October 2005

The evidence in this report illustrates a farming population in decline, with fewer farms in the UK and fewer people working on the land than ever before (Chapter 3). But there is hope for the future of UK agriculture as organic farming starts to reverse this decline. Not only do organic farms employ more people, but new research by the Soil Association reveals that they are also attracting more younger people into farming compared to non-organic farms in the UK. On average, organic farmers in the UK are seven years younger than non-organic farmers. The average age of non-organic farmers is 56. The proportion of organic farmers aged under 55 is 20% higher, compared to non-organic farmers.

7.1 More opportunities for younger people

“Young farmers seem to increasingly favour organic farming ... and the conversion to organic farming could be a reason for them to remain in farming instead of choosing other employment opportunities.”⁷⁹

Organic farmers are clearly bucking the trend of an increasingly ageing farming population – the average (median) age of the organic farmers and growers surveyed in the University of Essex research for the Soil Association was 49, seven years younger than total farmers in the UK in 2003 (Table 6).⁸⁰ This contrast in age is highlighted in Figure 3. Of the organic farmers surveyed, there are more younger farmers and less older farmers.

Table 6 Age of organic farmers compared to commercial non-organic farmers in the UK, 2003 (% farmers in age group)

	Organic farms	Commercial non-organic farms
Under 35	5%	4%
35 to 44	30%	18%
45 to 54	34%	26%
55 to 64	25%	29%
65 and over	6%	23%
Median	49	56

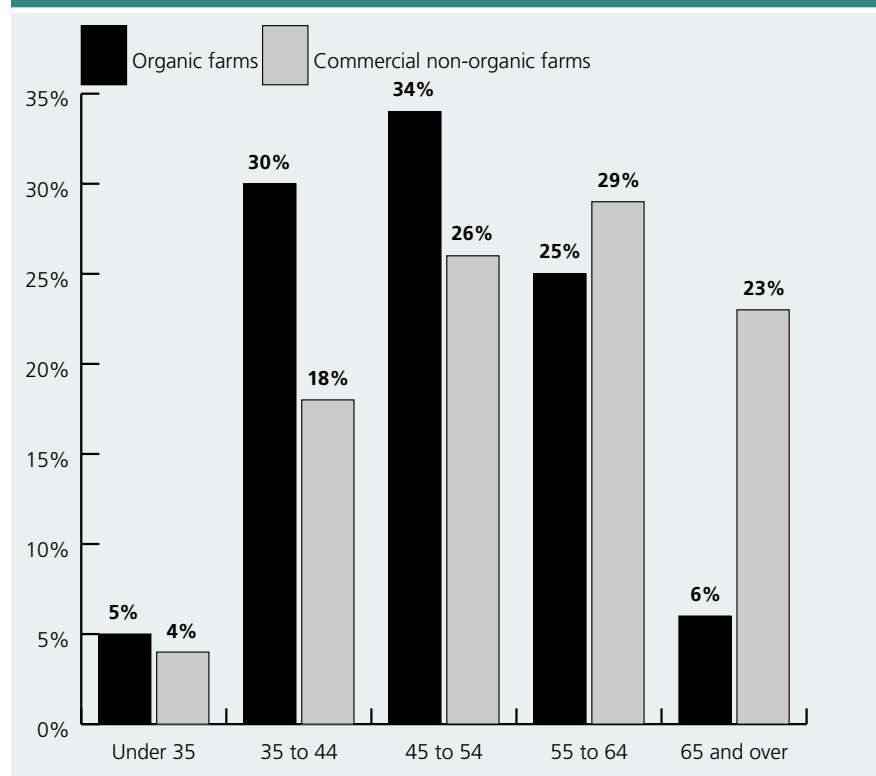
Source: University of Essex, 2005 and EC structure survey 2003. Commercial non-organic farms are all UK holdings of 4 ESU and over.



The trend for organic farmers to be younger is all the more surprising since their non-organic counterparts are getting increasingly old. Chapter 3 highlighted the ageing farming population in the UK. Organic farmers tend to be much younger, and the proportion of organic farmers aged under 55 is over 20% higher than for non-organic farmers. Sixty-nine per cent of organic farmers were aged under 55, compared to 48% of non-organic farmers (Table 6). Conversely, there is a much smaller proportion of organic farmers in the oldest age group (65 and over) – 6% – compared to 23% of the non-organic farming population. To encourage more young people into farming, the Soil Association is offering reduced organic certification rates for farmers and growers aged 30 years and under during the conversion period.

This finding that organic farming tends to be composed of younger, newer entrants to farming is confirmed by the 2004 survey of the organic farms by the University of Exeter funded by Defra. That study found that organic farmers in England are, on average, 5 years younger than their non-organic counterparts, with a median age of 50 years.⁸¹ In addition, a significant proportion (31%) had entered agriculture as an entirely new career and did not come from a farming family, compared to 21% of the non-organic sample. These farmers have never farmed in any other way but organically. This confirms the sense gained from the University of Essex survey of a young, dynamic, motivated cohort of people that is open to entrepreneurial, new entrants. If policymakers want to encourage enterprise and viable employment, they should encourage organic farming.

Figure 3 Age of organic farmers compared to non-organic farmers in the UK, 2003



Source: University of Essex, 2005 and EC Farm Structure Survey, 2003. Commercial non-organic farms are all UK holdings of 4 ESU and over.

⁸¹ The median value from the University of Exeter is unpublished and was calculated from data collected by Lobley et al. (2005), personal communication with the authors

7.2 Injecting optimism and entrepreneurship into UK farming

Farmers who are actively employing people and developing outlets for their produce are clearly inclined to take an optimistic view of their future. Again, this contrasts strongly with the overall trends in agriculture with depression and pessimism amongst many non-organic farmers driving the tragically high suicide statistics.

This distinct sense of optimism amongst organic farmers was analysed in some detail and confirmed in the 2004 ADAS survey. It found that organic farmers surveyed were 'more content with their lot than their non-organic counterparts' – with 39% of them happy to stay in farming, compared to 26% of their non-organic colleagues. In common with the University of Essex survey, organic farmers indicated a greater willingness to undertake direct marketing: 47% of organic farmers said that they were likely to market direct to the public in the future, compared to just 19% of non-organic farmers.

Organic farmers in the survey were also more optimistic about handing on their farms to a successor. Sixty four per cent of organic farmers definitely or possibly expected a family member to take on their farm after them, compared to 51% of non-organic farmers. These findings support the experience of farmers converting to organic systems. For example, a Dorset farmer who recently switched to organic systems said that "The whole process of going organic has completely reinvigorated me."

Organic farming is also boosting demand for educational qualifications. The Scottish Agricultural College has more than trebled its provision for education in organic farming. Twenty five students enrolled for the Postgraduate Diploma in Organic Farming in 2005, compared to just 8 when it began in 1999.

The University of Essex survey clearly shows that organic farming provides significantly more jobs than non-organic agriculture. The competitiveness and efficiency of organic farming is based on this extra labour, which is integral to the organic system. In the non-organic sector the route to economic survival continues to be to cut jobs to cut costs. The loss of worthwhile jobs, the capacity to care for the British countryside, isolation, farmer depression and suicide are a high price to pay for the continuation of a polluting and oil-dependent industry. In these circumstances, the absence of optimism amongst the non-organic farming sector and the lack of opportunity for new blood to enter UK agriculture are not surprising. In contrast, people involved in or entering organic farming are, in general, positive about their future, filled with entrepreneurial zeal, and considerably younger than their non-organic colleagues.

Welsh Farm Organics, near Newtown, Powys

Young organic farmers injecting life into the local economy

At just 28 years old, Jonathan Rees' enthusiasm for organic farming has been the driving force behind the success of his business, Welsh Farm Organics. Jonathan's family has been farming at Tyn Y Fron farm in Powys, mid-Wales for three generations and he is making sure that this continues into the future. "My passion is for farming and good quality food", he says. It was this passion that inspired his family to convert the farm to organic production, which it completed in 2001. Covering 250 hectares, the farm has 60 beef cattle and 1,100 Welsh Mountain and Speckled Face sheep. All of their meat is processed on the farm and sold to restaurants across the UK, or direct to the public, via their online mail order service and at farmers' markets.

Tyn Y Fron farm and Welsh Farm Organics employ a total of eight full time staff. The farm itself provides full time agricultural jobs for four people, including Jonathan's parents, his brother and his sister-in-law. Jonathan likes to work on the farm but he currently spends most of his time running Welsh Farm Organics, the successful processing and marketing business also based on the farm. The business employs four full time staff including two full time butchers. Jonathan and his wife Sally, aged 30, work full time on a range of

"My passion is for farming and good quality food. Farming has been in my family for generations."

Jonathan Rees, Welsh Farm Organics

business management and marketing jobs and often employ part time butchery staff during busy periods.

After converting to organic, the Reeses found it difficult to sell their livestock since there was scarcely any market for organic meat in the local area. So Jonathan and Sally decided to market their meat themselves, and, with a grant from the Welsh Development Agency, they invested in an on-farm processing unit. "It's been a rollercoaster ride", says Jonathan, reflecting on the growth of Welsh Farm Organics in the last four years. Creating a new market for their produce has also provided new skilled jobs that did not exist before they converted to organic. It is also providing a valuable outlet for other organic farms that would otherwise find it difficult to sell their livestock. In addition to keeping butchery skills alive, they process and sell meat from 10 small organic farms within 30 miles of Tyn Y Fron.

Jonathan's enthusiasm is unusual in an area where many family farms are struggling to survive. Many young people of Jonathan's age move out of the area. "There's the odd person who stays around here, but most people go and work in cities", he explains. Jonathan is determined to take the family farm into the future. "Farming is my life. It's what I enjoy and it's what I was brought up to do", he says.

Originally from Essex, his wife Sally had worked as a nurse in London but decided to return to her mother's home in Wales because she wanted to live in the countryside. "Moving to the countryside was a huge step", says Sally. "But I've never looked back. I love working on the farm and our children love it here too."

- Eight full time staff in farming, processing and marketing
 - Young farmers taking the family's 250 hectare beef and sheep farm into the future
 - Processing and marketing meat for 10 local organic farms
- www.welshfarmorganics.co.uk



Appendix A. Methodology

University of Essex

The data for jobs on organic farms in the UK was taken from a questionnaire survey commissioned by the Soil Association and conducted by the University of Essex during 2003. The number of farms surveyed is shown in Tables B1 and B3. Data for organic jobs on organic farms was compared to jobs on non-organic farms taken from Government statistics from the 2002 Agricultural Census, the latest data available at time of survey. The full findings and methodology of the study, *Survey and Analysis of Labour on Organic Farms in the UK and Republic of Ireland*, are published in the *International Journal of Agricultural Sustainability*, Volume 3, No 1, pp24-43.

The actual number of people employed on farms were converted into full time equivalent jobs (FTEs) for both the organic farm survey and the Agricultural Census data for total UK farms. Both the Agricultural Census and the organic survey recorded part time employment as any job involving less than 39 hours per week, but a recent Defra (2005) survey suggests that part time workers in England and Wales work approximately half the weekly hours of full time workers. Therefore, part time jobs were assumed to be 0.5 of a full time job for both Defra statistics and the organic survey. There are uncertainties in assigning a FTE value to seasonal or casual workers, so the researchers based it on data for surveyed organic farms that reported the number of days worked by casual workers. It was estimated that the average casual or seasonal worker worked 41.6 days per year compared to 240 days for one full time job.

Chapter 4.1 explains why the 40 large organic farms over 1,000 hectares were removed from the jobs per 100 ha calculation. The 40 farms were included in the calculation of jobs per organic farm because they had a nominal impact on the jobs per farm figure. The University of Essex study shows that removing these farms marginally changes the jobs on organic farms from 2.91 jobs per farm to 2.88 jobs per farm (combined figures for UK and Republic of Ireland).

In addition, the University of Essex weighted the organic farms in the survey to represent the balance of farm sizes nationally. It therefore overcomes the bias in the current sizes of farms that have converted to organic, many of which are large, extensive grassland farms. This adjustment is explained in more detail in Chapter 4.1.

Comparison with commercial non-organic farms

The figures referred to in Chapter 4.2 are calculations by the Soil Association based on the University of Essex survey of organic farms. To provide a more representative and 'like-with-like' comparison between organic and non-organic farms, the organic survey was compared with 2003 Agricultural Census data for commercial holdings only.

The rationale for excluding non-commercial holdings, defined as below 4 European Size Units (ESUs) for this report, is explained in detail in Chapter 4. In addition, changes to how the Agricultural Census is collected means that, since 2000, the census records minor holdings in addition to major holdings. The European Size Unit (ESU) is an official measure of a farm's economic size in terms of standard gross margins (i.e. profit). The Soil Association investigated

alternative indicators of commercial activity, such as farm size or Standard Labour Requirement and, whilst no such measures are perfect, ESUs offer the best available indicator of a farm's economic activity. According to Defra, "one ESU is defined as 1200 European Currency Units (average value 1987-89) of SGM. It is a measure of the economic size of holdings in terms of the value they add to variable inputs and thus differs from physical measures, such as area, which take no account of the intensity of production."

All data was taken from the 2003 Agricultural Census, the same year that the organic survey was conducted. Data for ages of farmers was taken from the 2003 EC Farm Structure Survey. All data was collected from the Department for Environment, Food and Rural Affairs, Welsh Assembly Government, Scottish Executive Environment and Rural Affairs Department and the Department of Agriculture and Rural Development, Northern Ireland. Data for the age of organic farmers were also recorded by the University of Essex as part of their survey and has not been published elsewhere. Ages of surveyed organic farmers were compared to commercial non-organic farmers in the UK, for holdings of 4 ESUs or above. Not age data was available for holdings of 4 ESU and over in Scotland. For consistency, the number of people employed in the Agricultural Census was converted to FTE jobs using the same methodology as the University of Essex. In addition, the same weighting calculations were made to represent the balance of farm sizes nationally.

Appendix B. Data tables

University of Essex survey

The following tables are taken from the University of Essex paper published in the *International Journal of Agricultural Sustainability*. Table B1 shows the number of organic farms surveyed by the University of Essex in 2003 compared to the total number of organic farms in the UK. Table B2 shows the proportion of organic farms surveyed that were involved in direct sales, marketing and processing. Table B3 provides a breakdown of the jobs provided by the organic farms surveyed.

Table B1 Comparison of total number of organic farms and area certified as organic with those surveyed, 2003

	Total number of registered organic farms	Number of farms sampled	Proportion of total number in this survey	Total area under organic (including in conversion) (hectares)	Proportion of total area in this survey
England	2611	674	25.8%	251,836	28.1%
Scotland	725	163	22.5%	428,608	21.0%
Wales	618	160	25.9%	55,101	27.6%
Northern Ireland	139	21	15.1%	5,629	21.1%
UK	4104	1018	24.8%	741,147	23.9%
Rep. Ireland	923	126	13.7%	29,850	16.1%
Total	5,027	1,144	22.8	770,997	23.6%

Note: Total numbers of organic farms does not include numbers organic processors

Sources: Defra, 2003; DAF, 2003; University of Essex survey 2003

Survey totals are for March 2003 for UK, December 2002 for Republic of Ireland

Table B2 Types of processing and direct sales and marketing activities on organic farms in the UK and the Republic of Ireland, 2003

	Number of farms	% of farms engaged in processing or direct sales	% of all farms in survey
Processing	217		19%
Meat	97	45%	
Dairy	80	37%	
Fruit and/or vegetables	77	35%	
Other	30	14%	
Cereals	11	5%	
Direct Sales	421		37%
Farm shop and customer collection	245	58%	
Farmers' markets and/or local shops	153	36%	
Box delivery	106	25%	
Box and/or mail order	21	5%	
Pick-your-own	5	1%	
Other	54	13%	
No. of farms with either processing or direct sales or both	449		39%
No. farms with both processing and direct sales	189		16%

Note: Total number of farms = 1,144

Notes:

Total number of farms = 1,144

FTE = Full time equivalent jobs

¹ 'Mixed' farms had substantial crops as well as livestock, 'Livestock' farms were predominantly livestock with grazing or fodder crops

² Calculated from mean FTE per farm divided by mean farm area

³ Calculated from FTE per farm/farm area for each farm, then average

(Values in brackets are the standard errors of the adjacent mean).

Table B3 Jobs on organic farms surveyed in the UK and the Republic of Ireland, 2003

Region	No. of farms sampled	Total area of farms (hectares)	Total labour as FTE	Mean farming FTE per farm	Mean processing and direct sales FTE per farm	Mean total FTE per farm	Mean farming FTE per farm (Mixed farms only)	Mean farming FTE per farm (Livestock farms only) ¹	Mean aggregate ² total (FTE/100 ha)	Mean total FTEs/100 ha per farm ³	Mean farming FTEs/100 ha per farm ³
English Regions											
North East	24	5738	82	2.24	1.19	3.43 (0.75)	2.37	1.78	1.43	11.7 (7.11)	7.29
North West	45	8623	132	2.72	0.21	2.94 (0.29)	3.18	2.29	1.53	35.9 (20.8)	27.1
Yorkshire	42	4288	131	2.53	0.60	3.13 (0.46)	2.67	1.65	3.06	10.6 (3.9)	7.45
East Midlands	44	7137	149	2.50	0.88	3.38 (0.52)	2.44	1.82	2.09	32.7 (28.4)	32.0
West Midlands	63	5415	188	2.34	0.64	2.98 (0.27)	2.85	1.53	3.47	65.4 (34.9)	41.5
Eastern	75	14,701	330	4.01	0.40	4.41 (0.98)	5.37	1.60	2.24	14.6 (3.44)	11.9
South East	115	17,827	449	3.03	0.87	3.90 (0.45)	3.45	2.01	2.52	23.8 (5.80)	18.4
South West	266	33,251	811	2.43	0.59	3.05 (0.24)	2.74	1.70	2.44	18.8 (5.9)	14.6
England	674	96,980	2,273	2.72	0.64	3.37 (0.18)	3.13	1.80	2.34	24.8 (4.75)	18.7
Scotland	163	127,057	506	2.42	0.69	3.11 (0.36)	2.62	1.75	0.40	12.3 (4.5)	7.29
Wales	160	16,466	318	1.76	0.23	1.99 (0.10)	1.89	1.68	1.93	8.2 (1.5)	5.44
Northern Ireland	21	1448	37	1.52	0.25	1.77 (0.23)	2.11	1.09	2.56	6.1 (2.1)	5.80
UK total	1,018	241,951	3,135	2.50	0.57	3.08 (0.13)	2.88	1.74	1.30	19.8 (3.25)	14.5
Republic of Ireland	126	4928	198	1.38	0.20	1.57 (0.11)	2.04	1.13	4.02	24.7 (9.8)	19.0
All surveyed farms	1,144	246,879	3,333	2.37	0.53	2.91 (0.12)	2.84	1.63	1.35	20.3 (3.08)	15.0

Commercial non-organic farm data

Table B4 shows the total number of holdings and on-farm jobs in the UK compared to commercial holdings only, defined as holdings below 4 European Size Units (ESUs).

The data is from the 2003 Agricultural Census and was collected from the Department for Environment, Food and Rural Affairs, Welsh Assembly Government, Scottish Executive Environment and Rural Affairs Department and the Department of Agriculture and Rural Development, Northern Ireland.

Table B4 Total jobs on holdings in the UK compared to commercial holdings (4 ESUs or over), 2003							
		Number of holdings	Area farmed (hectares)	Total labour	Labour as FTE	FTE per holding	FTE per 100 ha
England	Total holdings	190,687	9,177,390	354,381	243,521	1.28	2.65
	Commercial holdings only	86,209	8,534,353	271,536	198,040	2.30	2.32
Wales	Total holdings	35,500	1,458,838	55,643	39,024	1.10	2.68
	Commercial holdings only	15,222	1,293,084	37,026	28,024	1.84	2.17
Scotland	Total holdings	50,365	5,520,500	68,281	46,668	0.93	0.85
	Commercial holdings only	17,963	4,421,101	44,855	33,633	1.87	0.76
Northern Ireland	Total holdings	28,281	1,073,748	54,486	36,607	1.29	3.41
	Commercial holdings only	18,556	951,264	41,109	28,915	1.56	3.04
UK	Total holdings	304,833	17,230,476	532,791	365,821	1.20	2.12
	Commercial holdings only	137,950	15,199,802	394,526	288,612	2.09	1.90

Source: 2003 Agricultural Census.

Commercial holdings are defined as holdings with 4 ESUs or over.

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