

# *Getting to the heart of* **Horticulture**

Opportunities and challenges for  
the horticulture and potato sectors  
in the West Midlands



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## Foreword by the Heart of Horticulture Steering Group

The horticultural sector including potatoes is extremely important to the West Midlands. While those of us who work within the sector in the region know this, we began 2011 also knowing that we needed to improve our evidence to support this view to enable us to press for change.

The “Getting to the Heart of Horticulture” study and this concluding report has been designed to give a comprehensive review of the state of the horticultural industry in the West Midlands in 2011. It quantifies the scale and scope of the fresh produce, potato and horticultural industry across the five counties of Shropshire, Staffordshire, Warwickshire, Worcestershire and Herefordshire. The report in particular highlights the diversity of horticulture within the region, the significant contribution made by horticulture to the regional economy and the scale of employment required by the sector.

Our study draws out a number of the key challenges the sector faces over the coming years. While business confidence is high there remains concern about supply chain margin pressure, the loss of R&D capability and attracting and retaining quality personnel into the horticultural sector. In addition the study highlighted sector concerns regarding water security. Growers however are enthusiastic about the potential of renewable technologies.

We are indebted to DEFRA for agreeing to fund the cost of this report, and to all of the support given to us by others in the industry, including Wychavon District Council, The Horticultural Development Company (HDC), The Potato Council (PCL) and many others.

We are also indebted to EFFP for their effort and the diligent and meticulous attention to detail in evidencing and clarifying the results. We can now use the content of this report with confidence to secure an ever improving offer for horticulture.

This report is industry driven and has been informed by those who chose to participate in the study steering group or by those who shared information by completing the survey questionnaire. We would like to thank all of the growers in the region who invested in the study by getting involved.

We hope that Getting to the Heart of Horticulture will be invaluable for all stakeholders in shaping future policy and direction for the horticultural sector.



Anthony Snell  
Chairman  
Study Steering Group



Stephen Watkins  
Chairman  
West Midlands Board for Horticulture & potatoes



# 1. INTRODUCTION

The horticultural sector is perhaps the most complex and least understood part of UK agriculture. Growers produce an enormous variety of crops the majority of which have to be harvested, processed and delivered just in time to meet the exacting standards of processors, retailers and consumers.

The sector has undergone a marked transformation particularly over the last 10-15 years. Professionalism amongst producers has had to increase, particularly in response to consumer demand for high quality, varied and fresh produce and retailers' relentless pressure to get more for less. The output of horticulture and potato growing in the UK in 2010 is in the region of £3.6bn<sup>1</sup>, to which considerable value adding takes place in processing and retailing, this underlines the importance of the sector to overall levels of employment. Around fourteen per cent of national horticultural output is produced in the West Midlands, consequently the contribution of this sector to local economic and social wellbeing in many parts of this region is comparatively high compared to the rest of the country.

Any idea that horticulture in the UK is an industry comprised of predominantly small businesses using low-level technology is clearly out of date. The number of smaller and less specialist producers is falling as, in line with the trend in Europe's horticultural powerhouses, the industry is becoming increasingly 'hi-tech', utilising the latest machinery and production methods. Competition from imports and other growers require the horticultural industry to be adaptable and to adopt new technology readily. However, growers also need the local economic, legislative and political environment to be as supportive as possible. Understanding the extent to which producers in the West Midlands are meeting these and other challenges is necessary to ensure that the sector can continue to grow and develop.

EFFP carried out a survey of growers in the West Midlands to assess the current size and structure of the sector and to explore likely future changes. It was sent to 460 growers in the region using the Horticultural Development Company (HDC) and The Potato Council (PCL) producer databases. A total of 129 completed surveys were returned, a response rate of 28.6%. A range of information sources have been used in addition to the data collected from the survey to describe and appraise the sector and its relevance to the West Midlands economy.

The purpose of carrying out this research and producing this report is threefold, it is expected to:

- Raise robust statistics on the value and impact of the sector
- Provide an assessment of sector competitiveness and viability
- Identify the key issues that need to be addressed by the sector in the next 10 years

Potatoes are sometimes considered separately in statistical data, but for the purposes of this project are included within the definition of "horticulture."

It is anticipated that the report will be used in many ways, not least to provide evidence to support planning applications in particular by demonstrating the value of the sector to the local economy. The statistics produced by this research should prove helpful to horticultural businesses in the West Midlands by providing them with a wide range of facts and figures that will be useful when applying for RDPE funding and other grants and to raise the profile of the sector with interested parties including those involved in Local Enterprise Partnerships (LEPs).

Similar studies conducted on a UK wide basis have raised many pertinent issues, including skills and recruitment and the need for greater horizontal and vertical collaboration. Primarily it is hoped that this report will highlight what can be done to improve the profitability of the sector and encourage supply chains to work more effectively together across the West Midlands.

<sup>1</sup> <http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-farmmanage-agriaccount-tiffnotice-110428.pdf>

## Who has been involved

This project has been supported by RDPE funding provided by DEFRA. The survey itself was designed and distributed by EFFP who have written this report and will act as project managers for subsequent follow up activity with growers across the West Midlands. A steering group, made up of representative growers and other key stakeholders in the region was formed by the NFU to help guide the effort towards providing some valuable outcomes for growers. The HDC and PCL cooperated to ensure that growers were sent the survey forms. Many growers have given up their valuable time to fill out the survey, respond to requests for information and to share their thoughts and opinions.

In addition to the 130 growers who responded to the questionnaire this report would not have been possible without the hard work and commitment of the steering committee and a long list (too many to mention) of people who have given their time freely to comment on various drafts and to generate ideas on how the report could be improved and how the sector can be supported.

# Executive Summary

## The Horticultural Sector in the West Midlands

Horticulture uses just 3% of the agricultural land in the West Midlands but contributes over 21% of the value of its agricultural output. Around 30,000 hectares are used to grow a wide variety of crops of which over 60% is accounted for in Herefordshire and Shropshire. Unlike other parts of the UK the horticultural sector has been increasing in scale and output in the last few years in the West Midlands.

Approximately half of the horticultural land is used for growing potatoes with the remainder growing a wide variety of crops. Other significant crops include blackcurrants (35% of UK production), soft fruit (20% of UK production), cider apples (over 60% of UK production) and asparagus (approx. 65% of UK production).

The West Midlands accounts for nearly 14% of the UK's £2.56bn horticultural output which makes it the third most important region in England in terms of crop value. At the farmgate this output is worth over £350m which makes it a significantly more important sector than cereal growing or milk production. The Gross Value Added by growers is approximately £200m and it is estimated manufacturing and processing in the region adds a further £390m so that the sector as a whole contributes at least £600m GVA to the region. To grow the crops the sector sustains around 6,000 full time jobs and at least twice this number are employed for seasonal work. In addition approximately 7,000 people are employed in allied food processing and manufacturing. Added to these totals is the economic activity of suppliers to the sector and an enormous number of firms and individuals involved in the logistics of moving fresh produce from farm to processor and then into the retailers, wholesalers and food service companies.

The industry is consolidating and specialising. The largest 25% of businesses account for over 70% of the cropped area and are growing at a faster rate than smaller businesses. Many growers are members of groups, grow crops for a consolidator or have developed long term supply agreements with processors. This is particularly so for cider production but also with soft fruit and potatoes. Unfortunately, and for a variety of reasons, only a minority of growers are making use of the EU fruit and vegetable scheme which could provide a significant boost to incomes. Growers who are lacking in scale, are not part of a dedicated supply chain or who fail to cooperate with other growers are less likely to be able to negotiate pricing and contractual arrangements with processors. They are in turn becoming fewer and vulnerable to the buying power of the major retailers.

The market for fresh produce is incredibly complex. There are at least 17 marketing intermediaries in the region purchasing fruit and vegetables, two significant wholesale markets in Birmingham and Wolverhampton, traders and a significant number of producers selling direct to processors. The majority of produce finds its way to the major retailers. In addition around 15% of survey respondents sell all or some of their produce direct to the final consumer. The fact that so many producers act independently contributes to industry fragmentation and forces them to be price takers.

## The challenges

In the survey producers were invited to rank the major challenges to the performance of their businesses. Energy costs, pesticide regulation, and employment legislation and compliance are perceived to be the main threat to growers' business as they are a major cost and have a major impact on business performance.

Next in importance to growers are water security, recruiting and retaining skilled staff and the impact of planning constraints and delays. The fact that planning issues, delays and constraints came up repeatedly for those that are considering investment should be a matter of concern. Unease was expressed around the ability to raise finance from banks and although this may not be an issue for established and mature businesses it could be a severe constraint for developing and expanding businesses.

Growers are generally confident about finding and keeping customers for their produce but over 75% were not confident that the price they receive would be viable. This was mirrored by the fact that just 35% of producers

felt confident in their ability to compete with imports.

## The opportunities

Opportunities within the fresh produce sector are many and varied and can be divided between those relating to improving/adopting operational performance (processes) or exploiting market opportunities.

Growers ranked investment in R&D as being more important than investment in training and skills. However larger farm businesses placed a higher priority on training and developing people than smaller businesses.

Growers were invited to state what they thought would make the most positive difference to the performance of their businesses. This question elicited a lot of different responses although there were several popular ideas:

- Investing to improve energy use and make more use of renewables
- Making more efficient use of resources
- Improved irrigation practice and reservoir development
- Increased emphasis on marketing and customer management
- Investing in better machinery

## What needs to change

Given the diversity of the sector it would be easy to be overwhelmed by the sheer number of things that could be done differently. It is also worth bearing in mind that the challenges faced by one crop won't necessarily be the same as those faced by others and therefore it follows that any recommendations contained in this report are of a general nature.

An Action Plan for change is set out overleaf. It starts by focussing on the need for all parts of supply chains to work closely together. This will reduce supply chain risk and give growers the confidence to invest and deliver efficiency improvements. Sitting alongside this is the potential for growers to make use of the EU Fruit and Vegetable Scheme. Many producers have been left baffled by the scheme's rules but this shouldn't detract from the potential support it offers, if a way can be found to comply with them.

Two recommendations address the issue of the availability and skill of employees and owners which is a recurring theme throughout the report. Firstly there is need to maintain the current SAWS scheme to safeguard the production of high value crops. Delivering high quality training is vital and so there is also a need to ensure that those responsible for delivering training and qualification to the sector work closely with producers.

Adapting to climate change and the availability of natural resources will be the major medium to long term challenge for horticulture and is likely to require significant investment. The economic and social pressure to make more efficient use of these resources can only increase and as horticulture by comparison to most other agricultural enterprises is an intensive user of energy and water it will probably need to adapt its practices more than they do. Producers will need information and access to capital to adapt.

Planning has long been a controversial matter that impacts on the development of the sector as the balance between economic development and preserving the aesthetic identity of the countryside is very keenly felt in a sector that relies on protecting crops and having an appropriate infrastructure in order to be competitive. The robust set of statistics contained in this report will help to validate the economic importance of the sector so that better informed decisions can be made when planning and development applications are put forward.

Finally the sector generally and in the West Midlands specifically cannot afford to be complacent about research and development and needs to make sure that practical and valuable research is carried out and that every penny spent in this area is put to good use.

# AN ACTION PLAN FOR CHANGE

## 1. **Support grower cooperation and build effective supply chain partnerships with transparent pricing mechanisms across all crops.**

Growers will not invest in production assets unless they are confident that reward outweighs risk. The most stable and confident enterprises are those where growers, processors and manufacturers work together to create and share value and have a high degree of certainty with pricing. Growers who cooperate will be better placed to build these partnerships.

## 2. **Make sure the West Midlands takes full advantage of the EU fruit and Vegetable Scheme**

Derecognition of Producer Organisations by the RPA has left many producers bewildered. However, it is possible to qualify and improve profits if the scheme rules are followed correctly. If National and EU competitors make use of this scheme and growers in the West Midlands do not, this will create a serious competitive disadvantage for them. Support is needed to help derecognised producers comply with the scheme and enable new groups to successfully apply.

## 3. **Create greater awareness of the employment opportunities the sector provides and retain SAWS to safeguard the production of high value crops.**

The sector needs reliable and flexible labour to cope with seasonal demand and the survey points to serious limitations for many growers if the SAWS scheme ends in 2011 as proposed. An industry proposed new SAWS scheme requires industry and political support if it is to come into effect.

## 4. **Ensure high quality training, appropriate qualifications and career development is a cornerstone of horticultural business plans**

Horticulture is technologically advanced, expanding and in need of a dedicated and skilled workforce. If the industry offers rewarding long term opportunities to individuals it will attract and retain the talent it needs to remain competitive and grow. Making more use of apprenticeships and working closely with specialised colleges should be encouraged

## 5. **Exploit all forms of renewable energy where it is economical to build long term sustainable competitive advantage**

Energy policy is being shaped by climate change and projected cost increases. Many horticultural businesses working alone or with other growers have an opportunity to take advantage of government incentives and developments in renewables technology. Case studies, study tours and links to specialist advice will enable the sector to develop the knowledge and confidence to adapt to this opportunity.

## 6. **Increase water storage capacity and ensure efficient usage of water by adopting best irrigation practice.**

Expansion of horticulture and the predicted impact of climate change on UK weather patterns will increase reliance on irrigation. More water storage will be required and attention focussed on irrigation techniques that allow more efficient use of water.

## 7. **Make certain that individuals with responsibility for planning are fully aware of the social and economic benefits of developing the sector.**

Planning constraints, delays and costs inhibit the modernisation and development of a sector with high growth prospects. Greater awareness of the social and economic importance of the sector is needed. This will require all parts of the sector to work together with coordination from and between organisations that represent growers and by individual growers helping one another. The sector needs representation and engagement with Local Enterprise Partnerships to ensure its importance to the region is recognised and that it can access a fair share of government support.

## 8. **Build strong partnerships with organisations responsible for research and development and work closely with regional higher education institutions**

Government cuts have progressively dismantled many of the organisations and networks that supported agronomic research & development and knowledge transfer. More investment is needed to sustain success. Much of this can take place at a national level but colleges, universities, consultants and growers in the region should attempt to coordinate their activity to avoid duplication and ensure that resources are used in the most efficient and effective way. Practical field trials, discussion groups, access to experts and engagement along the supply chain is needed to facilitate rapid adoption of technology.

*These action points are described more fully in the Recommendations on P. 29-32*



## THE INDUSTRY TODAY

The West Midlands is blessed with an immensely varied, dynamic and resourceful range of horticultural businesses. Herefordshire is renowned for its hops and cider apples but is also one of the most important potato and soft fruit growing regions in the UK. Some fantastic soils in Worcestershire, particularly in the Evesham Vale, have led to world class production standards for a range of crops including asparagus and high levels of investment in glasshouses has made this a principal region for tomato growing. Potatoes remain an important crop in Shropshire and in adjacent Staffordshire but the end of sugar beet growing has encouraged several growers to use the excellent soils in this part of the region for growing high value salad crops and field vegetables. In addition, the large urban population in the region help to support a wide range of ornamental plant producers who supply garden centres and the landscaping market. Horticulture occupies just over 3% of the agricultural land in the region but contributes more than 21% of the value of the regions agricultural output.

### Area of Horticulture in the West Midlands

DEFRA statistics indicate that the total area of farmland used for horticulture and potatoes in 2009 amounts to approximately 30,595 ha. The EFFP survey captured a total of 9,012 ha representing 29% of the horticultural area in the region. The overall number of completed forms represent a good response rate to a survey of this type and enables a fairly accurate assessment of the sector to be produced. The relationship between surveyed area and the amount of land captured by DEFRA in the annual census is set out in Table. 1 and Fig.1

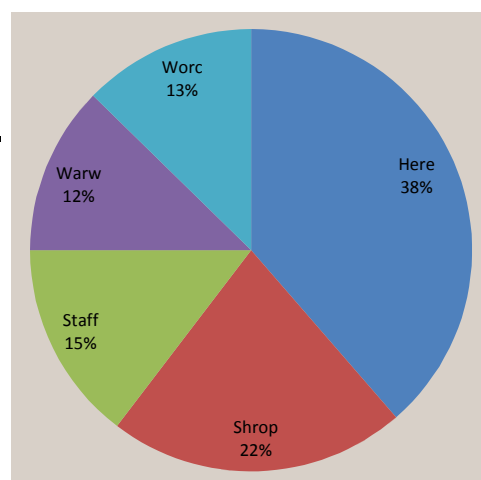
Only the Eastern region and South East regions of England have more land allocated to horticulture than the West Midlands. The region as a whole has 12.2% of the total English land area allocated to horticulture.

Recent data released by DEFRA shows that land allocated to horticulture declined by 3% across England between 2009 and 2010. However the West Midlands went against this trend by increasing its land area to

**Table 1: Comparison of areas captured by producer survey and DEFRA survey totals by crop group<sup>a</sup>.**

	Surveyed Area Ha's	DEFRA published Ha's	% of Land captured by survey
Herefordshire	2776.6	11928	23%
Shropshire	2389.4	6477	37%
Worcestershire	2075.7	5779	36%
Staffordshire	585.0	3596	16%
Warwickshire	1185.7	2815	42%
West Midlands	9012.4	30595	29%

**Fig 1: Distribution of Horticultural Land in the West Midlands**



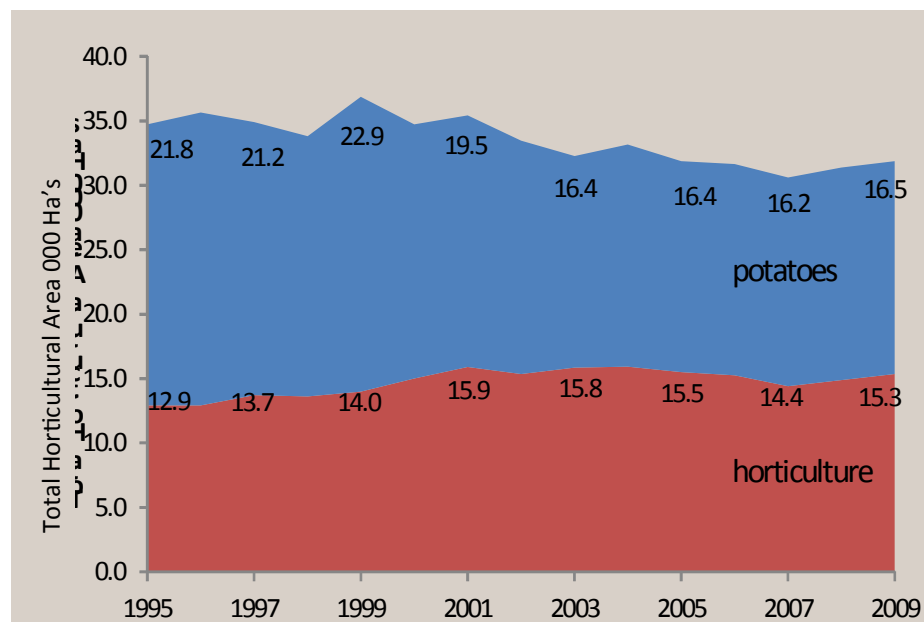
Source: DEFRA(2009), EFFP (2011)

horticultural crops by 7% in the same period. This increase was mainly as a result of large increases in the areas of field vegetables and soft fruit. In the last decade the area of potatoes grown in the region declined from a peak of around 23,000 ha to just over 16,000 ha in 2007, a decline of 30% (Fig. 2). The area of other horticultural crops grown over the same duration has fallen, albeit by a smaller proportion, from a peak of nearly 16,000 ha in 2001 to 15,300 ha in 2009, a decline of just 3.7%. For both crop categories the areas of crop grown have stabilised and started to increase.

<sup>A</sup> Appendix 1 contains a breakdown by county of the areas in horticultural production in 2010

Cropping potential is determined principally by soil type. Rich alluvial loams in the Vale of Evesham are for example suitable for growing practically any crop. These soils are graded Class 1 (See Fig 3.), are easy to work and moisture retentive yet well drained. Many grade 2 soils can be found to the North and West of Birmingham. These soils are suitable for growing a wide range of crops although limited by a tendency to drought. Many farmers used

**Fig 2: Comparison of areas by crop group. (Ha's 000's)**



Source: DEFRA Stats Ag. English Regions(2009)

to growing potatoes and sugar beet have the necessary water extraction licenses needed to diversify into growing other vegetable and fruit crops.

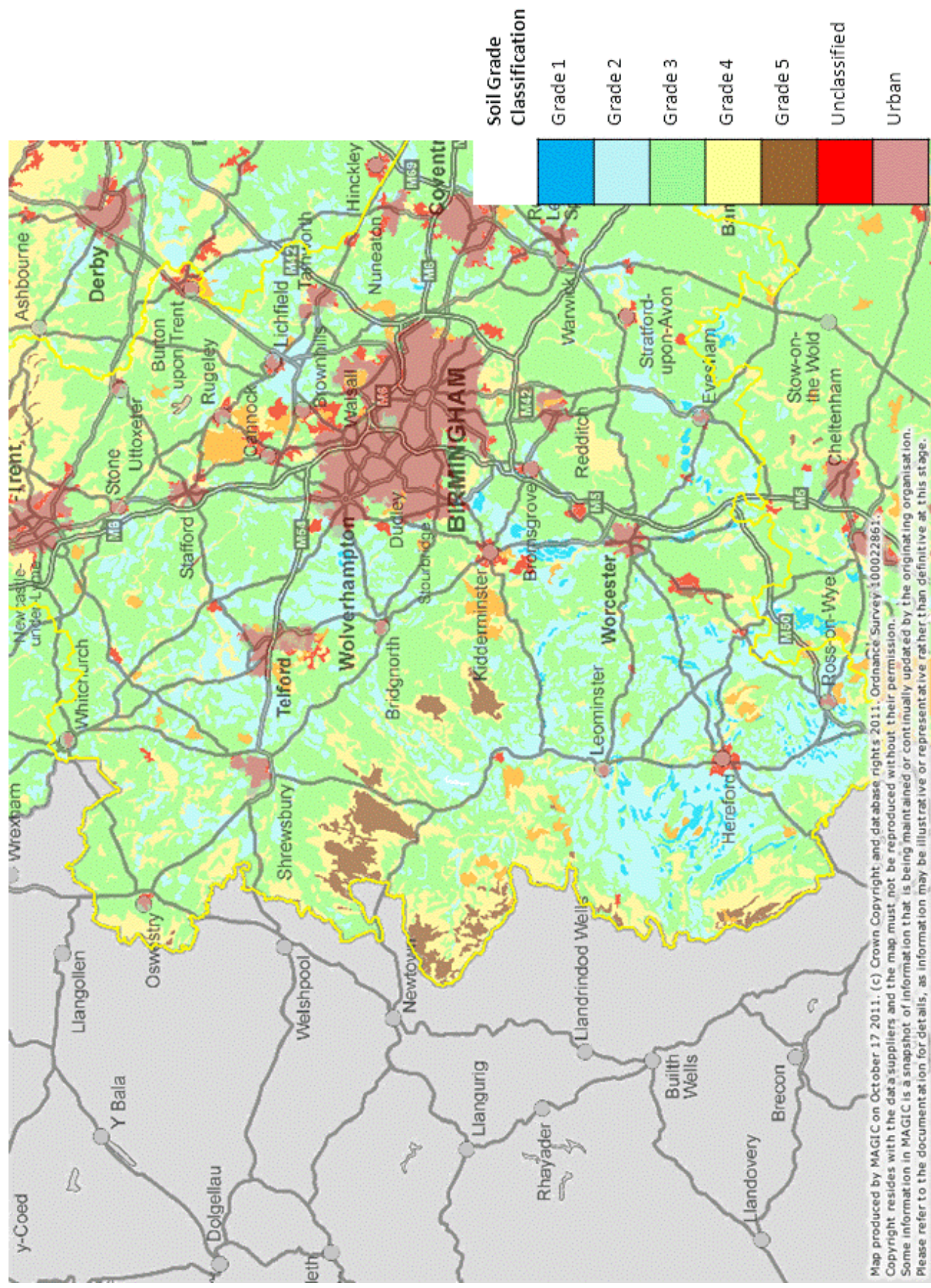
A study conducted by the Environment Agency in 2005<sup>2</sup> stated that irrigated horticultural crops accounted for 74% of the total irrigated area, and 86% of the total volume of irrigation water applied. This trend is at least partly driven by the major supermarkets' demand for quality, consistency, and continuity of supply, which can only be guaranteed by irrigation.

The same study assessed the impacts of climate change on the depths of irrigation applied and on volumetric water demand in the Vale of Evesham, an area of intense outdoor horticultural production. The study showed that with climate change, 'dry' year water demand for the existing irrigated crops in the Vale of Evesham would increase by around 13-20% by the 2020's, 25-50% for the 2050's and 38-84% by the 2080's. The crop sectors most impacted by climate change across the region will be potatoes, field-scale vegetables, and small fruit production. Adapting to these challenges should be a high priority if the sector is to remain competitive.

<sup>2</sup> [http://www.ukia.org/eabooklets/EA\\_Climate%20Change%20Impacts%20Horticulture\\_Final.pdf](http://www.ukia.org/eabooklets/EA_Climate%20Change%20Impacts%20Horticulture_Final.pdf)



**Fig 3: Soil Grade Classification Map of the West Midlands**



## Areas of Crops Grown

Growers in the West Midlands produce a varied mix of crops and host substantial areas of the major crop groups. With the exception of potatoes and hardy nursery stock the area of the other crop groups have increased between 2009 and 2010.

There is a reasonable correlation between the crop mix in the survey and the crop mix in DEFRA data. The survey has a lower proportion of fruit and potatoes, a higher proportion of vegetables and a similar proportion of ornamental crops. Based on the DEFRA data shown in Table 2. ornamental horticulture accounts for approximately 2% of the crop area, potatoes for nearly 50% and vegetables use 24% of the cropped area with the balance of 24% used for both hard and soft fruit growing. Only the South East region has more land allocated to fruit production than the West Midlands.

Appendix 2 gives a more detailed breakdown of the different crops, areas and location of the various crops grown in the region.

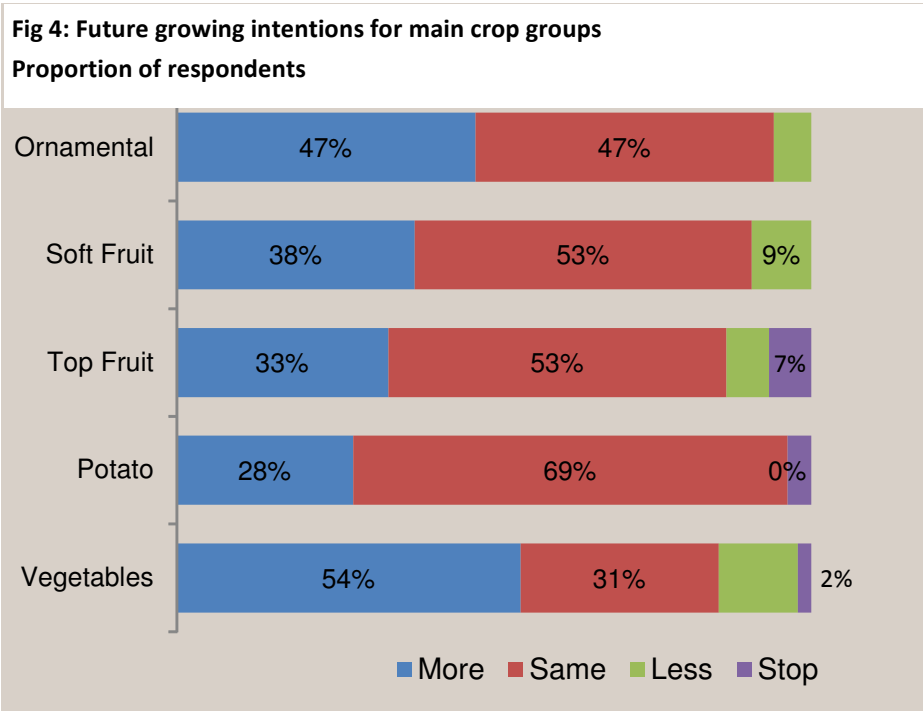
**Table 2: Cropping Mix in West Midlands (Ha's)**

	2009	2010	% of Crops
Small fruit	1,972	2,017	6.1%
Top fruit	5,707	6,154	18.6%
Total vegetables grown in open	5,984	8,076	24.4%
Crops under glass/plastic	164	168	0.5%
Hardy nursery stock	797	786	2.4%
Potatoes	16,173	15,883	48.0%
<b>TOTAL</b>	<b>30,797</b>	<b>33,084</b>	<b>100.0%</b>

Source: DEFRA Farm Survey 2010

Producers were invited to describe their intentions regarding the area of crop they intend to grow in the future. Due to the size of the sample of producers who completed the survey and the large range of crops it is not possible to accurately estimate the area of each crop grown today or how much this is likely to change in the future. Nonetheless the data that was captured when aggregated into crop groups (Fig 4.) paints a reasonable picture of what is likely to be grown in the next few years.

Appendix 1. gives a more detailed breakdown of the different types, areas and location of crops grown in the region.



Source: EFFP: Survey of West Midland holdings 2011



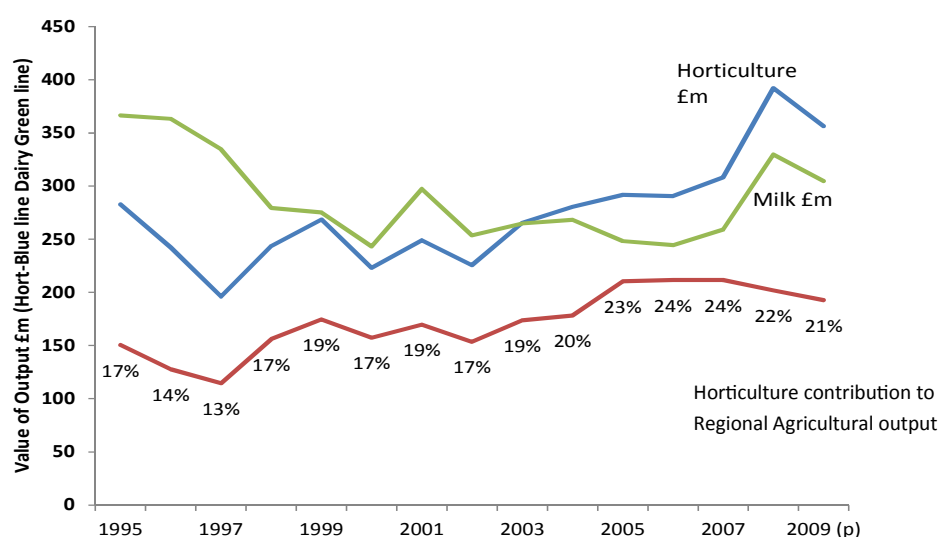
For top fruit a small number of producers are planning to stop growing the crop but this is more than compensated for by the number who intend to expand. Compared to the other crops a relatively small proportion of potato producers plan to expand the area they grow. Vegetable growing seems set to expand at a faster rate than the other crops. The recent increase in prices (2011) and fall in the value of the pound against the euro have undoubtedly made UK produce more competitive against imports.

## Value of Crop Output

The total estimated farmgate value of horticulture in the West Midlands is around £350m based on 2009 output and prices. In 2009 Horticulture made up 21% of the region's total agricultural output of £1,664 million even though it utilises just 3% of the land area (Fig. 5). Horticulture has been increasing in absolute terms and as a proportion of the value of agriculture in the region.

There has been a steady upward trend since 2001 in the value of horticultural crops across the region, although this trajectory dipped slightly in 2009 owing to lower prices generally but particularly for potatoes which were 20% cheaper than in 2008. Vegetable and potato prices achieved in 2010 were significantly higher than those achieved in 2008 illustrating the volatility in returns. Since 2004 horticulture has overtaken dairy in terms of the value of output across the region and supports significantly higher levels of employment.

**Fig 5: Value of horticultural crop output and contribution to regional farm output**



Source: DEFRA <http://www.defra.gov.uk/statistics/files/defra-stats-ag-english-regions-2009-data.xls>

## Value Added

The Gross Value Added by growers is approximately £200m and it is estimated manufacturing and processing in the region adds a further £390m so that the sector as a whole contributes at least £600m GVA to the region. Added to these totals is the economic activity of suppliers to the sector and an enormous number of firms and individuals involved in the logistics of moving fresh produce from farm to processor and then into the retailers, wholesalers and food service companies.

Based on analysis of the relevant data it is estimated that processing and manufacturing involving fresh produce has a combined output slightly less than £1bn. This includes packing, processing, importing and wholesaling although there is much less imported produce processed in the West Midlands than in those regions containing ports or road links to the continent.

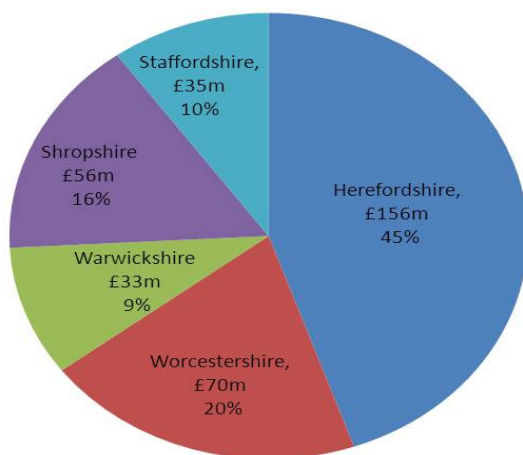
Full details of the gross output, valued added and employment produced within the fresh produce supply chain is set out in Appendix 4.

## Distribution of Holdings

DEFRA Farm Survey statistics from 2008 indicate that the West Midlands has over 1200 horticultural businesses however this includes an extremely long tail of very small producers. The 460 surveyed farms are representative of specialist commercial potato and horticultural businesses.

Horticultural output is not spread evenly throughout the region. Herefordshire has the largest area of land allocated to growing horticultural crops and consequently produces the highest amount and proportion of value (Fig. 7). Despite having just 13% of horticultural businesses Worcestershire accounts for 20% of the overall financial output. This is due to the fact that it grows a high proportion of very high value crops. A more detailed breakdown of the areas and values of crop type grown across the West Midlands is set out in Appendix 2.

**Fig 6: West Midlands Primary Horticultural Output £m and %**



EFFP (2011) Defra Stats Ag English Regions

Horticultural businesses in the West Midlands average 70 ha with the largest businesses in Shropshire, Herefordshire and Warwickshire. Holdings in Shropshire and Herefordshire are larger than those in the other counties mainly because they have a higher proportion of potato holdings which tend on average to be larger than holdings growing other crops. The Warwickshire average is skewed by two extremely large vegetable producers.

Further analysis of the data reveals the distribution of farm sizes. The largest 25% of farm businesses account for 71% of the total area allocated to horticulture. The smallest 25% of producers account for just 2% of the area used for these crops.

The survey provides clear evidence that significant consolidation of the industry has taken place during the last five years. Further analysis (Table 3) reveals that between 2006 and 2010 the largest quartile of businesses increased the area of land they allocate to horticulture by 1,700 ha or 45%. In contrast the smallest 25% of holdings only increased the corresponding area by 11 ha or 7%.

**Table 3: Land area distribution of Horticultural holding in the West Midlands**

	Number of farms	Horticultural Area Ha's			
		2010	2006	Change	% change
Smallest Farms	32	147	158	( 11 )	-7%
Middle Group	64	2,122	1,995	128	6%
Largest Farms	32	5,509	3,799	1,711	45%

Source: EFFP: Survey of West Midland holdings 2011



## Case Study – How the natural advantages offered by the West Midlands created a growth opportunity

**PDM has grown dramatically from a standing start in 1990 to being one of the three largest lettuce growers in the UK today in a part of the country not renowned for horticultural production – the North Shropshire Plain.**

Philip Maddocks started growing lettuce and cauliflowers in North Shropshire on 10 acres rented from his father in 1990. Before setting up his business he had worked in the USA and in the UK for large salad growers learning the business and identifying the opportunities in the sector. His family still farm nearby with dairy cattle and arable enterprises.

Despite farming in an area not renowned for horticultural production, the area has perfect free draining soils for salad crops. Prior to their current use much of the land would have been in arable rotation growing sugar beet and potatoes. The farm's location is central to the road networks being no more than 10 miles from the M6 and the Birmingham conurbations making distribution through their dedicated 30 lorry fleet a relatively simple affair.

PDM grew as new customers were attracted. Cauliflower production was an early casualty in favour of expanding the range and volume of salad crops grown. At first Philip concentrated on supplying whole head Iceberg lettuces to wholesale customers. In 1993 the business started to import produce from Spain in order to maintain year round customer supply.

By 2002 the business had started to grow Little Gems and Romaine lettuce in response to customer demand. The customer portfolio had also diversified to include a range of retail as well as foodservice customers. Production increased through a mixture of land purchase and rental agreements with PDM always controlling production. The closure of the local sugar beet factory in 2004, made more suitable land available for horticultural production.

In 2006 the business started to grow baby leaf spinach and the following year invested in a processing facility which has enabled the business to market bagged salads. This development continued this year with the introduction of new crops such as wild rocket and bull's blood chard. PDM now sells mixed leaf salads into Morrisons under the "Little leaf Co." Label.

Today PDM grows around 2,000 acres of crops in the UK and has partnerships with growing businesses in Portugal and Spain importing baby leaf crops from November to March. The season shoulders are managed by PDM to ensure all programmed crops are utilised. The company employs close to 350 members of staff in the UK with the majority of these being overseas seasonal workers.

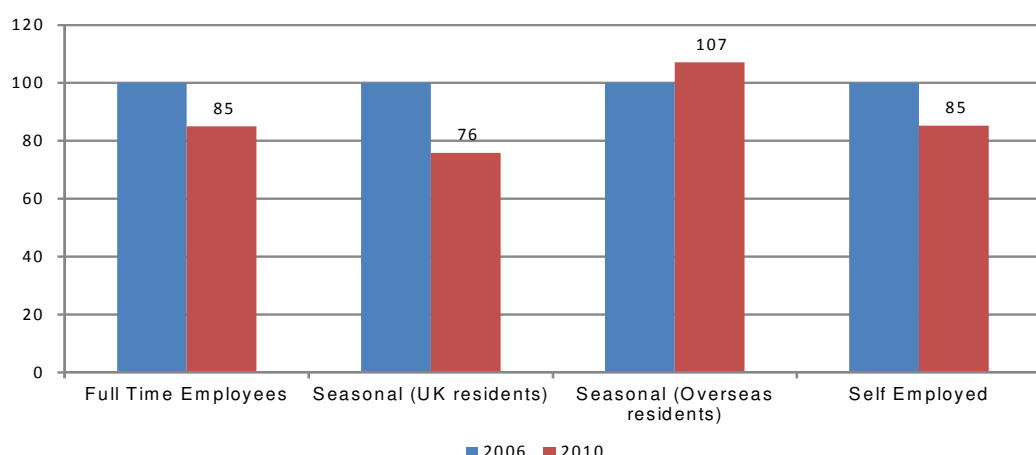
The largest challenges facing PDM include energy costs and water availability. The company has large winter reservoirs but also uses borehole water. All their water resources were challenged by this year's very dry weather in the West Midlands. To mitigate energy costs PDM has invested in PV cells on packhouse roofs which now produce 30% of their electricity requirements.

# EMPLOYMENT

June Survey data quoted in a recent DEFRA review of labour statistics<sup>3</sup> indicates that across England a total of 293,000 annual labour units including family labour is employed on commercial holdings across 8.9 million hectares. Lantra<sup>4</sup> estimate that 116,000 people work in horticulture whereas official figures from the Office for National Statistics estimate 53,550 people are employed in horticulture (excluding potatoes). Based on the ONS data alone even though horticulture occupies 240,000 ha or just 2.8% of the agricultural land area it employs around 20% of the workforce.

Extrapolating the employment data collected in the survey across the West Midlands infers that across the region the sector employs approximately 6,400 people on a full time basis and in addition up to 15,000 people working on a part time basis. In addition an enormous number of people are employed supplying farmers and further downstream in distribution, processing, marketing and retailing. In processing alone around 7,000 people are employed across the region. (See Appendix 4 for further detail).

**Fig 7: Employment Trends - West Midlands Horticulture 2006 - 2010 (Indexed)**



Whilst it is difficult to state the accurate number of people employed by growers it is clear that although the sector relies heavily on migrant and agency labour there are still opportunities for long term careers. Figure 7 uses 2006 as a baseline for comparing the number of people employed by growers in that year with the number employed in 2010. From this we can see that the number of full time employees has reduced by 12%, the number of seasonal employed UK residents by 21% and self employed individuals by 11%. By contrast the number of Non UK seasonal employees has increased by 7%.

Analysis of the survey data in more detail shows that only 8% of respondents have grown their area of horticultural crops and seasonal labour usage by significantly more than the average. Asparagus and soft fruit appear to be the most common crops showing increases in area grown amongst survey respondents and consequent increases in use of seasonal labour.

Looking specifically at the large rise in overseas seasonal labour amongst survey respondents reveals a significant level of consolidation in the region for labour use. The top 25% users of overseas seasonal labour employed 96% of the total overseas seasonal labour and grow around 50% of the total horticultural crop area. For every UK resident seasonal worker there are seven overseas seasonal workers.

<sup>3</sup>Ref: <http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-landuselivestock-june-statsrelease-englandcroplivestocklabour-111024.pdf>

<sup>4</sup>Ref: [http://www.lantra.co.uk/Downloads/Research/Skills-assessment/Production-horticulture-v2-\(2010-2011\).aspx](http://www.lantra.co.uk/Downloads/Research/Skills-assessment/Production-horticulture-v2-(2010-2011).aspx)

## Employment Issues

Respondents to the survey frequently identified obtaining and retaining staff with the right skill level as an area which, if addressed, could make a positive impact on the sector. The particular issues that they felt needed to be addressed included:-

### 1. The need to retain the SAWS scheme

SAWS has helped growers to overcome employment difficulties by providing an ideal contribution to the industry's seasonal labour requirements for the last 60 years. There is generally a poor response from the local population to meeting local, seasonal employment opportunities in the horticulture sector. The horticulture industry continues to do everything it can to maximise the potential of the resident workforce particularly during a period of high UK unemployment although continued availability of overseas workers is considered essential by an overwhelming majority of growers.

### 2. The need to invest in improving skill levels

Lantra<sup>3</sup> state there are relatively few enrolments on qualifications and training in the area of production horticulture. Most young people cite career prospects and training as key determinants of their career choice and so it therefore follows that the horticulture sector is placing itself at a significant disadvantage to other careers where training and promotion are a clear element of the offer made by employers.

The difficulty in recruiting skilled staff is seen as a threat to the sector. A number of respondents considered this problem could be addressed through growing the business, expanding the area grown to supply year round and hence retain staff all year.

Therefore, a sensible response through a combination of training initiatives, including extensive use of apprenticeships, and industry promotion would challenge the perception of horticulture as a undesirable place to work, and encourage young entrants into the sector.

### 3. The need to increase labour productivity

An obvious way to increase labour productivity is to invest in technology that can substitute mechanical power for human effort. Because vegetable planting, harvesting and sorting relies on visual as well as manual dexterity, technology to imitate these skills is expensive to develop and buy. However developments in computing power and robotics together with an increased ability to grow uniform crops will make the technology to carry out the key manual tasks more reliable and affordable.

Apart from the largest growers or contractors who can work machines across several units, machines to substitute for labour are generally unaffordable. There is of course the potential for sharing equipment with neighbours and the Fruit and Vegetable Scheme can be used to grant aid the purchase of some equipment.

### 4. The need to address succession planning

Statistics suggest that over half of working occupiers are aged 55 and over, with almost a quarter aged 65 plus - this is often presented as an acute problem. There is, however, a need to be mindful that there 'may' be a younger influence present in the business (for example, in family partnership arrangements) that is not recognised by the survey system (which focuses on the official head of the holding).

Generally succession issues in horticulture are unlikely to be any different to those experienced across agriculture as a whole. Consequently, whilst the issue is important, horticulture does not deserve special attention. However succession, at the management level, does require attention to the points raised above in relation to skills.

## MARKETS

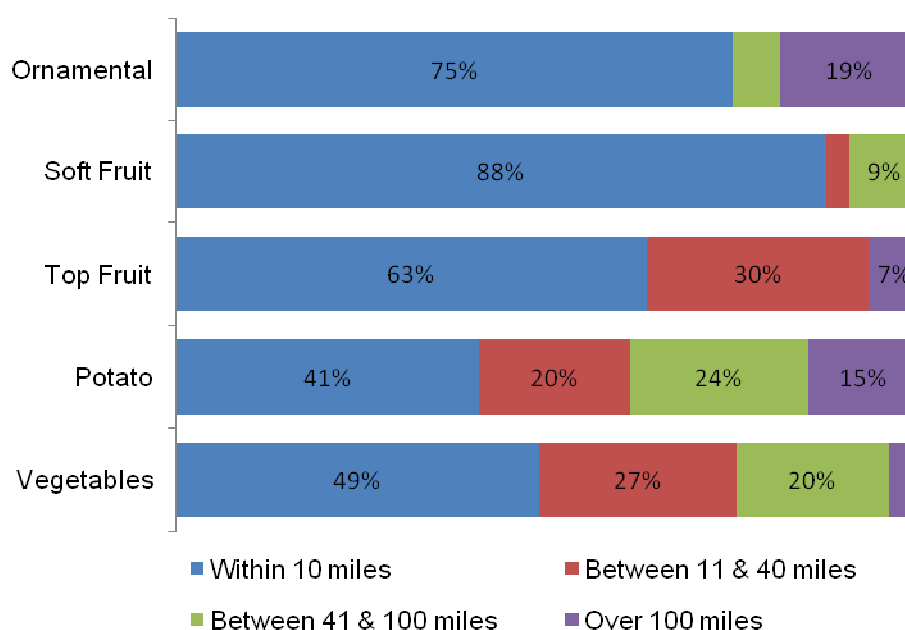
This section of the report considers the extent of food processing in the region; grower organisation, where crops are marketed and the relationships between buyers and sellers. It includes the findings from the grower survey area and findings from a separate packer survey carried out as part of this project who purchase crop which would equate to using 50% of the output from the Defra recorded horticultural area in the region.

Fresh produce clearly needs to reach the market place as quickly as possible in order to avoid deterioration. A whole host of intermediaries and information flows are needed to balance supply and demand. The key channels to market include marketing intermediaries who may provide additional services such as packing and labelling; Producer Organisations; Packers and Wholesale Markets. In addition there are a number of large fresh produce businesses with direct sales routes into the multiple retail sector. This is especially true for soft fruit, protected crops and some field vegetables. The overall picture is extremely dynamic and complex, as illustrated in Appendix 3, and is made up of thousands of individual transactions between buyers and sellers on a daily basis.

A number of nationally significant marketing intermediaries are based in the West Midlands to be central for their distribution across the country as well as being close to an important centre of production. A survey of these businesses and the produce they buy from the region accounted for some 54% of the horticultural area in the region (excluding potatoes).

### Distance from grower to first stage processor

Fig 8: Distance to market for major crop groups



Source: EFPF: Survey of West Midland holdings 2011

The distance from grower to the first stage processor is a good indicator of the quality and quantity of infrastructure within a region and the survey findings reveal that the West Midlands is well served with packing infrastructure in all horticultural sub sectors other than potatoes which on average have to travel 39 miles to a processor.

Figure 8 illustrates the distance to first stage processors for survey respondents. Fresh produce which travels furthest on average include potatoes, field vegetables and ornamentals. Many larger growers will carry out their own first stage packing, especially for more perishable crop.

Soft and top fruit travel the shortest distances with cider makers located in the region taking a significant proportion of top fruit production and many soft fruit grower respondents selling direct to retailers with their own packing facilities on site. However these statistics indicate quite clearly that only a small proportion of fresh produce is processed outside the region. Consequently the value adding activity and employment associated with first stage processing is retained in the region. The critical mass of produce grown sustains this activity together with the central location and proximity to large centres of population.

Appendix 6 has details on the operation and scale of the two wholesale markets in the region. A current study being carried out by EFFP suggests that up to 75% of sales from wholesale markets are of imported produce which means that they are currently of minor relevance to growers in the region.

## Organisation of growers

Close to 40% of survey respondents indicated that they are members of some form of grower group, with 14% of them in Producer Organisations. The low number in producer groups will have been partly caused by the de-recognition of the majority of PO's within the region. This de-recognition denies producers access to EU support funding worth up to 4.1% of turnover to support business development, improve marketing, production efficiency and sustainability. Of equal significance is that close to 50% of respondents are not members of any form of grower group and are effectively acting independently. Given the long tail of smaller growers this is contributing to sector fragmentation and placing many growers as price takers.

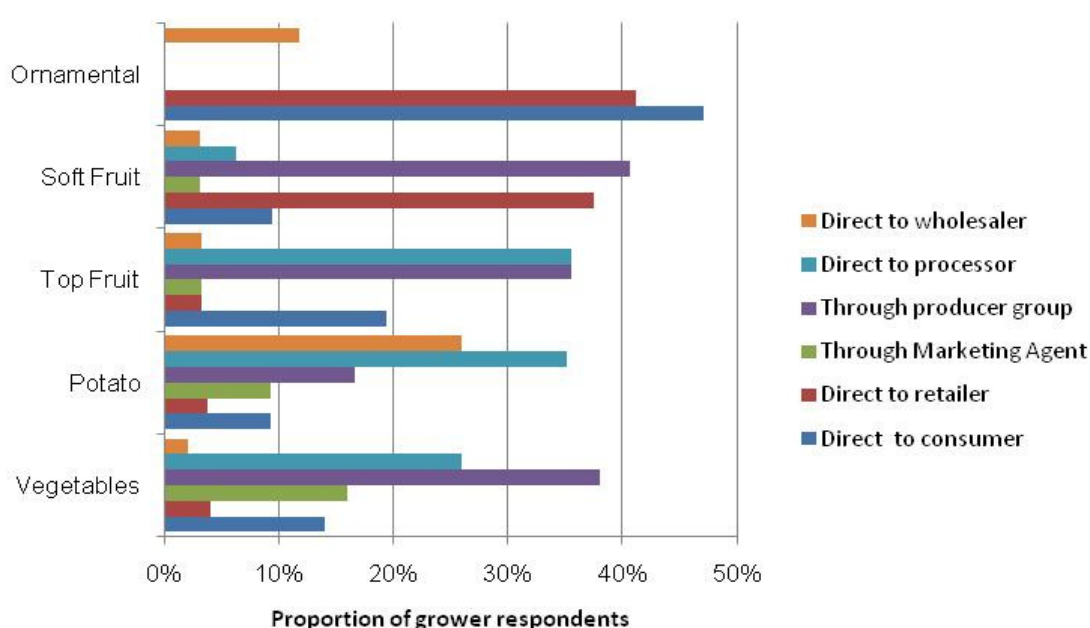
Across the UK, organisation of horticultural production (excluding potatoes and ornamentals) within Producer Organisations (PO's) peaked at around 50% of total production in 2004. Since then the proportion of total production within recognised PO's has declined significantly with the de-recognition of a number of PO's. By 2010 the value of total horticultural production within PO's was less than 35%. Within the West Midlands there were at least four regionally based PO's and at least two others with members in the region. Today it is believed that there is only one recognised PO in the region.

Growers are also members of more informal marketing groups where one member has developed a packing capacity and processes produce from other grower members primarily for retail markets.

## Marketing channels

The supply chain from grower to ultimate customer is complex within the fresh produce sector including a number of different operators with different functions and organisational structures. Grading and packing can be done by grower, Producer Group or Marketing Agent/ Category Manager. In most cases sales to wholesale

**Fig 9: Main marketing channels for horticulture crops in the West Midlands**



Source: EFFP: Survey of West Midland holdings 2011

markets and wholesalers will be made up of supply in excess of retail demand and for supply of produce which is considered of too low a quality for retail sales.

Figure 9 illustrates the range of marketing channels used by grower respondents. The survey recorded respondents' primary route to market and the findings show clear differences between produce sectors:-

For **ornamentals** the key routes to market are direct to retail and consumer with over 67% of produce marketed in this way, with a small number of respondents citing wholesalers as their primary marketing channel.

For **soft fruit** the role of the producer group is much greater with more than 40% of the respondents to this question citing this channel as their primary marketing channel closely followed by direct to retail sales which accounts for over 23% of total sales.

For **top fruit** the most popular primary marketing channels were direct to processor and through producer groups. The former is most likely to be cider apple growers who have individual grower contracts with processors and the latter dessert apple producers.

For **potato** producers close to 25% respondents cited wholesale customers as their primary marketing channel (the largest area for sale to wholesalers amongst all the categories). However the largest proportion of respondents sell primarily direct to processors.

For **vegetables** producer groups are the favourite primary marketing channel, with close to 40% respondents using this route. Evesham is a significant geographic hub for protected edibles and field vegetables (other than potatoes) at trader and consolidator levels with a number of category managers and traders operating out of the area.

A more detailed appraisal of marketing channels and supply chain challenges for the main crop types grown on the region is described in Appendix 6.

## Customer relationships

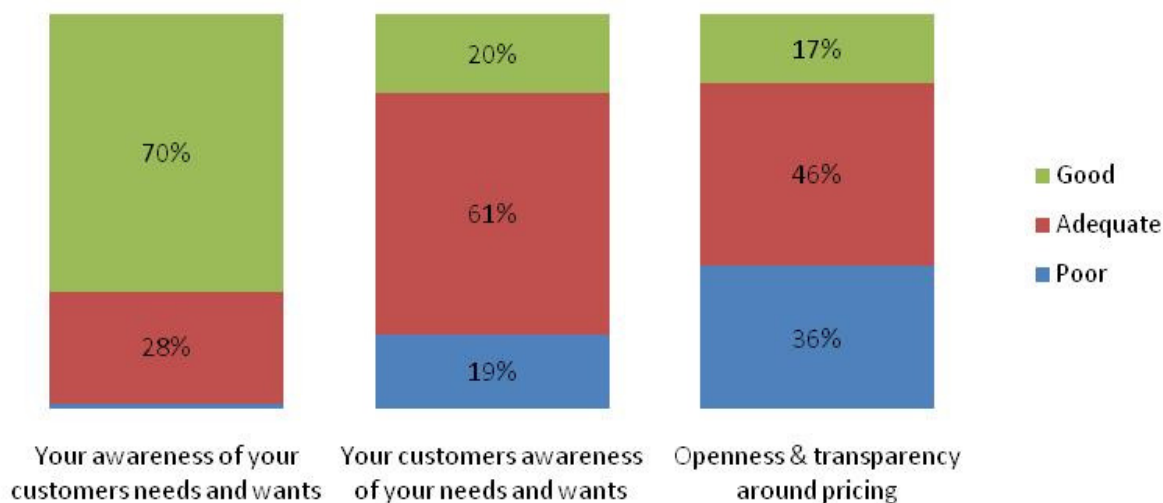
Relationships with customers is a key indicator of the effectiveness of supply chain function. Within recent years the relationship has been seriously tested by retail buyers looking to reduce their procurement costs and applying pressure primarily to the growing base to secure these savings. Fig 10 sets out the survey findings in this area and clearly demonstrates a perceived difference in awareness of needs and wants between growers and their customers<sup>4</sup>. Whereas growers believe they have a very good understanding of their customers needs this contrasts starkly with respondents perception of their customers awareness of their needs and wants as growers. Communication between buyer and grower needs to be improved as only a fifth of respondents believe that customers have a good understanding of their needs and wants.

The picture is still more concerning when considering the degree of openness and transparency around pricing. 36% of growers consider that their supply chains functioned poorly in this area and only 17% of respondents consider their supply chains functioned well in allowing for openness and transparency. However those 17% of growers who considered that their supply chains were transparent and open also reported that their customers were more aware of their needs with 80% scoring this aspect of their supply chain function as good compared to only 20% in the total sample. Respondents who considered their supply chains to be open and transparent are primarily potato and apple producers mainly supplying non retail customers.

Marketing issues provoked comments from growers in two major areas. Firstly 8% of respondents believed that they needed to increase their emphasis on marketing and customer management and secondly 7% believed their businesses would benefit by changing to more direct routes to market.

<sup>4</sup> The customer is assumed to be the buyer of a growers produce. However no attempt was made in the survey to define precisely who the customer is and so by extension use of the term customer could extend beyond the initial purchaser.



**Fig 10: Grower view of customer relationships**

Source: EFFP: Survey of West Midland holdings 2011

Where grower respondents do have more direct contact with retailers and customers (which applies to less than 40 respondents) close to a third of these respondents reported focusing on marketing to make a positive difference to their business in areas such as improving communication with customers on varietal selection, improving product promotion, investing in improved marketing facilities, and developing closer relationships with customers.

Some routes to market require a greater level of commitment from both growers and customers. In general these are crops which take longer to establish such as top fruit and some soft fruit, or crops where there is a high level of investment required in processing capability. Hence crops such as cider apples, blackcurrants and processing potatoes are often grown on long term contracts. Other supply chains offer no commitment but do provide a way to move produce to the market. Competition between intermediaries is an effective way for suppliers to discover what the market will pay. Analysis of the survey responses found that producers are more confident about the future where they are involved in channels where there are stronger ties between the supply chain participants. In other words, producers with no allegiance to a particular supply chain tended to be less confident about the future.

### Wholesale Markets

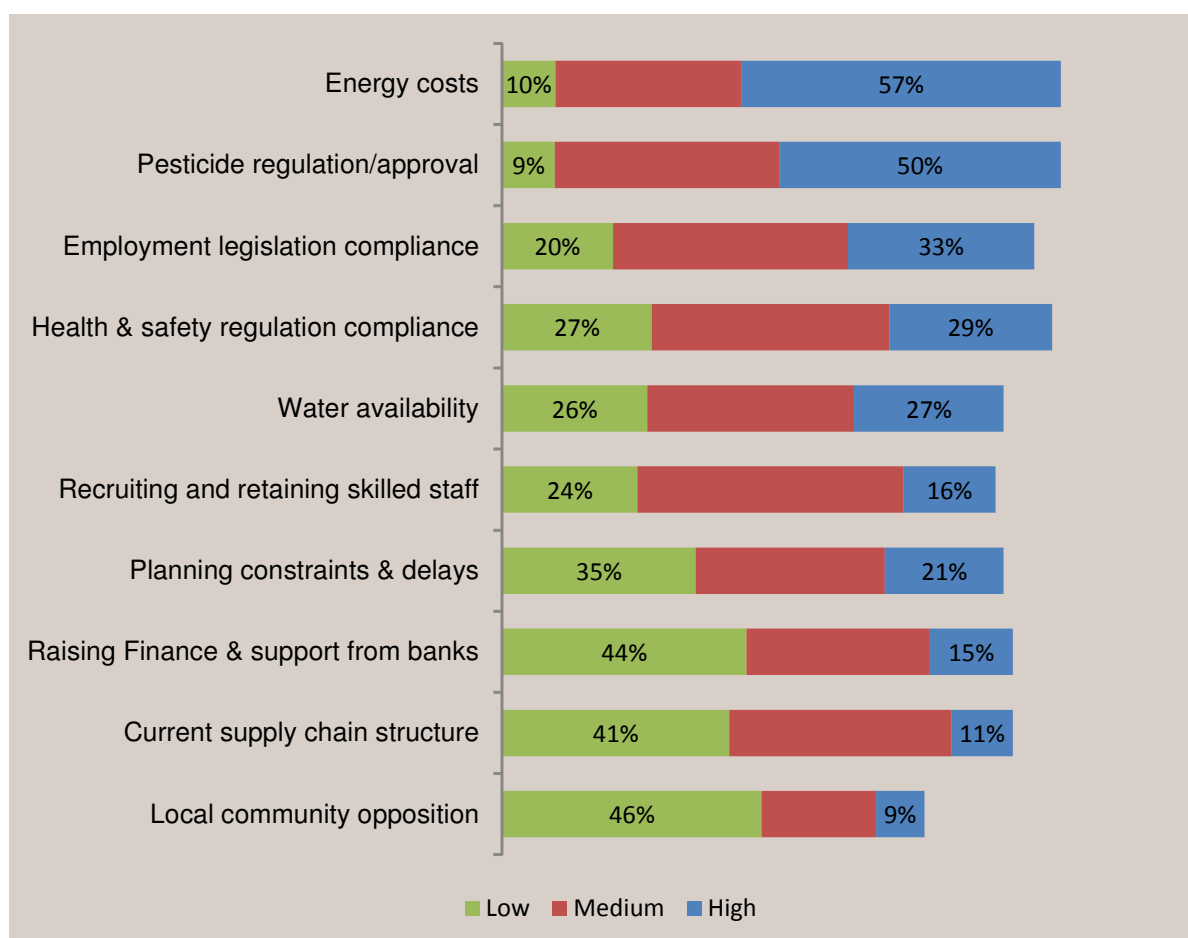
A route to market requiring a relatively low level of commitment is offered through wholesale markets. Within the West Midlands there are produce markets in Birmingham and Wolverhampton. EFFP estimates suggest that no more than 10% of total fresh produce sales at these markets are produced locally suggesting that they are currently of limited benefit to regional growers. Birmingham wholesale market has some 62 fresh produce traders amongst others and has an estimated turnover of some £100 million per annum. Wolverhampton has a much smaller wholesale market and information on the number of fresh produce traders is currently unavailable. For both these markets the future is uncertain. Birmingham City Council are looking to sell the current site with a new market potentially being developed. Wolverhampton Council is considering alternative uses for the current site.

# CHALLENGES

Much research over the past five years has been aimed at identifying the challenges facing the fresh produce sector, most recently the Fruit and Vegetable Task Force and EFFP's report into driving change in the fresh produce sector. These challenges have contributed to a reduction in the self sufficiency of UK production of vegetables over the past decade. They could also lead to further area reductions especially for field vegetables with growers opting for less risky crops such as cereals. Within the West Midlands survey growers were asked to rank a range of different industry challenges in terms of the level of threat they represented to their businesses. The main threats identified (Fig. 11) to business success were those that impact directly on the operational performance of businesses. Energy, pesticide approval and employment legislation were the three largest concerns for growers.

**Energy costs and pesticide regulation/ approval** are unsurprisingly perceived to be the main threats to grower's

**Fig 11: Business Challenges. % of respondents perception of significance of threat.**



Source: EFFP: Survey of West Midland holdings 2011

businesses as they represent a large cost and have a major influence on business performance. The qualitative data shown above in Fig 11 links very closely with the large number of suggestions made by growers (11% of all comments) on how to make a difference to overall business performance in the area of energy costs.

## Water availability

The challenge of water availability is not perceived as highly significant as compliance with regulations and legislation but growers are keen to investigate how to improve their position in relation to water security. 8% of all comments on making a positive difference focus on investment to extend and improve the efficiency of utilisation of water including irrigation and reservoirs.

## Case Study – How Reducing energy costs and solving a waste problem is being addressed by Evesham Vale Growers

*Turning waste from a cost into a resource will be the result of this pioneering development which will result in all the products from the anaerobic digester being used within one business and be the first AD plant for a mixed salad business in the UK.*

Evesham Vale Growers (EVG) is a fresh produce business growing tomatoes, spring onions and courgettes in the Evesham vale. The Company also markets tomatoes for other growers in the Vale and lists Sainsbury's among their customers. Their tomatoes are grown hydroponically within their 34 acres of glasshouses. Of course they are seeking to reduce energy costs but the driving force for the project to install an anaerobic digester on site came primarily from their rising waste disposal bill which costs over £2,500 per week for spring onion waste alone.

The Company has recently received planning permission to build the 1.4 MW plant costing around £4 million; which will be able take between 25,000 and 30,000 tonnes of suitable waste per year. In addition to the production of electricity the plant will also produce around 9 million KW of heat which will be used to heat a nearby 12 acre glasshouse on site. This will save around £30,000 per acre in annual gas costs. The estimated yearly production of 23,000 tonnes of digestate will be used on EVG's farms meaning that the company will be less reliant on fertilisers made from fossil fuels.

Once established the plant will be eligible for the Feed in Tariff (FIT) which will be 13p for the first 500 KW's and 9p per KW thereafter. With these payments in place payback for the plant, which should have a minimum 20 year life, will be seven years.

A portion of the feedstock for the plant will be fresh produce waste. In addition EVG intend to use maize within the feedstock and farm yard manure from cattle finished on their farms fed partly on their fresh produce waste. David Shepherd the Commercial Director for EVG is open to discussions with other local fresh produce businesses with waste disposal issues as this plant will be able to produce renewable energy from feedstock which growers may currently be paying to place in landfill.

### Planning constraints and delays

Planning constraints, delays and costs inhibit the modernisation and development of a sector with high growth prospects. Greater awareness of the social and economic importance of the sector is needed. This will require all parts of the sector to work together with coordination from and between organisations that represent growers and by individual growers helping one another. The sector needs representation and engagement with planning departments and committees to ensure its importance to the region is fully recognised.

There is a need for the planning processes to keep up with technological and market trends so that growers can adopt a flexible approach to re-use of redundant buildings or installing new technologies such as AD plants. However, it is not as simple as making the planners understand the issues. It is a process that also involves communities and hence also needs to gain their trust and understanding.

Vegetable processing is considered to be manufacturing a product. Because of this it is far more difficult to achieve planning permission than for a development in what is considered to be straight forward agriculture. Planning applications to house migrant and seasonal workers in temporary accommodation often cause consternation in local communities.

Clearly growers need to work in partnership with their local communities and planning authorities but a well organised group of community activists can cost tens if not hundreds of thousands of pounds and put the future of jobs at stake. In future industry stakeholders will need to support the sector both in individual planning applications and in the strategic level pursuit of policies that are designed to help businesses grow.

## Grower confidence

A lack of grower confidence in their marketplace has been highlighted by many studies as a key contributory factor to the decline in production with many growers citing lack of customer commitment as a constraint on their ability to invest. The survey carried out in the West Midlands found that growers are most confident about finding and keeping customers and least confident about achieving a viable price with close to 90% of respondents either very worried or concerned about this (Fig 12). This finding duplicates those of the EFFP national survey of growers conducted in 2009/2010. Meeting customer specifications is a concern for around 50% respondents. However for those growers who consider their supply chains to be most transparent and open, less than 60% are concerned about achieving a viable price. This group also has a much higher level of confidence around finding and keeping customers and are marginally more confident in their ability to meet customer specifications.

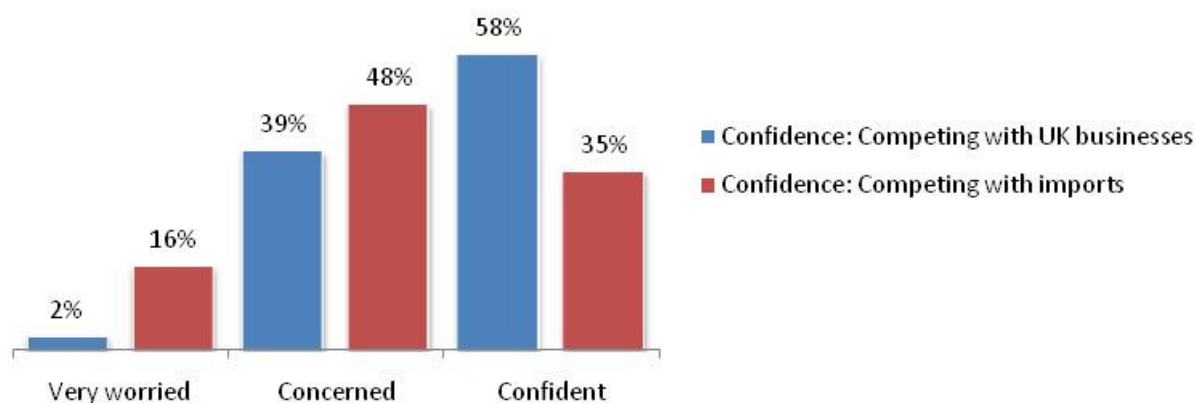
**Fig 12: Grower Confidence in customers and pricing**



## Confidence in grower competitiveness

Growers on average are much more concerned about competing with imports than other UK businesses (Fig. 13) with some 35% only of respondents confident in their ability to compete effectively with imports compared to 58% respondents believing they can compete effectively with other UK businesses. Further segregation of the sample found that growers who consider their supply chains to be more transparent and open have higher levels of confidence in their ability to compete with other UK businesses and imports. More than 70% of growers in this group are confident in their ability to compete successfully with imports and 69% are confident of their ability to compete with other UK businesses.

**Fig 13: Grower Confidence in competitiveness**



## Case Study – How innovation, differentiation and a focus on quality built a strong market proposition

**Who'd have guessed that the fastest crisps in the world are made in Herefordshire? This year, Tyrell's who introduced premium crisps to the UK consumer, have broken the record for the fastest crisp processing in the world with crisps being delivered from field to customer in 45 minutes.**

The Chase family were traditional arable farmers in Herefordshire until 2002, when they decided they wanted to add value to their main crop to improve business margins. Will Chase then set off to research how to make and sell crisps visiting key manufacturers around the globe.

On his return the family started to test recipes in the farmhouse kitchen from where the Tyrell brand was born. The region has a strong tradition of supporting local food producers with a staunch network of outlets for producers and so naturally their first customers were local shops in Herefordshire and surrounding counties. Recently sales are expanding at 40% per annum including a quadrupling of exports over the past few years. In today's economic climate this is impressive growth for a product which commands a significant premium in the marketplace. However the Company still retains close linkages with local food outlets, so much so that it was the Ludlow Food Centre which received the record breaking crisps delivery.

The ethos of the business is, quite simply, to produce the best quality crisp possible. To help with this the family work with a 10 strong local producer co-operative who grows specific potato varieties to exacting specifications. It is this attention to detail that enables Tyrell's to leave the skin on the crisps which gives them their authentic and characteristic appearance.

Whilst the Chase family no longer own the business one of the keys to their continued success is product authenticity and integrity. All the crisps are made on the farm site in Herefordshire with all operations carried out here. The business employs a relatively small staff of 110 people. Alongside their enthusiastic focus on quality production the business has also carved out a niche amongst its target customers for being fleet of foot with new products coming to market within eight weeks. This has allowed them to introduce new flavours for the different seasons and to mark significant events.

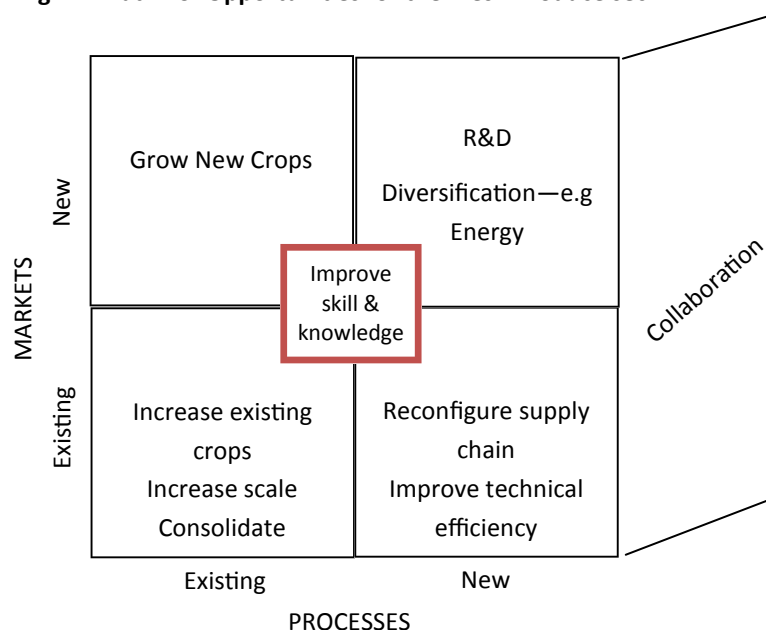
Production is on a human scale too. Their kitchen has eight kettles which fry 50 kg batches of sliced potatoes in 7-9 minutes depending, as Oliver Rudgard the Marketing Director says, on the individual quirks of each kettle. These eight kettles are now working very hard on a four shift system producing 50% more crisps than they did last year.

Tyrell's use around 10,000 tonnes of potatoes per year at the moment and with current levels of expansion predicted to continue for the foreseeable future it is easy to see that this business will take a bigger slice of Herefordshire's 180,000 tonne potato crop. Being successful in today's highly competitive market-place makes it increasingly important to ensure your products supply chain is robust and agile. Tyrell's achieve this by keeping tight control of all parts of their supply chain but nothing is as important as making sure that the basic ingredient, the potato, is perfect for crisping.

# OPPORTUNITIES

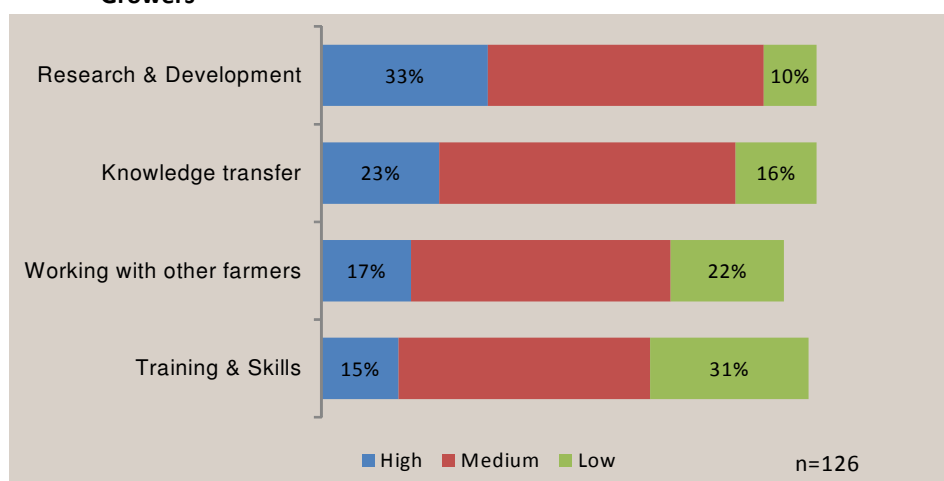
Opportunities within the fresh produce sector are many and varied and can be divided between those relating to improving or adapting operational performance (processes) or exploiting market opportunities. Any opportunity will tend to be very specific to individual businesses depending on the resources at its disposal and the knowledge or information and skill of both managers and operatives (Fig 14). It follows that successful businesses are those that both understand market potential and can produce in the most efficient way adopting new technology as appropriate. In each of the dimensions shown in Figure 14 the possibility also exists to work collectively with other growers or other parts of the supply chain.

**Fig 14: Matrix of Opportunities for the Fresh Produce sec-**



The survey was used to explore growers attitudes towards improving skill and knowledge and working with other businesses in the supply chain. Growers were asked to assess the importance of four pathways to support business development. The four areas investigated were: training and skills; research and development; working with other farmers and knowledge transfer. Figure 15 illustrates how growers ranked these four pathways. Research and development was expected to deliver the greatest impact on business development whereas, by comparison, training and skills would have the least impact on business development.

**Fig 15: Importance of business development pathways perceived by Growers**



Source: EFFP: Survey of West Midland holdings 2011



Further segmentation of this data into large and small farms indicate that :

- Larger farm businesses give more priority to training and skill development than smaller ones. 56% of small farms thought training was high or medium priority whereas the corresponding figure for large farms was 78%.
- There was no difference of opinion between large and small farms on the impact of working with other farmers
- 93% of large farms and 86% of small farmers felt that increasing research and development would have either a large or medium impact on the performance of their businesses
- A similar result was reached in relation to knowledge transfer

Larger farms tend to be more positive overall towards each of the four pathways although it should be born in mind that these are just general observations based on averages. There are many small farm businesses that rate the importance of these pathways as high or higher than several large businesses.

Growers made very little mention of any of these areas other than working with other farmers in their own suggestions for making a positive difference to their businesses, although there were many comments on improving efficiency which will presumably require an element of research, training and knowledge transfer.

## Case Study – How innovation and research created value

**The Chinns at Cobrey Farms are pioneers in the asparagus field – leading the way to extend the season for this quintessentially English crop.**

The Chinn family have been farming in Herefordshire for generations. Like many farms in the county they used to run a mixed livestock arable farm until the late 1990's when the business moved more into fresh produce growing potatoes and onions. At this time the business also peeled and sliced onions for the Foodservice sector in the West Midlands.

A significant turning point for the business occurred in 2002 when the cold stores and processing facilities were destroyed by fire. This caused the business to take stock and based on a rigorous assessment of the economics of onion growing compared with alternative land use options. The decision was made to stop growing and processing onions and find a new more profitable crop to grow. John Chinn researched his relatives who were already growing strawberries in polytunnels which gave him the idea of growing asparagus in a similar way. At this time it was a field crop available for little more than 6-8 weeks from England. Following research in South America and southern Europe the family started growing and conducted trials to find suitable varieties and growing techniques to extend the season.

Cobrey Farms now produces around 27% of all the asparagus produced in the UK. For Herefordshire it is now a major business employing over 1,000 people to grow, pick, pack and distribute the crop which is all sold to major retailers in the UK. The family's pioneering spirit is still strong with the business employing its own expert agronomist to conduct growing and variety trials.

They also work with Cranfield University to solve the challenge posed by diffuse pollution from their free draining soils. One outcome of this has been the installation of grass waterways in many fields where run off is an issue.

As well as leading the way in terms of innovation and sector research the family are meeting the demand challenge head on. John Chinn says: "the largest opportunity in the asparagus sector at the moment is to increase production to match demand increases. For Cobrey Farms the shoulders of the season are a significant production target. This year for the first time we will have asparagus available in the period from August to November". They are investing in land to grow asparagus and working with other growers who want to get involved with this exciting crop.

## Making a positive difference to growers businesses

A key part of this project is to drive change in the fresh produce sector though identifying what is holding the sector back and finding out from growers themselves what their solutions could be. In the survey growers were invited to propose two ideas that would make a positive difference to their business. In total 165 different comments were received. Any idea mentioned more than ten times is set out in Table 4 and Appendix 7 sets out a more complete analysis of the responses.

Quite a few of these activities are being suggested in order to counter challenges in the areas of energy costs, water availability, achieving a viable price and improving competitiveness against imports. Given recent price increases, media attention and the focus on climate change it is perhaps unsurprising that the issue of energy costs is the number one issue on producer's minds.

**Table 4: Collated qualitative Responses to question "What would make a positive difference to your business?" In order of frequency of response**

Category	Number of responses
Investment to improve energy use efficiency including renewables	18
Making more effective use of inputs	17
Investment to extend and improve the efficiency of utilisation of water including irrigation and reservoirs	14
Increased emphasis on marketing and customer management	14
Invest in improved machinery leading to reductions in use of resources such as labour and improved operational efficiency	12
Changing varieties grown	12
Changes to routes to market – more direct	11
Expand to take advantage of economies of scale (machinery, input purchase and labour)	10

The need to address irrigation concerns has implications for public policy as well as at a purely farm level. Addressing cost pressures through making more effective use of inputs or by achieving economies of scale through expansion or by using modern labour replacing machinery are recognised as being important.

The need to address market concerns varies amongst different segments of producers. For example further analysis of respondents suggesting an increased emphasis on marketing and customer management are those who, in the main, already have more direct customer relationships. Those considering more direct marketing are currently selling through others or to wholesalers/ processors.

This prioritised list provides a useful starting point for further initiatives to support sector development.

## CONCLUSION

The West Midlands region has natural advantages for the production of fresh produce that few other regions can match. It is centred within and close to areas with high population density and located in the centre of the country with good links to all major transport networks. Furthermore it has soils and climate that suit fresh produce production and established networks of growers and processors that can facilitate expansion.

The sector in the West Midlands is exceptionally dynamic and responsive to market demand as evidenced by the development of asparagus, potato, fruit and no doubt other enterprises. But producers are frustrated with rules and regulations that prevent them from growing and developing their businesses at a faster rate. The deregistration of producer organisations by the EU, planning delays and demands, legislation on pesticide use and the controls on employing labour are burdens that have impacted heavily on this sector and are expected to continue to do so in the foreseeable future.

A consequence of this is that smaller producers generally find it difficult to grow and develop their businesses. Larger businesses with more management resource and who find it easier to afford professional support are probably not held back to the same extent but they generally find that public bodies stifle rather than stimulate.

In comparison to other agricultural sectors like cereal and dairy which produce a limited number of very homogenous products the fresh produce sector is the complete opposite. There is enormous variety in the crops that are grown and in the ways that they are produced and marketed. This makes the task of analysing and commenting on the sector difficult. What is appropriate advice for a potato farmer in Staffordshire probably won't even be relevant to a strawberry grower in Herefordshire. It is therefore unlikely that generic advice and support to the industry will be effective. However, planning, marketing, employment, training, and investment are issues common to all classes of grower. The following pages of this report address these common issues.

Competition from imported produce will continue to weigh on British growers, underscoring the need for clear and relevant R&D and communication channels at each level of stakeholder engagement. Likewise, attracting highly skilled workers and graduates to horticulture must be a high priority given the often misguided depiction of a stagnant industry and the current heavy reliance on migrant workers.

It is very clear from this study that horticulture is important to the economy of the West Midlands and has responded positively to market demand. However the significant challenges identified by producers and described in this report cannot be ignored and change is needed. For things to change someone or something has to start acting differently. With this in mind, and based on the findings of this report, eight key actions that will benefit everyone in horticulture across the region have been identified. These are set out overleaf and it is hoped that they will galvanise the industry to build on current success.

# AN ACTION PLAN FOR CHANGE

Set out below are the key actions that the authors and the report steering committee believe are necessary to promote the competitiveness and sustainability of horticulture and potato growing in the West Midlands. Good work is already being conducted by growers, processors, industry bodies and other key stakeholders to help sustain the sector. However, more can be done to support the sector where the marketplace is not working efficiently. Mainly it is up to the industry itself to address these issues but the recommendations below also indicate how and where the public sector and others can help.

## 1 Support grower cooperation and build effective supply chain partnerships with transparent pricing mechanisms across all crops

Growers will not invest in production assets unless they are confident that reward will outweigh risk. The most stable and confident enterprises are those where growers, processors and manufacturers work together to create and share value and have a high degree of certainty with pricing.

### Current Activity:

- Industry bodies and key stakeholder engagement with growers and processors nationally to support the development of supply chain partnerships
- Existing examples in cider, potato and some soft fruit supply chains
- PCL benchmarking cost of production in UK and Western Europe

### Future activity:

- Encourage broader and deeper participation by growers and processors in supply chain partnerships. Involve more growers across a greater number of crops.
- Industry bodies should research and promote effective supply chain partnership working.
- Demonstrate via the use of case studies best practice in this area
- Make available templates and pricing models that can be adapted to individual supply chain needs that reflect costs and risk at all stages. Scope for Industry bodies such as NFU to benchmark performance

## 2 Make sure the West Midlands takes full advantage of the EU Fruit and Vegetable Scheme

Derecognition of Producer Organisations by the RPA has left many producers bewildered. However, it is possible to qualify and improve profits if the scheme rules are followed correctly. If National and EU competitors make use of this scheme and growers in the West Midlands do not, this will create a serious competitive disadvantage for them. Support is needed to help derecognised producers comply with the scheme and enable new groups to successfully apply.

### Current Activity:

- NFU support for derecognised POs with the RPA
- EFFP advice to POs on formation and recognition issues

### Future activity:

- Growers via representative bodies such as the NFU working with government bodies to increase eligibility
- Awareness raising amongst growers of the benefits of the support available through the scheme
- Support to develop horizontal collaboration leading to the formation of compliant Producer Organisations

### 3 Create greater awareness of the employment opportunities the sector provides and retain SAWS to safeguard the production of high value crops.

The sector needs reliable and flexible labour to cope with seasonal demand and the survey points to serious limitations for many growers if the SAWS scheme ends in 2011 as proposed. The proposed successor to the SAWS scheme requires industry and political support if it is to come into effect.

#### Current Activity:

- NFU working with industry partners have negotiated scheme extension until 2013

#### Future activity:

- Successor scheme proposed by NFU and stakeholder partners to be promoted to government
- Proactive response by labour providers
- See next recommendation #4

### 4 Ensure high quality training, appropriate qualifications and career development is a cornerstone of horticultural business plans

Horticulture is technologically advanced, expanding and in need of a dedicated and skilled workforce. If the industry offers rewarding long term opportunities to individuals it will attract and retain the talent it needs to remain competitive and grow. Making more use of apprenticeships and working closely with specialised colleges should be encouraged.

#### Current Activity:

- Several local colleges are able to provide apprentice scheme
- Management training available via Management Development Services a consortium of grower groups

#### Future activity:

- Awareness raising amongst growers of the opportunities and benefits provided by apprenticeships
- Greater dialogue between growers and colleges to increase the awareness of opportunities in the sector at all levels amongst undergraduate students
- Endorsement and development of specialist qualifications
- Increased scope for using Web2.0 technologies for virtual interaction between key stakeholders

### 5 Exploit all forms of renewable energy where it is economical to build long term sustainable competitive advantage

Energy policy is being shaped by climate change and projected cost increases. Many horticultural businesses working alone or with other growers have an opportunity to take advantage of government incentives and developments in renewables technology. Case studies, study tours and links to specialist advice will enable the sector to develop the knowledge and confidence to adapt to this opportunity.

#### Current Activity:

- Plethora of private and public bodies providing advice and support on conservation and generation of energy
- PCL benchmarking sustainability initiatives

#### Future activity:

- Links from the bodies responsible for delivering advice in this area into the network of organisations who traditionally provide support to the sector
- A role for PCL And HDC is to promote examples where good practice has been adopted in the region –

## 6 Increase water storage capacity and ensure efficient usage of water by adopting best irrigation practice.

Expansion of horticulture and the predicted impact of climate change on UK weather patterns will increase reliance on irrigation. More water storage will be required and more attention on irrigation techniques that allow better use of water.

### Current Activity:

- Raising awareness of the potential impact of climate change on water requirements
- Advice and support on water conservation

### Future activity:

- Enhanced knowledge transfer knowledge from primary research into practical recommendations
- Raise awareness and promote examples where good practice has been adopted both in the region and globally
- Prioritise investment for the development of storage

## 7 Make certain that individuals with responsibility for planning are fully aware of the social and economic benefits of developing the sector.

Planning constraints, delays and costs can inhibit the modernisation and development of a sector with high growth prospects. Greater awareness of the social and economic importance of the sector is needed. This will require all parts of the sector to work together with coordination from and between organisations that represent growers and by individual growers helping one another. The sector needs representation and engagement with key stakeholders including planning departments and Local Enterprise Partnerships to ensure its importance to the region is recognised and that it can access a fair share of government support.

### Current Activity:

- Reform of UK planning law

### Future activity:

- Raise awareness amongst policy makers of the current and likely future importance of the sector in the West Midlands and its ability to increase regional GVA
- Educate growers on impact of proposed changes to planning law
- Case studies of good community and planning authority engagement for grower use

## 8 Build strong partnerships with organisations responsible for research and development and work closely with regional higher education institutions

Government cuts have progressively dismantled many of the organisations and networks that supported agronomic research & development and knowledge transfer. More investment is needed to sustain success. Much of this can take place at a national level but colleges, universities, consultants and growers in the region should attempt to coordinate their activity to avoid duplication and ensure that resources are used in the most efficient and effective way. Practical field trials, discussion groups, access to experts and engagement along the supply chain are needed to facilitate rapid adoption of technology.

### Current Activity:

- HDC & PCL levy funded research – including cross sector research on topics like soils or renewables.
- Larger growers funding their own R&D
- Corporate supply chain R&D (e.g. McCain and Pepsico)
- West Midlands Fresh Produce Forum

### Future activity:

- The West Midlands Fresh Produce Forum to take a lead on regional research bringing growers and researchers together to resource identified research needs
- Continued TSB/Levy funding opportunities for Horticulture (specific to SME's)
- Local funding initiatives for research on minor crops
- Improved knowledge transfer activities





Appendix 1: Summary of survey data

		Herefordshire	Shropshire	Staffordshire	Warwickshire	Worcestershire	Grand Total	Proportion
Category	Crop							
Fruit	Apples	275.8	0.0	1.0	0.0	169.7	446.4	6.0%
Fruit	Strawberries	178.2	20.2	65.0	0.0	3.2	266.7	3.6%
Fruit	Raspberries	58.2	6.9	1.0	0.0	2.6	68.7	0.9%
Fruit	Blackberries	10.5	0.0	1.0	0.0	0.0	11.5	0.2%
Fruit	Blackcurrant	153.0	0.0	1.0	0.0	0.0	154.0	2.1%
Fruit	Blueberries	17.5	0.0	0.0	0.0	0.0	17.5	0.2%
Fruit	Top & stone fruit	28.2	0.0	0.0	0.0	94.6	122.8	1.7%
Total Fruit		721.5	27.1	69.0	0.0	270.1	1087.7	14.6%
Ornamental	Bulbs and outdoor flowers	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Ornamental	Hardy nursery stock	5.3	36.0	0.0	25.1	99.0	165.4	2.2%
Ornamental	Protected ornamentals	0.0	0.0	0.0	9.3	3.8	13.1	0.2%
Total Ornamental		5.3	36.0	0.0	34.4	102.8	178.5	2.4%
Total Horticulture		1450.5	1802.6	504.6	206.4	126.3	4090.4	55.0%
Vegetables	Potatoes	364.2	0.0	1.8	3.0	122.2	491.2	6.6%
Vegetables	Asparagus	11.3	0.0	0.0	0.0	298.7	310.0	4.2%
Vegetables	Brassicas	0.0	169.7	0.0	0.0	20.0	189.7	2.6%
Vegetables	Carrots	4.9	0.0	0.0	0.0	51.0	55.9	0.8%
Vegetables	Cucurbits	0.0	0.0	0.0	0.0	40.9	40.9	0.6%
Vegetables	Herbs	38.4	0.0	0.0	0.0	40.5	78.9	1.1%
Vegetables	Hops	44.5	0.0	0.0	0.0	252.9	297.4	4.0%
Vegetables	Legumes	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Vegetables	Mushrooms	0.0	9.7	0.0	20.2	0.4	30.4	0.4%
Vegetables	Onions	0.0	8.9	0.0	0.0	0.4	9.3	0.1%
Vegetables	Parsnips	0.0	0.0	0.0	0.0	20.9	20.9	0.3%
Vegetables	Tomatoes	0.0	0.0	0.0	0.0	412.5	412.5	5.5%
Vegetables	Salads	0.0	0.0	0.0	0.0	136.5	136.5	1.8%
Vegetables	Spring Onions	2.8	0.0	0.0	0.0	1.0	3.8	0.1%
Vegetables	Vines	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Total Vegetables		466.2	188.3	1.8	23.2	1398.1	2077.7	27.9%
Total Horticulture		2,643	2,054	575	264	1,897	7,434	

Appendix 2: Value of West Midlands Horticulture by crop group and county

Value of Primary Agricultural Output within the West Midlands 2009

Area	£/T	Potatoes 1		Fresh Produce	
		Area	Tonnes	Area	£ total
Herefordshire		4872	238184	591	426,12
Worcestershire		756	36960	11,648	4,963,361
Warwickshire		1408	68835	3 079	25,858,185
Shropshire		5649	276170	84	8,263,869
Staffordshire		2342	114496	19,393	6,441,451
West Midlands		14996	733129	15,116	5,954,353
			14,770,036	13,973	51,481,219
			94,769,145	120,813	

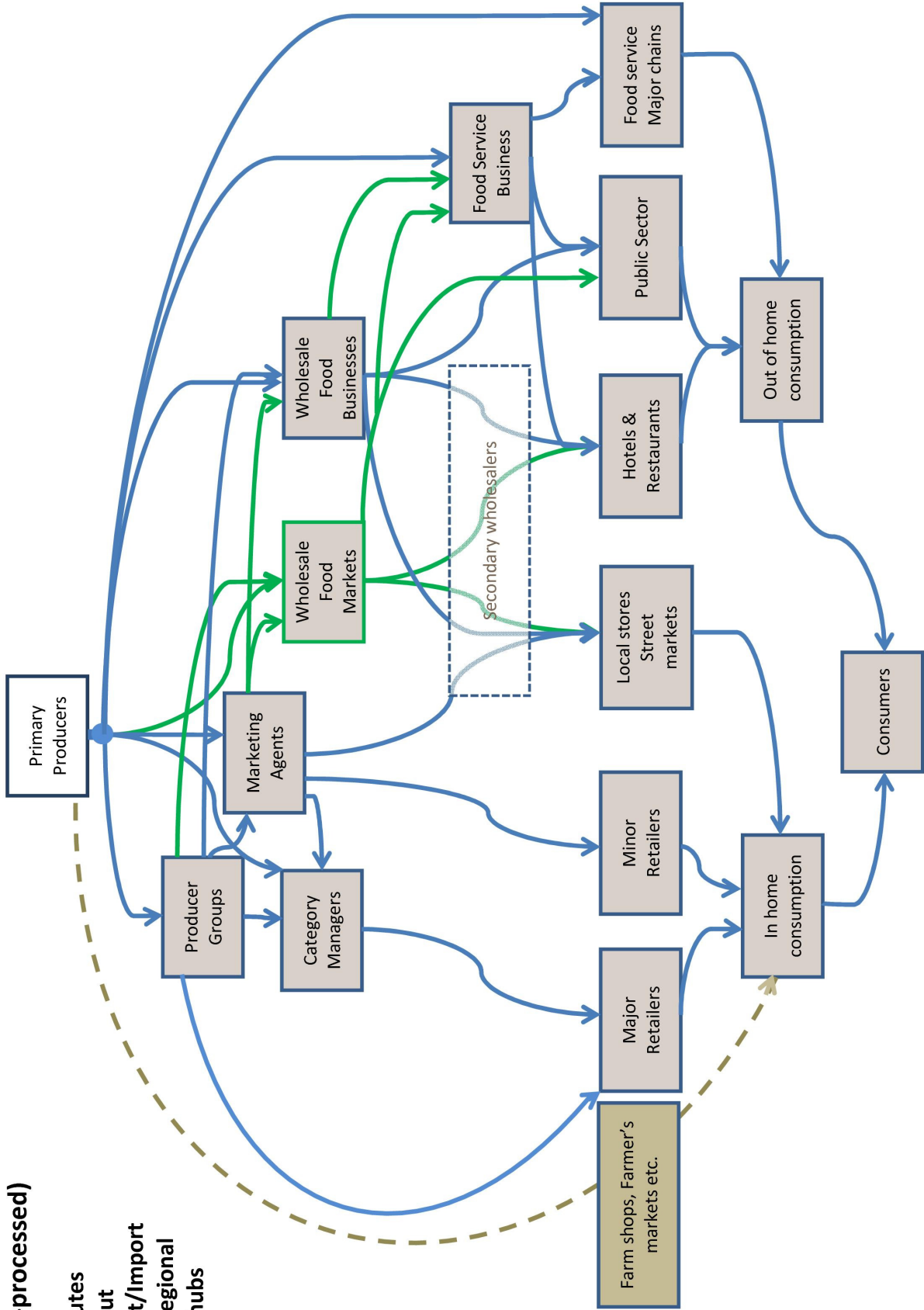
1, Potato Price DEFRA Price Series for Potatos, Eggs  
Poultry, Eggs, Butter, Cheese & potatoes

Area	£/T	Fruit		Ornamentals	
		Area	Tonnes	Area	Value £
Herefordshire		5 632	80684	136	10,093,534
Worcestershire		1 297	18581	189	14,027,044
Warwickshire		235	3367	152	11,281,009
Shropshire		144	2063	144	10,687,271
Staffordshire		296	4241	110	8,163,888
West Midlands		7 679	108935	731	54,252,745
			148,747,899		

Appendix 3: Summary map of the range of supply chains for fresh produce

# UK Fresh Fruit and Vegetable Supply Routes (non-processed)

All routes  
without  
Export/Import  
and Regional  
food hubs



# Appendix 4:

## Gross Output and Gross Value Added for UK and West Midland Horticulture Primary Production and Food Manufacturing 2009

	Farmgate				Food Manufacturing				Consumer (UK)	
	West Midlands		UK		West Midlands		UK			
Area 000 ha		source		source		source		source		source
Fruit	8.17	1	28.56	3						
Vegetables	8.24		124.53	3						
Potatoes	16.5	1	130	4						
	32.91		283.09							
<b>Output (£mill)</b>										
Potatoes	81.9	1	940	4	149	10	1710	5	3,528	6
vegetables	82.1	1	1054	3	521	11	6694	5	6,929	6
Fruit	127.0	1	567	3	326	12	1454	5	6,457	6
Plants and flowers	90.2	1	700	3					3,328	7
	381.21		3,261		996		8,404	5	20,243	
<b>Gross Value Added</b>										
£ mill	202		1,728		393		3,320			
%	53%	2	53%		39.50%	13	39.50%			
<b>Employment</b>										
People Employed	6,400	8	53,000	9	7,348	14	62,000	5		
Output per employee	59,564		61,528		135,556		135,556			

### References

- 1 Defra: Structure of the industry in the West Midlands
- 2 Extrapolated from - Farm Business Survey 2009 - <http://www.farmbusinesssurvey.co.uk>
- 3 DEFRA: Basic Horticultural Statistics 2010
- 4 The Potato Council - <http://www.potato.org.uk/industry/supply-chain>
- 5 ONS, Annual Business Survey 2007 - Section C Manufacturing
- 6 ONS, Family Food Survey 2009
- 7 ONS - Family Spending 2009 Edition
- 8 EFFP - Heart of Horticulture 2011 (full time employees)
- 9 Survey of Agriculture & horticulture 2009
- 10 Assuming 6% of UK production and manufacturing
- 11 Assuming 7.7% of UK production and manufacturing
- 12 Assuming 22.3% of UK production and manufacturing
- 13 Assume proportion value added is on par with UK average
- 14 Assume number employed is pro rata with UK average

## Appendix 5: Markets

### BIRMINGHAM MARKET

<b>PRODUCT TYPES AND SPECIALITIES</b> Composite market with fresh produce, meat, fish and poultry (largest integrated wholesale market in England)		<b>NUMBER OF TRADERS/UNITS</b> 62 fresh produce traders 6 meat traders 6 poultry traders 20 fish traders 235 units
<b>OWNERSHIP</b> Birmingham City Council	<b>OCCUPANCY LEVEL</b> 65% (spare units let for storage)	<b>SUPPLIER CATCHMENT AREA</b> All of the UK
<b>KEY ISSUES</b> Birmingham City Council says it costs £2.8 million to run the market but receives only £1 million short of this figure in income when the market is fully let.  The site, being in the centre of Birmingham, is worth an estimated £70-80 million for redevelopment  Promotion of the market is a key issue for the tenants	<b>FUTURE PLANS</b> There are BCC plans to sell off the site early 2013. Plans for the development of a new market in a different location are unclear at present.	<b>TURNOVER</b> Estimate of £100 – 150 million
<b>MARKET CHARACTERISTICS/LAYOUT/CONDITION/ETC</b> There has been little investment in the market in the past 5 years and it is in need of modernisation and repair, in particular the roof. It is 37 years old	<b>EMPLOYMENT</b> More than 1,000	<b>CUSTOMER MARKETS AND CATCHMENT AREA</b> Mostly Midlands and north. Estimated 13,000 customer visits each week
<b>TENANTS' ASSOCIATION DETAILS AND MEMBERSHIP</b> Reasonably strong tenants' association	<b>ESTIMATE OF LOCAL PRODUCE SUPPLIED INTO THE MARKET</b> Estimate about 10%	<b>POTENTIAL SYNERGIES AND CLUSTERING WITH OTHER MARKETS</b> It is in the same customer and supplier catchment as markets at Derby, Wolverhampton, Nottingham and Leicester

Appendix 5 (Cont'd)

**WOLVERHAMPTON MARKET**

<b>PRODUCT TYPES AND SPECIALITIES</b> Mostly fruit and veg		<b>NUMBER OF TRADERS/UNITS</b> 28 units 7 warehouses Growers and fish stands 6 traders
<b>OWNERSHIP</b> Wolverhampton City Council	<b>OCCUPANCY LEVEL</b> About 75%	<b>SUPPLIER CATCHMENT AREA</b> Mostly imports – products sold cannot be grown locally
<b>KEY ISSUES</b> Lease renewals (short term) are due in September.	<b>FUTURE PLANS</b> Possible market relocation	<b>TURNOVER</b> Did not know
<b>MARKET CHARACTERISTICS/LAYOUT/CONDITION/ETC</b> In need of modernisation and investment	<b>EMPLOYMENT</b> Not sure but < 100	<b>CUSTOMER MARKETS AND CATCHMENT AREA</b> Localised, serving primarily ethnic groups
<b>TENANTS' ASSOCIATION DETAILS AND MEMBERSHIP</b> Small provincial market with a relatively weak traders group	<b>ESTIMATE OF LOCAL PRODUCE SUPPLIED INTO THE MARKET</b> Fairly small < 10%	<b>POTENTIAL SYNERGIES AND CLUSTERING WITH OTHER MARKETS</b> Worried that tenants will move to Birmingham market (they have both links and conflict with them)

## Appendix 6: Supply chain overview of significant fresh produce crops within the West Midlands

Within the West Midlands there are a number of sub sector supply chains of significance. Due to their national importance they will be looked at individually. They are soft fruit, asparagus, cider apples, mushrooms and potatoes.

### Blackcurrants

The blackcurrant supply chain is dominated by Glaxo Smith Kline (GSK) who purchase more than 90% of all UK blackcurrants for Ribena production. Very few blackcurrants are sold at retail level and there are only very limited alternative markets to GSK for blackcurrants, with the only other blackcurrant processor also located in the West Midlands. GSK market Ribena on its UK provenance and hence it is vital that they have a secure UK supply. Eight growers in the West Midlands are responsible for around 35% of total UK production. Produce is juiced at Thatchers contract juicing facilities in Somerset. Blackcurrant growers have individual production contracts with GSK which are renewed on a regular basis. Blackcurrants are a long term crop with significant investment in new plantations required every ten to twelve years with a two to three year lag period before blackcurrants reach peak yields. This high level of commitment and requirement from GSK for UK fruit produces interdependence between grower and processor underpinned by long term agreements.

### Strawberries

The region is well known for strawberry production with a number of large scale strawberry growers marketing direct to retail. In addition to large scale businesses marketing direct to retail there are other growers based in the region who market through one of two Producer Organisations based in the South East & East of England. It is estimated that the soft fruit sector (excluding blackcurrants) in the West Midlands contributes close to £28 million in added value from farm gate to consumer. Strawberry production has greatly benefited from investment in new varieties and extending the growing season through the use of polytunnels. So much so that now for a small number of weeks in the year UK production exceeds demand and overall the UK is 73% self sufficient in strawberries compared to 12.1% self sufficiency for all fruit. This is now creating new challenges for strawberry growers who are seeking to identify ways to differentiate their product offers to the market. Unlike blackcurrants there is no significant demand for UK strawberries outside the retail market as a result of the varieties grown and production cost.

### Cider apples

Cider apples are grown primarily for processing with UK supplies boosted by commodity apple juice purchased from around the world and surplus culinary apples from other parts of the UK. The West Midlands is home to the largest UK cider manufacturer and the transformation of apples into cider takes place completely in the West Midlands.

The region benefits from the presence of a juicing facility at Ledbury which is state of the art and capable of pressing over 100,000 tonnes apples in a 12 – 14 week period. Defra statistics suggest that there are around 6,000 hectares of cider apples and perry pears in Britain and the EFFP packer survey estimates that at least 65% of this total area is located within the West Midlands with one major national and a number of smaller regional cider manufacturers in the region. The major manufacturer negotiates long term supply contracts with growers based on an area and volume calculation with agreements in place for 30 years. This provides significant stability and longevity to production planning in a sector where long term planning and commitment are essential.

### Asparagus

The West Midlands has been able to benefit from the deep free draining soils in part of the region to increase production of this high value crop and to employ technologies to allow for the growing season to be extended from the traditional March– July period to include a new period from August to November. Within the West Midlands over 65% of all English asparagus is grown with the crop currently occupying some 820 ha predominantly in Worcestershire. The crop turns over more than £20 million per annum for West Midlands growers. UK consumer demand for asparagus is currently increasing by around 12-14% per annum with UK production rising at around 7% per annum. Whilst demand increases outstrip UK production imports will continue to be the predominant source of supply with South America being a major supplier. Investment in asparagus growing is



significant with plants remaining in the ground for 10 years and research work ongoing into varieties which will enable the season to be extended in conjunction with polythene cloches and polytunnels.

### Potatoes

The supply chain structure for potatoes is split into businesses growing potatoes for the retail market (either as prepack or loose potatoes) and those businesses processing potatoes into products such as crisps and chips.

The West Midlands region is a significant producer of potatoes especially in Herefordshire and Shropshire producing more than 13% of the UK's production. Unlike most field vegetables a significant proportion of potatoes grown in the UK are destined for further processing rather than for the pre-pack destinations. The table below shows the destinations of the region's potato production.

**Table 1: Potato Utilisation in the West Midlands**

Market sectors	Production tonnes
Fresh bags	42,095
Fresh chipping	97,909
Pre-pack	149,433
Processing	369,958
Other Ware	63,930
Seed	6,749
<b>Total</b>	<b>733,129</b>

Source: PCL

Close to 50% of total production is processed with growers producing on contract. In addition there is a small area of seed potatoes produced in Shropshire. Despite the significant level of production in the region there are few significant potato processors in the region, apart from a chip factory Nr Wolverhampton, This adds to the transport costs for this supply chain from the region.

### Mushrooms

Mushrooms have been included in this section as they require significant investment and within the West Midlands there are two fresh produce growers involved in this sector who together produce more than 10% UK mushrooms. Table 2 illustrates the current market balance for mushrooms in the UK.

**Table 2: Market Balance for Mushrooms in the UK 2010**

	Volume (T)
Home Production Marketed (HPM)	69,300
Imports	98,277
Exports	715
<b>Total Supply:</b>	<b>166,862</b>

Source: Basic Horticultural Statistics, DEFRA, 2010 provisional

UK retailers are increasingly specifying a requirement for UK produced mushrooms, which will require investment on the part of UK growers to increase production from the current historic low point of production. Production has dwindled as a result of the past strength of sterling which made imported mushrooms a more cost effective option for retailers. The crop is capital intensive but has a relatively short production cycle which has meant that production moves to lower production costs areas relatively easily with Poland being the current source of increasing volumes of mushrooms as they invest in the infrastructure needed with EU support.

**Appendix 7: Collated qualitative Responses to question “What would make a positive difference to your business?” In order of frequency of response**

<b>Category</b>	<b>Number of responses</b>
Investment to improve energy use efficiency including renewables	18
Making more effective use of inputs	17
Investment to extend and improve the efficiency of utilisation of water including irrigation and reservoirs	14
Increased emphasis on marketing and customer management	14
Invest in improved machinery leading to reductions in use of resources such as labour and improved operational efficiency	12
Changing varieties grown	12
Changes to routes to market – more direct	11
Expand to take advantage of economies of scale (machinery, input purchase and labour)	10
Improvements and increases to storage facilities	9
Improvements in operational efficiency	9
Working with other growers on such areas as machinery sharing, marketing, input purchase	7
Improve effectiveness of staff usage	7
Improving grading capacity	5
Extending crop seasons including R and D	5
Increase yields	4
Focus on diversification / added value (farm shop, chicken production)	4
Better matching of crops to customer requirements	4
Changing from machinery ownership to hiring in	2



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