



Worcestershire
Local Enterprise Partnership

Worcestershire
Horticulture Strategy
2016 - 2025



Executive Summary

The Worcestershire Local Enterprise Partnership (WLEP) has been tasked to drive growth of the local economy to provide over 25,000 jobs and increase the value of the local economy by £2.9 billion by 2025. Agri-Tech has been identified as a key growth area for the Strategic Economic Plan (SEP) of the WLEP; the horticulture industry is a key player in the local economy, contributing over £33m annually. Development of the horticulture sector will greatly assist in the delivery of the ambitious goals of the SEP, and the Worcestershire Horticulture Strategy has been formulated to promote growth and expansion of local horticulture businesses. In addition, there are significant opportunities to address other areas of the SEP, particularly the cross-cutting priorities of environmental sustainability, technology and innovation, and to interact with SEP programmes for sustainable sites and premises, skills for growth, alongside numerous targets of the European Structural Investment Fund (ESIF) program. These have been highlighted where possible to support the breadth of the SEP deliverables through development of the local horticulture industry.

Horticulture in Worcestershire is heterogeneous, covering the vegetable, top, soft fruit, ornamental and protected edible sectors. Whilst each sector faces its own complement of challenges, there are unifying themes that should be targeted for intervention. The WLEP Horticulture Strategy has been developed from the response to questionnaires and telephone interviews with seven leading Worcestershire horticulture businesses. In addition, three key national organisations at the executive level were also interviewed and their views were sought on the relationship between national and regional strategies for the development of the horticulture industry in Worcestershire.

The overarching view of the industry is that growth of the sector will be promoted by a regional capital grant support for innovation, in addition to assisting growers in business development and access to larger-scale funding streams (e.g. RDPE REG or LEADER grants). Local support could also be delivered through the relaxation of planning law related to new production system infrastructure and repurposing existing farm buildings, and providing targeted business development support. This should be coupled with improved focus on knowledge exchange to facilitate business self-evaluation and the uptake of industry best practice to drive enhanced productivity and efficiency. Lastly, focused interventions to address the costs of labour provision and to mitigate the effects of shortages in skilled labour, particularly of seasonal workers, will continue to enhance resilience in the industry.

Britain's withdrawal from the EU, "Brexit", is liable to exacerbate labour availability and impact funding availability, while increases in the cost of imports will offer an opportunity for enhanced availability and marketing of UK horticulture products. In addition, links within the strategy were identified for recently established national Agri-Tech centres of excellence, but these primarily focus on arable and livestock segments of the Agri-Food landscape. The WLEP strategy is therefore timely, because in the absence of substantive central government funded innovation or business development support, or obvious links with recently established Agri-Tech centres, there has never been a greater need to aid this vital industry at a regional level at a time when considerable opportunity for growth is likely to evolve over the coming decade.



WLEP Horticulture Strategy Theme Summary

A breadth of challenges and opportunities for horticulture in Worcestershire were identified and were used to formulate a strategy that integrated the aims of the SEP while focusing on local horticulture. The strategy is split into four inter-locking themes which identify the problems, solutions and actions for growth:

1. Investing for Development

Economic barriers to development can prevent businesses from utilising new technology or expanding operations to improve productivity. Improving grower's access to investment streams will deliver direct potential for growth and support the underlying aims of the SEP. To address this, it is proposed that a **Horticulture Growth Fund** is established to provide targeted investment in the sector. This will provide a buffer against currency fluctuations and the loss of EU funds post Brexit to producer organisations, but also act as a catalyst for growth, especially if import substitution becomes increasingly cost effective. In addition, sympathetic application of planning regulations for the development and expansion of infrastructure should be promoted.

2. Promoting an Environment for Growth

Traditional marketing models (i.e. into supermarket trade) are under increasing pressure due to changes in consumer behaviour. Growers can realise significant growth by using high-quality, specialist products to target novel marketing routes. Intervention and investment will be required to promote expansion into new areas and exploit this opportunity.

3. Labour Provision and Development

Labour availability is already a significant problem for growers, and this is likely to be intensified by "Brexit". Labour provision also carries a significant cost and this will continue to increase through uptake of the living wage. Action should be taken to mitigate the effects of labour provision to ensure sustainable development.

4. Promote Knowledge Exchange

Despite increasing consolidation, the industry remains fragmented and practice is highly variable. Knowledge Exchange (KE) within the industry should be promoted to enable benchmarking evaluations of best practice and empower growers to instigate bespoke strategic plans for business development. Furthermore, there is scope to join with similar "horticulture significant" LEPs and produce a concerted way forward to encourage innovation and sector expansion for UK fresh produce, which is crucial for societal health and wellbeing.

Overall, the next decade will offer a breadth of challenges and opportunities for the horticulture industry, and targeted localised support will enable local businesses to alleviate difficulties caused by the changing economic and political environment while realising the opportunities and helping to deliver the economic aims of the SEP by promoting the growth of a strong local sector. Implementation of the horticulture strategy will realise measurable results within the 10 year time-frame of the SEP, but will also establish the framework for longer-term, sustainable development within the industry to promote economic growth and job creation over the following decades.



Objective

To promote an Agri-Tech Horticulture sector strategy for the Worcestershire Local Enterprise Partnership (WLEP) and to inform the Strategic Economic Plan (SEP). The strategy will be used to facilitate economic growth, encourage investment and create lasting sustainable employment for Worcestershire.

About This Document

This strategy has been developed as the result of an evidence-based review of the horticulture sector which is a primary industry for Worcestershire. Targeted questioning and responses for key sector stakeholders including local growers and industry bodies was used to promote the strategic needs of the industry at a regional level.

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Introduction

Horticulture is a primary industry for the Worcestershire region, contributing £33m¹ to an industry with a farm gate value of £1.8 billion². The value of the industry to the region has led the Worcestershire Local Enterprise Partnership (WLEP) to include the Agri Food-Tech sector as one of three key sectors in its Strategic Economic Plan (SEP). The SEP aims to grow the Worcestershire economy by £2.9 billion by 2025 by supporting growth in key economic areas. Compared with home-grown produce, UK fresh produce imports exceeded £4.92 billion indicating that there is significant potential for growth that could be realised within the UK, particularly as the devaluation of the pound as a result of “Brexit” makes UK-grown produce increasingly competitive. Sales of fresh produce continue to show strong increases: products such as strawberries, raspberries, broccoli and fresh herbs show double-digit growth in annual sales³ as a continued diversification of the British palate and renewed focus on healthy, locally-grown produce drive increased market uptake. Developing the horticulture sector in Worcestershire will enable local businesses to exploit this trend and will assist the WLEP in delivering the SEP by stimulating growth of a priority sector.

Horticulture is a diverse industry, covering a range of edible and non-edible crops produced in a range of growing systems from open field to entirely enclosed soil-less culture (i.e. hydroponics). A unifying theme is the demand for high-quality, sustainable local produce that can be marketed at high value to a consumer that promotes fresh, nutritious and healthy food. Producers face a complex range of challenges including energy costs, labour access, pest and disease challenges, supermarket price pressures and increasing regulatory pressures that must be addressed while maintaining competitiveness against imported produce. Continuous innovation will be required to respond to these challenges, but limited access to technical and financial support to drive positive change has hindered the sector’s ability to exploit new opportunities for growth.

Growth of the horticulture sector has the potential to make a substantial contribution towards realising the economic targets of the SEP. In addition, sector growth can be directed to address several cross-cutting themes of the SEP, including environmental sustainability (through increased resource use efficiency or accessing renewable energy sources) and technology/innovation (by applying innovative crop technologies such as LED lighting systems). These also feed into numerous thematic objectives of the European Structure Investment Fund (ESIF) Growth Program, including low carbon systems, environmental protection and SME competitiveness.

This strategy has been formulated to compliment the objectives set out in the SEP by identifying key opportunities in the horticulture sector, and the barriers that are currently hindering development. Development of the horticulture sector has the potential to not only increase economic output from primary producers, but will have downstream effects on related industries such as Agri Food-Tech and manufacturing industries (e.g. automation), logistics (cool chain systems) and food processing. Local business development also has the potential to address cross-cutting areas of the SEP and priorities of potential funding streams and these have been highlighted as relevant.

¹ Heart of Horticulture, NFU, nfuonline.com, accessed 24th September 2016

² Defra Horticulture Statistics 2014, gov.uk, accessed 24th September 2016

³ Fresh Produce Journal, fruitnet.com, accessed 24th September 2016

Horticulture in Worcestershire

A breadth of produce is grown in Worcestershire as a result of a combination of factors including soil, microclimate, market access and historic farming legacies. Building on the existing success of horticulture in the region should be prioritised in order to maximise economic benefits and drive sustainable economic growth. A number of key crop groups are showing significant growth indicating strong opportunities to realise growth in the local horticulture sector. A specific example can be found in asparagus: free draining soils have encouraged asparagus production with over 350ha of land in Worcestershire producing over 28% of the English crop⁴. Asparagus is showing strong market growth (13% in 2015⁵), with demand outpacing supply: import value exceeded £46 million against home production of £27 million in 2014⁶ indicating strong growth potential. Similarly, Worcestershire has a strong provenance for strawberry production: the UK market value saw growth of 12.6% in 2015⁵ but home production of £244 million is offset against imports of £130 million⁶. Strawberries have benefited from shifting consumer behaviour increasingly treating them as a snack option in addition to dessert food, and the industry is continuing to increase production through the application of new technology such as microclimate modification in polytunnels. Worcestershire and the midlands also contribute over 65% of the UK's output of cider apples, giving considerable added value through down-stream processing that occurs in the county. Established growers in the region also output a broad range of other produce, including tomatoes and salad vegetables grown under glass, ornamentals and field vegetables.

Opportunities for the horticulture sector to develop are numerous, and Worcestershire is well placed to exploit them. Worcestershire is well connected to all major UK markets, with virtually all major cities reachable within 4 hours by road, with ready access to rail freight terminals and deep water ports. This is reflected by a strong local supply chain with numerous food logistic business operating out of the area and this not only provides ready market access for locally-grown produce, but also supports the importation and distribution of non-UK produce that can be used by growers to support their continuity of supply out of season. Additionally, numerous processors have established in the county, providing alternate markets for produce e.g. cider from apples.

The commercial drivers for increased productivity are significant, and the role horticulture has to play in achieving the economic growth outlined in the SEP is significant. This strategy has been prepared to promote the sustained development of the horticulture industry in Worcestershire. A breadth of challenges are faced by the horticulture industry, some of which are only approachable at the national level (e.g. legislative issues surrounding plant protection products) and this strategy will focus primarily on the areas where there is potential for the WLEP to add value to local businesses. However, the potential to support development of overarching themes will be highlighted wherever possible.

⁴ Heart of Horticulture, NFU, nfuonline.com, accessed 24th September 2016

⁵ Fresh Produce Journal, fruitnet.com, accessed 24th September 2016

⁶ Defra Horticulture Statistics 2014, gov.uk, accessed 24th September 2016



Strategic Analysis

A review of cross-sector primary producers and industry stake holders (e.g. grower associations and levy boards) has been used generate a consolidated view of the position of the horticulture industry and the opportunities and barriers to growth. While the industry is diverse in its outputs, a core set of common themes are identifiable in this context.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Infrastructure and facilities (glasshouses, pack houses), including supply chain logistics • EU Fruit and Veg Regime’s Producer Organisation Scheme that has spurred significant capital investment • Location and access to markets, short distances to a range of customer bases • Local climate and soil type • Availability of labour • Broad and established local grower base • Active business involvement with a strong willingness to grow and improve current the economic situation • Comparably low land prices with other growing areas of the UK 	<ul style="list-style-type: none"> • Cost and availability of labour, particularly of seasonal workers and as a result of implementing the National Living Wage • Cost and availability of growing resources, including energy and water • Difficulty in bench marking performance against industry standards • Limited knowledge exchange between growers and stakeholders • Limited cooperation in the marketing of produce or resource acquisition • Availability of capital for investment • Availability of space to develop existing holdings
Opportunities	Threats
<ul style="list-style-type: none"> • Increasing customer demand for locally grown, low-carbon, high-quality fresh produce. • Sustainable sources of renewable energy, eligible for RHI payments or Feed in Tariffs. • Potential higher cost of imported fresh produce with volatile exchange rates • Consumer pressure for local produce and lowered carbon emissions from efficient growing systems. • Emergence of innovative technologies to drive production efficiency, lower costs or improve capacity to give high quality outputs e.g. “smart” systems using integrated sensors and autonomous vehicles/robotics. • Access to new marketing routes and the ability to exploit continued consumer demand for novel, speciality or niche produce. • New speciality cultivars to better suit production method or customer demand • The evolving economic situation as a result of “Brexit” e.g. new markets, weakened pound • Industry and market consolidation 	<ul style="list-style-type: none"> • Reducing pool of crop protection products needed to maintain quality and yield • Lack of suitable replacement for EU Producer Organisation program after “Brexit” • Reduced labour availability post-Brexit, particularly of seasonal workers. • Significant and growing risk from pest and disease resistance. • Water conservation pressures and the need to protect aquifers • Continued ability to obtain a viable price for produce (e.g. price pressure from supermarkets), compete with imports and retain current customers • Changes in the energy market or water security increasing production costs • Issues arising from residential growth overlapping with horticulture businesses • Vulnerability to changes in demand or production costs from narrow overheads • Negative economic impacts of “Brexit” • Industry and market consolidation

Emergent Themes

Of the threats and weaknesses outlined above, five key emergent themes are evident across the sector that relate to the ability of growers to sustain competitiveness and promote business development. These are summarised in order of precedence below, although the extent to which these are relevant vary between subsector and business scale. For example, large businesses with greater yield outputs are more likely to be able to secure supermarket contracts and therefore may show increased resilience to variation in market conditions.

Theme	Description
Availability and Cost of Labour Provision	The labour requirement of the horticulture industry is considerable and subject to large seasonal variation. The availability of suitably skilled labour is already difficult as a result of the end of the Seasonal Agricultural Worker Scheme (SAWS), and uncertainty of the effects of “Brexit” on migrant worker availability is likely to exacerbate this problem. Labour represents a significant proportion (generally >50%) of total costs to growers, and the effects of the National Living Wage has exacerbated this further.
Availability of Plant Protection Products	A primary cross-sector concern is the availability of suitable Plant Protection Products (PPPs) in the face of increasingly restrictive legislation, evolving resistance and the emergence of new pests and diseases. The inability to effectively control the incidence of disease, pests or weeds will increasingly hamper the industry's ability to grow high quality produce profitably.
Market Access and Customer Relations	Changes in customer behaviour, particularly supermarkets, has led to some concern that farm gate prices are under increasing pressure to buffer reductions in market value. Established supply chains for existing customers may require adjustment to broaden customer access.
Potential to Invest	Access to new technologies can carry prohibitive costs, or the lack of suitable land for expansion can prevent growers from investment in long-term business development and maintain competitiveness. This may restrict access to new technologies, or limit grower’s capacity to take benefit from economies of scale by expanding existing facilities.
Resource Provision	The cost and availability of resource provision (water security, gas/electricity wholesale costs) are of concern to some growers, but this is more specific to certain sub-sector crops such as protected or field vegetables.
Knowledge Exchange	Limited exchange of information between growers and industry stakeholders restricts the uptake of new technology or implement best practice. A lack of industry-standard benchmarking data limits growers' ability to conduct evaluations of their business efficacy. The flow of knowledge within a business in the form of staff training is also important, but can come at considerable cost in smaller business, and is compounded further by the ability to retain staff and the lack of new entrants into the horticulture sector.



Integration of the opportunities, current sector weaknesses and threats to further development of horticulture in Worcestershire has led to the identification of five key themes where the WLEP can add value. While these represent distinct areas for intervention, there are unifying themes between them that will further empower local horticulture business to develop and assist the WLEP in realising the goals set by the SEP. The strategy has also been written to accommodate changes in the economic or political environment that may occur over the next decade, particularly as a result of “Brexit”. By highlighting critical areas of risk for business growth and ensuring that the business infrastructure is preserved (e.g. demonstrate the importance of a replacement for SAWS to national government) action can be taken to make sure horticulture sector is as robust and resilient as possible. Additionally, changes implemented at the national level such as the publication of DEFRA’s Food and Farming Plan and the government’s response to assuming responsibility for roles formerly occupied by the EU (e.g. pesticide regulation) will need to be responded to on a regional level. This strategy has been formulated to be inherently flexible to allow expansion to suit a changing landscape, while continually developing foundations for local business development. In summary, it is the goal of this strategy to promote growth in the horticulture sector by supporting growers in three key objectives:

- **To maintain competitiveness and increase resilience to market variation**
- **To increase productivity, improve production efficiency and enhance sustainability**
- **To expand and diversify customer bases, and consolidate existing customer relations**

1. Investing For Development

Horticulture is an industry where production is currently heavily reliant on manual labour to ensure that high quality fresh produce reaches the consumer in a clean and attractive format. This is particularly relevant given that the significant growth in the market for washed, prepared and pre-packed produce demanded by the increasingly time-limited consumer. To further improve the efficiency of the industry, however, the use of mechanisation and the introduction of new technologies is being increasingly adopted for direct planting of modular seedling plugs at sowing to automated washing, grading and packaging machines for harvested produce.

Crops such as tomatoes and fresh herbs can be grown in entirely artificial environments using clean soil-less culture i.e. hydroponics, low energy light emitting diode (LED) lighting systems to extend the growing season and carbon dioxide (CO₂) enrichment derived from efficient on-site combined heat and power (CHP) systems and which is used to boost yields by up to 20-30% and improve fresh produce quality. Different sectors of horticulture will require investment in different areas, but common themes can be identified in the nature and benefits that could be realised through a targeted investment strategy to improve production efficiency and competitiveness, and these are summarised in the table below



Category	Description
Resource Use & Efficiency	Resource creation or utilisation methods that enhance the efficiency of use, lower costs of provision or increase the sustainability of production. This will include new on-site CHP or anaerobic digester plants, irrigation technologies or biomass boilers. These can lower provision through reduced applications, lower cost or subsidies (e.g. Renewable Heat Initiative) or increased productivity such as LED crop lighting.
Production Efficiency	Technologies that reduce labour inputs, increase capacity or can realise increased economies of scale. Technology to automate processes of planting, harvesting or spraying or monitoring/control systems (e.g. enhanced sensor use and modelling of data for systemic review) or increasing/upgrading capacity (e.g. packhouses). Increased production efficiency can be realised through lower labour inputs and/or increased outputs in terms of produce yield quantity or quality.
Innovation	Application of emergent technologies to support production. Examples such as automated produce grading, non-contact pest control measures, post-harvest storage equipment or automated picking systems represent innovations in the application of new technology to the horticulture sector. These offer increased resource or production efficiency, or the opportunity to improve product quality e.g. slowing post-harvest declines in product quality. The use of new cultivars to better suit customer demands or in response to pest/disease problems also represents a route for innovation.
Marketing & Managerial	Investment in training and mentorship of business owner operators in strategic planning, marketing and customer management has the potential to increase grower resilience by providing access to new markets or improved relations with existing customers. This may also cover facilities to better manage staff activities to improve production efficiency, and enabling growers to broaden their marketing perspectives e.g. developing their own marketed brand. This will also address training aspects are discussed below in Promoting Knowledge Exchange .

Key Problems

1. Availability of Capital Investment

The provision of new facilities can carry costs that can severely restrict the potential from growers to implement strategic developments. This is particularly relevant to smaller growers in lower value sectors and can act as a significant barrier to expansion or implementing innovative technology. Growers may be unable to access available funds, or may be unaware or unable to apply for existing funding opportunities. This will be significantly exacerbated if the EU Fruit and Vegetable Regime Producer Organisation Scheme is not replaced post “Brexit” in 2019.

2. Availability of Space

Growers may not have space on existing holdings, or may be unable to exploit the available space through planning restrictions or the lack of funds to develop them. This may restrict the potential for growth, or increase reliance on non-local facilities (e.g. offsite packhouse storage).

Solutions

Direct intervention through investment in capital projects would enable growers to overcome barriers relating to the lack of capital investment. A **Horticulture Growth Fund** could be established to support growers seeking to develop their business in line with one of the four themes discussed above. Investment could be made on a 50:50 intervention rate up to a maximum of £500k, and the process could represent a single, streamlined access point to a range of funds both local and national/EU (e.g. RDPE REG or LEADER grants), or promote growers to implement measures to unlock capital either from the banking sector or systemically retained profits.

Coupled with the **Horticulture Growth Fund**, businesses could also be provided with a mentorship program to help them develop a 5 or 10 year strategic plan. This would operate in tandem with a benchmarking and critical evaluation of the business on a case-by-case basis that would be supported by the activities of the Knowledge Exchange Hub discussed in **Promoting Knowledge Exchange** below. Strategic planning could also focus on assisting growers to expand to satellite sites. Those growers that have already developed all available land may face challenges when expanding production to new sites that may not be adjacent to existing holdings, and focused planning to assist growers with new off-site developments would expand the potential from growth with the potential to create new employment opportunities in areas of the country with access to a large workforce.

Provision may also be made for the long-term. Funding provided to growers to switch to alternative cultivars to realise future gains by aligning outputs with customer demands over time will also drive production efficiency and sustain market prominence. A key example can be seen in cider production, a significant output of Worcestershire horticulture with great potential for added value through down-stream processing. Despite strong growth over the last decade, apple cider sales are in decline (-5.4% 2014 – 2015)⁷, but is showing increasing “premiumisation” with customer focus on niche, UK local premium brands. Apple or hop breeding programs would require a 15-20 year period before returns on investment could be seen, but establishing new cultivar provenance may further enhance the Worcestershire brand by feeding into local downstream industries e.g. cider production of an entirely Worcestershire cider brand. Furthermore, renewed focus on the development of high quality, niche products represents the opportunity to growers to directly out-compete imports while offering a product that can attract market premium prices, and this is discussed further in **Promoting an Environment for Growth**.

Besides direct investment, business development could be promoted by a sympathetic approach to planning regulations to facilitate the expansion of on-farm buildings, new glasshouses or facilities. The planning of new residential developments that may overlap with horticulture businesses should be managed to ensure that necessary business practice can be sustained (e.g. HGV movements).

⁷ Westons Cider Report, westons-cider.co.uk, accessed 26th September 2016



Implementing a targeted investment program while assisting growers in long term business development is directly relevant to a number of objectives and priorities of both the SEP and ESIF Growth Program. Improving resource use efficiency, and enabling growers to implement low carbon or renewably-sourced energy alternatives (e.g. ground heat pumps) would integrate with the environmental sustainability cross-cutting priority of the SEP and align with the ESIF Growth Programme priorities of low carbon growth. This also has potential to promote innovation and enhance business competitiveness through reducing costs, increasing efficiency and output quality and quantity. Lastly, the availability of investment may also allow growers to implement innovative non-contact pest control measures and resource efficiency measures which will promote the environmental protection theme of the ESIF Growth Program while addressing industry-wide concerns as discussed in [Addressing Industry-Wide Challenges](#) below.

“ Feedback from the Industry

The National Living Wage and Brexit have created uncertainty for investment in Horticulture businesses. The WLEP could function to provide support to businesses to encourage investment to drive innovation, efficiency and growth of this primary industry.

There is scope for automation to improve efficiency and have significant impact at the pack house/storage system level. Other types of automation may only be affordable for the larger growers.

Expanding facilities to extend the UK growing season (e.g. poly tunnels) will mean we can reduce imports of produce, and mechanisation will allow us to become more efficient in growing and packing produce.

The availability of suitable land or facilities locally will have a significant impact on our ability to develop. ”

Actions

- Establish a **Horticulture Growth Fund** to provide growers to access to funding for business investments that align with one of the four key topics: Resource Use & Efficiency, Production Efficiency, Innovation or Marketing & Managerial development.
- Implement a program to assist businesses in developing a short- to medium-term plan for development to fully realise benefits from investment
- Create a sympathetic planning environment in which the needs of horticulture business are viewed in terms of their socio-economic effects. Schemes such as the Local Development Order applied to the Vale Park, Evesham, could be replicated for suitable sites elsewhere in the region to prioritise Agri-Tech and horticulture sector developments.

Successful Outcomes

- Facilitate business development by supporting growers to actively expand and develop their existing business formats leading to increased competitiveness through greater capacity to provide high quality, fresh produce better with closer adherence to customer demands.
- Growers enabled to improved productivity through exploiting innovative technology, increased economy of scale and exposure to new markets.
- Greater resilience and amplified economic turnover, leading to job creation in horticulture and related sectors.
- Delivery of SEP/ESIF objectives by promoting low carbon, sustainable business growth.

2. Promoting an Environment for Growth

The UK horticulture industry operates in an environment where multiple economic factors have the potential to impact long-term business resilience. Intervention at the regional scale to mitigate the effects of these forces can ensure long-term sustainability of the industry by supporting the drive towards increased efficacy and productivity.

Key Problems

1. Unfavourable Market Conditions

For edible production, over 75% of UK sales are made through 4 retail groups representing the supermarket chains⁸. Supermarket retail purchasing is tending towards favouring a limited number of providers, meaning that smaller producers may be unable to meet production requirements for supermarket contracts. The ornamentals sector has a more diverse customer base, but increasing consolidation in the sector has meant that similar challenges are being increasingly felt in the sector. Declines in membership of producer organisations⁹ has led to a greater proportion of growers acting independently, giving greater exposure to variations in market value.

2. Narrow Profit Margins

Increasing competition from imports and rise of the “discounter” supermarket trend has seen downward trends in prices to consumers and retail customers generally attempt to transmit price falls to producers. For example, UK carrot sales rose 6.1% in volume in 2015, but reductions in prices lead to a 6.5% decline in market value, with similar declines seen in lettuce, cucumber, onions and sweet peppers¹⁰. Lower farm gate values ultimately impact profit margins, and while industry data is scant, many growers operate with profit margins approaching 2% which greatly impacts their resilience to buffer further changes in market value or overheads.

Solutions

Actions should be taken to promote the position of Worcestershire horticulture to ensure its prominence, and to broaden market access routes to further extend the broad range of marketing channels already utilised by growers. Besides supermarket sales, growth of the UK foodservice sector is strong and the proximity of Worcestershire to major centres of population in Birmingham and Bristol offers strong opportunities for market growth for fresh produce. Two key strategies are available to growers looking to optimise market access:

1. High volume output achieved through increased productivity, or by developing purchasing relationships with other growers to supplement output to reach levels suitable for supermarket or retail trade.
2. Low volume, high quality specialist production targeted to niche markets which attract a market premium with top tier retailers or local markets.

⁸ National Horticulture Forum, hortforum.net, accessed 24th September 2016

⁹ Heart of Horticulture, NFU, nfuonline.com, accessed 24th September 2016

¹⁰ Fresh Produce Journal, fruitnet.com, accessed 24th September 2016



Growers working towards either strategy could be supported by the implementation of targeted investment as discussed in **Investing for Development** above. For example, gross outputs could be increased through increased productivity, or specialist markets could be targeted by supporting growers to switch to speciality products. Regional examples can be seen in growers converting to speciality crops including microleaf and sea vegetables¹¹ which would require investment in novel cultivars or innovative growing systems. Alternatively, market access could be expanded by enabling growers to make use of emerging market technology, particularly the online customer base. This could be particularly relevant to the ornamentals sector where regional growers have utilised an online customer base to provide mail-order sales of niche products to customers nationwide¹².

Investment could also be made to enable growers to produce their own branding and developing a product that could be marketed directly, building on the consumer trend towards UK production and local sourcing. Fresh produce and processed products marketed directly from growers on the basis of a regional strength has been demonstrated successfully in the UK¹³ and this could be exploited as part of the evolving brand for Worcestershire produce. Growers could be empowered to work with their customer base to enhance appreciation of the benefits of localised UK production, and encourage this as an advertised advantage at the point of sale to the end consumer.

A mentorship program could be made available to growers as part of the strategic planning element of the Horticulture Growth Fund to guide growers in accessing new markets through a variety of channels. This could also focus on developing customer relationships to improve the degree of transparency and communication between tiers of the supply chain. By promoting a better understanding of the consumer and customer profile, strategic planning can be geared towards a closer alignment between business outputs and customer demands.

Feedback from the Industry

“ *Understanding the cost base will provide clues as to where investment should be targeted for growers.*

The ability of the industry to change is linked to a company that is willing or unwilling to change. For those willing to change then the quality of advice will make a difference.

We could possibly explore social media as a marketing tool.

Brexit may represent an opportunity in terms of exporting produce. ”

Actions

- Instigate a program of business mentorship to include marketing and customer relations in grower-specific short- and medium-term plans.
- Assist growers in evaluating new and existing markets, and provide investment through the **Horticulture Growth Fund** to better align outputs with market requirements.
- Promote locally grown produce as part of a unifying Worcestershire brand.

¹¹ Westland Nurseries, Offenham, westlandswow.co.uk

¹² Ashridge Nurseries, Somerset www.ashridgetrees.co.uk

¹³ The Tomato Stall, thetomatostall.co.uk

Successful Outcomes

- Increased economic turnover as a result of increased customer access, product demand and closer adherence to customer needs.
- Improved resilience by broadening customer access outside of the traditional retail setting, and by enabling growers to offer niche, high value specify products.

3. Labour Provision and Development

Horticulture carries a requirement for a large, skilled workforce. Production is difficult to automate, and the seasonal nature of cropping cycles means that seasonal variation can more than double the workforce during periods of peak activity. Labour costs can account for 35 – 60% of business turnover¹⁴ have a significant impact on business profitability and a significant number of growers report difficulties accessing sufficient numbers of seasonal workers particularly in ornamentals and field vegetables¹⁵.

Key Problems

1. Implementation of the Living Wage

The high cost of labour will be compounded by the introduction of the National Living Wage (NLW), with an increase in seasonal wage cost of 35% between 2016 – 2021¹⁴. Transmitting this increase to the consumer through price increases is likely to unpalatable to both primary purchasers and ultimate consumers, risking a reduction in consumer demand. Therefore, increases in productivity or cost-efficiency must be made to offset these increases.

2. Availability of Seasonal Workers

65% of non-seasonal agricultural workers in the UK are EU-born¹⁶, rising to 85% of seasonal horticulture workers¹⁷. Britain's withdrawal from the EU may pose a significant challenge to the availability of seasonal workers, particularly after the ending of the Seasonal Agricultural Worker Scheme (SAWS). This would compound existing problems accessing a suitable workforce.

Solutions

Improving business labour use is a potential area to drive development. Increasing access to a viable labour pool while reducing the labour requirement through increased production efficiency would provide a direct route to growth.

Reducing labour requirements would directly mitigate the effects of the NLW, lower labour costs which would increase the competitiveness of local businesses. This could be achieved through the use of automation or mechanised labour-saving devices to fulfil formerly labour-intensive roles. The implementation of new technology would also address the SEP priority of innovation and has the

¹⁴ NFU, nfuonline.com/misc/press-releases/impact-of-national-living-wage-on-uk-horticulture/

¹⁵ NFU, nfuonline.com/nfu-report-end-of-season-horticultural-labour-survey-2015/

¹⁶ Sustainable Food Trust, sustainablefoodtrust.org/articles/eu-referendum/

¹⁷ Heart of Horticulture, NFU, nfuonline.com, accessed 24th September 2016



potential to support the emergence of aligned Agri-Tech ventures in the area. The installation of innovative technology would require capital investment, and this may pose a barrier to uptake by smaller business. To resolve this, labour saving investment should be a priority of the **Horticulture Growth Fund** as discussed above.

While the availability of labour is predominantly a national challenge (e.g. development of a new SAWS) the WLEP could maximise on the availability of a skilled workforce, addressing further SEP objectives. The significant investment already made at Pershore College should be capitalised upon by promoting the industry to skilled career entrants, or through further expansion of the Worcestershire Apprenticeship scheme. Training of the existing labour pool should be promoted to enhance the availability of technical and managerial skills through EU funding or business support initiatives as discussed below in **Promoting Knowledge Exchange**. By enhancing the availability of a skilled workforce the burden of training for businesses will be lowered while providing a route to increased efficiency via a more productive workforce.

Feedback from the Industry

“ To shorten our supply chain we would need to invest in more equipment and staff.

We are already feeling the impact of the National Living Wage and if the increases are not reduced margins will come under extreme pressure.

We can increase our own crop production and reduce costs and labour through mechanisation.

We may need to invest and have access to skilled labour to take advantage of an expanding customer base. ”

Actions

- Support the investment in efficiency/labour saving facilities by growers to mitigate the problems associated with labour provision. This will be of particular relevance to smaller businesses for which innovative technology may be prohibitively expensive as discussed in **Investing for Development** above.
- Strengthen relationships between growers and training providers by increasing access and prominence of apprenticeship schemes to enhance labour pool skills using the existing Worcestershire Apprenticeships system. A horticulture-specific apprenticeship scheme could be established and promoted at the tertiary educational level, and work with growers to encourage businesses to utilise the scheme (e.g. apprenticeships could be incentivised through the **Horticulture Growth Fund**).
- Develop the Worcestershire Horticulture Apprenticeship Scheme by creating a dedicated programme with FE/HE institutions at diploma and graduate level.
- Apprenticeships and training in smaller businesses for which the financial burden would be significant should be incentivised, and support provided for businesses which already provide these.
- Relax planning concerns for work-force orientated developments such as migrant worker accommodation and facilities.



Successful Outcomes

Increased competitiveness for horticulture businesses through a combination of:

- Reduced total labour costs as a result of automation of labour-intensive tasks.
- Increased efficiency (e.g. lower waste, higher product quality) achieved through a more skilled workforce.
- Increased buffering of changes in labour costs (e.g. NLW), mitigating the risk of increased product cost to customers.

4. Promoting Knowledge Exchange

The grower represents the critical step in a multi-stage process between R&D and on-farm implementation of innovative production systems. The high value of the horticulture market traditionally sees the industry as early adopters of novel technology, but a lack of knowledge exchange between stakeholders can restrict uptake, generating barriers to improved productivity and efficiency.

Problems

1. Restricted KE

The highly technical nature of horticulture means that there is considerable benefit to be made through peer group participation. Making growers aware of current industry developments, best practice and new technology enables them to make improvements to enhance their efficiency and ultimate productivity. A reciprocal flow of information back to the wider knowledge base (i.e. consultants, Universities and technology businesses) enables relevant commercial information to be utilised in training/education, product development and R&D. These networked interactions are, however, most effective when properly mediated to ensure that there is sufficient exchange between necessary stakeholders to ensure sufficient flow of information. At a UK and European scale the need and effectiveness for KE for the horticulture sector has been critically evaluated by Mulholland et al., (2015)¹⁸

2. Limited Benchmarking Ability

The provision of industry benchmarking data such as energy and resource use, yield responses and market data is scant, and where this available is primarily accessed through paid on-farm consultants. This constriction in information flow prevents growers from comparing their business performance with industry standards, thus hampering their ability to identify areas where improvements could be made.

3. Improving Workforce Skills

Horticulture requires a skilled workforce, but effective training can be difficult to implement in small ventures with high staff turnover. Basic training can take up to 2 months, but a new worker may

¹⁸ [Mulholland BJ, Rahn C, Van Oost I, Voogt W, Svensson I, Verhaege M, Garming H, Shaban N \(2015\). Participatory learning for knowledge exchange in field based vegetable production](#), accessed 24th September 2016

only reach commercial levels of production after 1 year. Highly skilled workers (e.g. technical managers) may require years of commercial experience. KE within a business is also reliant on an effective training network to ensure the efficacy of this process. This can act as a barrier to effective staff development (particularly in smaller enterprises), but is essential to maximise the competitiveness of a horticulture business both in terms of gross yield and product quality.

Solutions

The development of a county-wide KE network would address all of these aspects. Such a network should be formed of a range of stakeholders (**Error! Reference source not found.**). Interaction between growers and industry bodies such as Crop Health and Production Centre (CHAP), Agrimetrics, Agri EPI Centre and the AHDB can drive industry-specific R&D, and feedback technical updates to growers. R&D can be conducted by further/higher education or Research Institutions in conjunction with growers who may act as hosts for trial sites which will allow growers access to novel technology, and implement in practice to enhance their competitiveness. The development of Agri-Tech companies can provide expert advice on the application of new technology to growers, but can also act as partners with other stakeholders in obtaining and delivering industrial development funding through schemes such as Innovate UK. Lastly, communication between growers allows the dissemination of ideas within the industry, and has the potential to include overseas producers. This network would be open to cross-border interaction.

Involvement with KE networks, could provide access to experts for participating businesses and opportunities for staff training as identified as a priority in **Labour Provision and Development** above. Interaction with educational establishments would improve the quality of the training available by providing a strong commercial content while giving growers access to a skilled workforce and increasing the prominence of horticulture would encourage more career entrants into industry. An educational focus would also be directly relevant to the ESIF strategy, while enhance the skill base of the workforce aligns with the SEP priority of supporting the “*Skills for Sustainable Growth*” (2010). Incentivised training and development should be an integral part of a KE Network to maximise on the propagation of good practice.

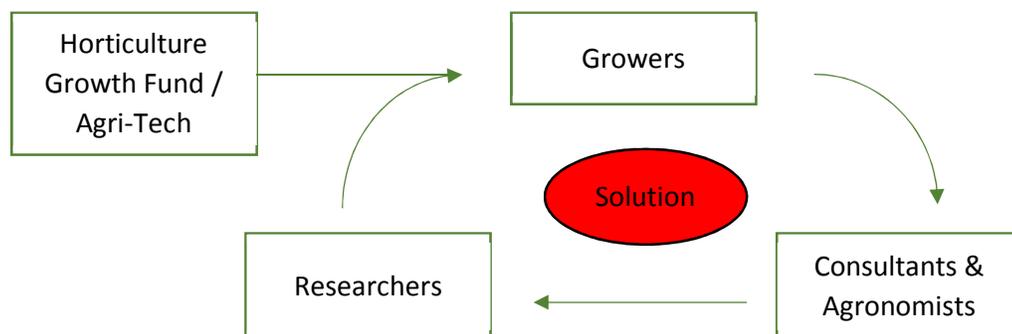


Figure 1: Solution focussed KE activity for to drive innovation for the horticulture sector with support from WLEP, demonstrating how growth of the horticulture sector can be driven by innovative project development.



Feedback from the Industry

“ Short term gains on profitability and sector efficiency should be targeted at benchmarking at the individual or grower group level. There is large variation in efficiency between farms, despite the produce going through the production process with associated costs.

Agri-Tech is out of reach for Worcestershire with no academic institution in the county involved in Agri-Tech centres. Centres are mixed and are biased towards arable and livestock initiatives – only party focussed on Horticulture.

Agri-Tech initiatives were regarded as of potential use at the top end of the industry who have the staff to understand and apply to practice, not necessarily for those busy on farm making a living.

We need a shift in culture and aspiration to increase awareness of Worcester horticulture industry opportunities for career entrants. ”

Actions

- Establish Knowledge Hubs formed of grower representatives, the wider supply chain and education partners to promote transfer and uptake of innovative business practice.
- Promote Knowledge Hub links to the key [Crop Health and Production Centres \(CHAP\)](#), [Agrimetrics](#) and [Agri EPI Centres](#) for potential cross sector or sector specific KE.
- Promote grower inclusion in R&D projects for levy board/HE research or Innovate UK projects.
- Develop an incentivised program for training and KE, with funding available for related activities e.g. subsidised study tours, conferences and grower day attendance.
- Provision of county-specific guidance for the application of new legislation/regulations.

Successful Outcomes

Increased competitiveness for horticulture businesses through a combination of:

- Improved access to a skilled workforce, reducing training requirements and increasing efficiency through reduced employee induction periods.
- Opportunities to enhance efficiency and productivity by enabling critical analysis of business practice against industry standards, or through implementation of industry best practice or novel approaches.
- Improved access to sufficient labour forces to support time-critical harvests and enhanced ability to meet customer time schedules.

5. Addressing Industry-Wide Challenges

Some of the challenges facing horticulture in Worcestershire need to be addressed at the national level. Chief among these is the availability of suitable plant protection products (PPPs) which are subject to increasing legislative and customer restriction and concerns of new and evolving crop pests and diseases. The availability of PPPs is a sector priority for industry bodies such as [AHDB Horticulture](#) which runs programs such as Extension of Authorisation for Minor Use (EAMU) for off-label horticulture use and contracts R&D work to promote the use of new crop protection methods.

Other areas including energy costs are also predominately influenced at the national level, such as changes to application of the Renewable Heat Initiative, and bulk energy purchase. Lastly, market conditions are largely dictated at the national and international level and cannot be directly influenced by local intervention.

The areas identified in this strategy will help growers to mitigate the negative effects of these areas, improving business competitiveness and resilience to future industry challenges. A combination of promoting knowledge exchange and investment capital will empower growers to implement cutting edge pest and disease control measures, including non-chemical methods as discussed above. Similarly, increased benchmarking and the provision of investment for increased energy investment has the potential to reduce energy wastage. Increasing overall productivity, market education and promotion of local produce will improve the ability of producers to access reliable markets for their produce, helping them to capitalise on the strong market connections that are already established in Worcestershire.

Feedback from the Industry

“ *There is no single silver bullet and it is unlikely that multiple strands of improvement will produce step change in practice but it is envisaged that a more efficient and profitable horticulture sector will emerge over time. If the macro economics are right following “Brexit” then import substitution will become a reality as UK Horticulture businesses grow. This will be helped if supermarket prices increase (imported goods being more expensive will push the price up) and this will ease tight margins for UK producers. More profit and growth will increase re-investment opportunities to UK horticulture businesses* ”

Summary

Worcestershire has a rich and diverse horticulture industry, which is well placed to realise sustainable economic growth as a result of emerging opportunities. While some areas are outside the remit of the WLEP such as crop protection product regulation and market conditions, targeted intervention by the WLEP has the potential to promote increased resilience in the sector to help local businesses grow in the face of difficult market conditions.

With appropriate investment growers will be able to create the opportunity to implement innovative solutions to problems relating to labour cost and supply, market access and resource availability and use (**Figure 2**). When combined with strategic planning and a program of mentorship for business, a coordinated strategy of sustainable business development will enable increases in gross economic output, employment in the local area and a boost to related industries.

By progressing the existing foundation of the horticulture industry, there is significant potential for the WLEP to successfully realise its targets of economic growth while delivering a range of other cross-cutting priorities in the SEP including environmental protection and sustainability, enhancing workforce skill base and developing Worcestershire as a world-class location for business investment and growth.



While change is likely to occur over the medium (5-10) - to long-term (20 years and beyond), implementing this strategy will maximise the potential of local businesses to develop their competitiveness whilst remaining robust to the challenges of operating in an environment of increasing uncertainty as a result of “Brexit”, continually shifting consumer tastes and evolving government policy.

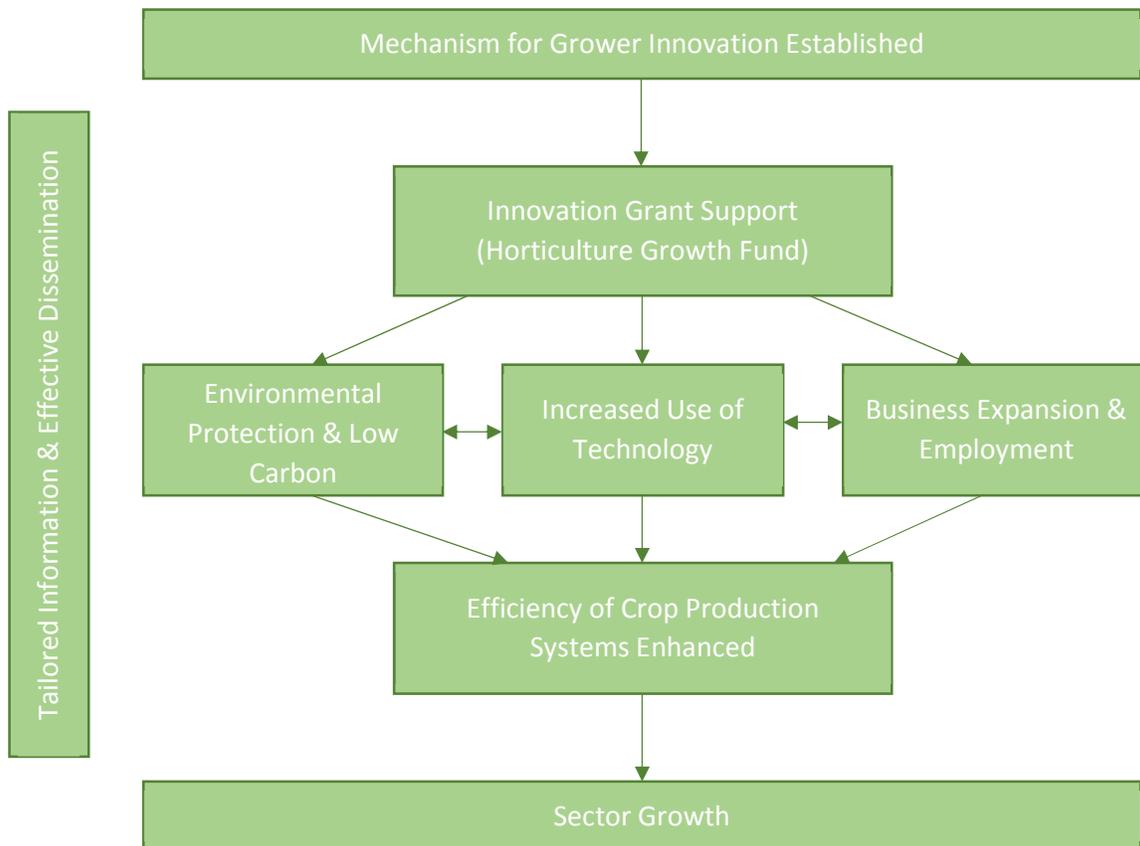


Figure 2: Summary of the interaction of the thematic objectives of the horticulture strategy in promoting sector growth.