An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

National Strategy for

HORTICULTURE

2023-2027

Contents

Foreword by Minster McConalogue

Minister for Agriculture, Food and the Marine

I fully support Ireland's new National Strategy for Horticulture. It charts an important way forward for this crucial industry.

As the fourth largest sector in agriculture, the horticulture industry has a vital part to play in meeting the four high-level missions of Food Vision 2030, our shared strategy for the agri-food sector.

If we are to achieve our ambition of being a world leader in sustainable food systems, we need an economically, socially and environmentally sustainable horticulture industry to support farm families and a prosperous and vibrant rural economy.

This new National Strategy for Horticulture, commissioned by my colleague Minister of State Pippa Hackett to address the key challenges and opportunities for the horticulture industry, outlines a roadmap to achieve the industry's full potential and contribute to our overarching ambition.

Growers within this industry are innovative and resilient. They are quick to adopt new growing practices that are beneficial in terms of profitability, efficiency and protection of the environment and it is this innovative mindset that is key to strengthening this industry.

I recognise the challenges facing this industry at present, in particular the challenges in relation to fairness and transparency in the supply chain. I am quickly progressing legislation to establish the new Agri Food Regulator. The office will provide a price and marketing analysis and reporting function which will give insights and ultimately support the industry. I am pleased to have appointed the office's first CEO in Niamh Lenehan and I know she will be a success.

All stakeholders in the industry have a role to play in delivering on the implementation of actions in this stakeholder led Strategy. This is your roadmap and Strategy. We want nothing more than to see the industry grow and flourish in the time ahead. I acknowledge and thank all of the stakeholders who participated in the development of this Strategy.

Charlie McConalogue.

Minister McConalogue

Foreword by Senator Pippa Hackett

Minister of State for Land Use and Biodiversity

I am delighted to launch the National Strategy for Horticulture 2023-2027.

Horticulture growers across Ireland produce high quality plants and produce, much of which supports family and community wellbeing. Irish citizens have access to the highest quality locally produced seasonal produce, (the centrepiece of any healthy diet) and to healthy plants and trees to enjoy in their gardens.

This strategy, which follows comprehensive consultation with the public and the industry, establishes a roadmap that presents our collective vision to grow the sector to a more profitable value-added future, driven by sustainability and innovation.

Achieving our vision will require all stakeholders in the industry to work together. We will all need to work smarter, leverage relevant science and technology, value our existing growers and businesses and encourage new entrants. We know there is a future in Irish horticulture, but we need your help to fulfil this ambition. If all the actions in this Strategy are implemented, we anticipate a 30% increase in farmgate value from €529 million in 2022 to €688 million by the end of 2027, generating more rural employment and thriving local communities.

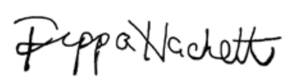
I fully recognise the challenges currently faced by the sector, in particular the need for a fair price for locally grown quality produce in order to sustain a viable sector.

Recent changes in climate on continental Europe, as well as geopolitical events elsewhere, have highlighted the importance of growing Irish plants and produce in Ireland. The actions outlined in this Strategy will, through the support of all stakeholders, initiate change and maximise the sector's potential, providing a clear route to an environmentally, economically, and socially sustainable future for horticultural growers in Ireland.

As consumers we all have a part to play in valuing and supporting fresh, locally grown produce and Irish trees and plants to underpin a viable industry in the short to medium term, thereby providing confidence to attract and retain new entrants to safeguard the industry in the long term.

So please choose Irish grown when it is available, be that in the supermarket, garden centre, your local grocer or on the menu in restaurants across Ireland.

Finally, I would like to thank everyone who has participated in this process, in particular, members of the Horticulture Industry Forum including growers who have so generously contributed their time and knowledge and informed our considerations.



Pippa

About this strategy

Food Vision 2030 called for a new National Strategy for Horticulture to leverage its potential for growth and contribution to climate change mitigation.

Building on the independent report commissioned by Minister Hackett and produced by KPMG on *Opportunities for the Irish horticulture Sector*, and KPMG's subsequent *Prioritisation analysis*, this Strategy addresses the cross-cutting factors faced by the horticulture industry to grow a more profitable, value-added sector, driven by sustainability and innovation. The strategy's approach is driven by the belief that the source of increased sustainable output can only be market-led and as a result of increased collaboration, with growers and related businesses, ably supported and assisted by Government and State Agencies. This new National Horticulture Strategy is closely aligned with the over-arching agri-food industry strategy – Food Vision 2030.

Three distinct areas of sustainability underpin Food Vision 2030: environmental, economic and social, in keeping with the UN FAO model for sustainable food systems. A Sustainable Food System is profitable throughout (economic sustainability), has broad-based benefits for society (social sustainability) and has a positive or neutral impact on the natural environment (environmental sustainability).

The collective vision for the Horticulture industry:

"To grow a more profitable value-added sector driven by sustainability and innovation."

Horticulture is one of the most carbon efficient sectors in Irish Agriculture and can have a further positive environmental impact by expanding environmentally sound practices and adapting developing technologies. Economic viability is threatened due to tight margins and increasing input costs – for the horticulture industry to be enduring, it must be financially viable. Finally, the sector's social benefits include employing workers in local communities, producing healthy produce for a healthy diet, and positively impacting wellbeing through the positive mental and health benefits of gardening and recreation including for those with special needs.

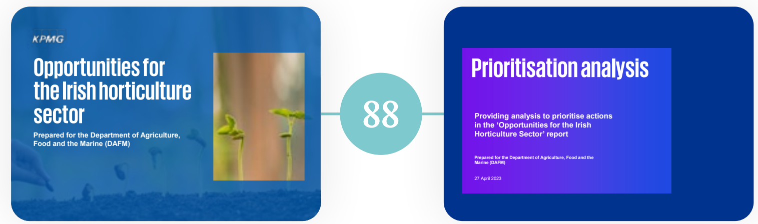
If all the actions in the Strategy are carried out, the future for horticulture in Ireland is positive, with anticipated growth of 30% in farmgate value from €529 million in 2022 to €688 million by the end of 2027.

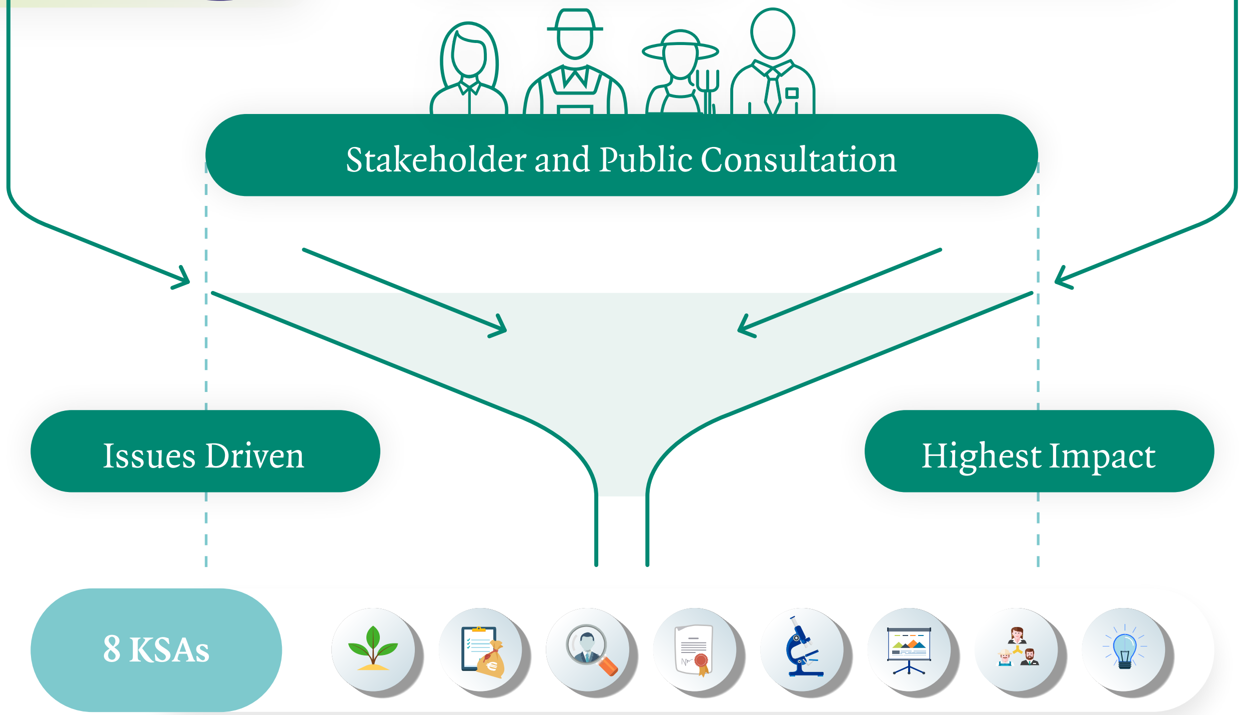
The development of the National Strategy for Horticulture 2023-2027

1. A climate smart, environmentally sustainable agri-food sector.
2. Viable and resilient primary producers with enhanced wellbeing.
3. Food which is safe, nutritious and appealing: Trusted and valued at home and abroad.
4. An innovative, competitive and resilient agri-food sector, driven by technology and talent.

Eight cross-cutting Key Strategic Actions (KSA) will drive change and growth across all the horticulture industry's sub sectors leading to environmental, economic and social sustainability. These eight Strategic Actions have been distilled from the 80 plus actions KPMG initially identified in their report *Opportunities for the Irish Horticulture Sector.*

This distillation, and subsequent ranking in order of effectiveness and cost, is a result of extensive public and stakeholder consultation (July-December 2022) and a multi criteria analysis by KPMG (completed April 2023).





8 Key Strategic Actions

1
Strengthen the position of the grower in the marketplace

2
Develop a written charter between growers, consolidators and retailers, and increase consumer demand for local, in season, fresh, quality fruit, vegetables and plants

3
Establish the framework for a permanent non-EEA seasonal workers' scheme for the horticulture industry to ensure a reliable supply of skilled seasonal workers in the short to medium term while innovation and research into automation is intensified

4
Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms to attract talent that will drive the horticulture sector to realise its true potential

5
Research and Development for the industry

6
Better data and information for better insights

7
Integrate Horticulture back into Agriculture Knowledge and Innovation System AKIS

8
Support innovation and diversification

8 Key Strategic Actions (continued)

These eight Key Strategic Actions contain steps that industry stakeholders can take together, to stabilise the industry where needed, and develop new synergies to take advantage of innovation, diversification and other opportunities where identified.

For each action the key players, timelines and outputs have been identified. By addressing the key cross cutting factors the entire industry faces, these actions will also grow each sub sector of the industry. Where sub sector priorities identified in the KPMG's *Opportunities for the Irish Horticulture Sector* report are not explicitly addressed in the Key Strategic Actions, commodity groups will lead on the implementation of the sub sector actions (see Appendix II).

The Strategy addresses the need for collaboration, policy changes and emphasises the importance of innovation, research and development in the sustainable long-term growth of the sector. Sustainable and circular bioeconomy approaches are essential to the strategy's success, with a focus on credible evidence that food and food ingredients are produced in a sustainable way. The Strategy further explains how existing levers and tools should be realigned and points to new resources required to fulfil the industry and each sub-sector's potential.

KPMG's *Opportunities for the Irish Horticulture Sector* report laid out three possible scenarios for the industry: a sustainable future, the status quo and a declining industry. If all the actions are carried out, the future for horticulture in Ireland is positive, with anticipated growth of 30% in farmgate value from €529 million in 2022 to €688 million by the end of 2027.

To ensure the strategy remains on track to deliver the industry's shared vision and aligned with the Food Vision 2030 strategy, there will be a mid-term review in 2025. To hold all stakeholders accountable, each year the Department of Agriculture, Food and the Marine (DAFM) will collate and publish progress on each Key Strategic Action, reporting back to Food Vision 2030's High Level Implementation Committee chaired by the Minister for Agriculture, Food and the Marine, the Horticulture Industry Forum and other industry stakeholders.

Horticulture in Ireland

The horticulture industry is diverse and covers plant and food horticulture. Horticulture food sectors active in Ireland include the mushroom, potato, field vegetables, soft fruit, edible protected crops and top fruit sectors. The amenity horticulture sector includes nursery stock, protected crops, cut foliage and outdoor flowers and bulbs.

While covering less than 2% of agricultural land, the Irish horticulture industry accounts for approximately 11% of total agri-food jobs (direct and downstream) and therefore it is a vital component of the rural economy. This industry is responsible for providing employment directly to more than 7,000 people involved in primary production and a further 11,000 involved downstream.

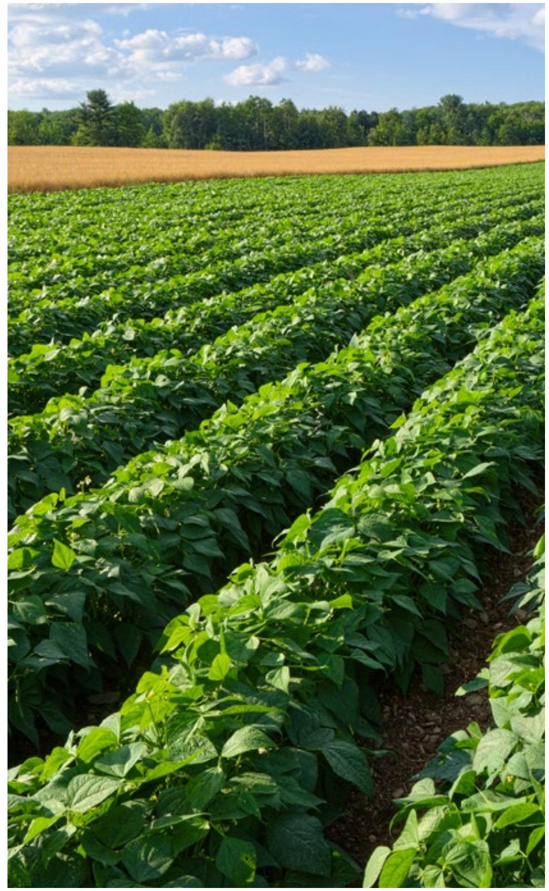
Horticulture is considered a low environmental impact method of production, and recent developments and advancements have helped facilitate a further reduction. There has been a widespread adoption of Integrated Pest Management practices, innovative technology to reduce energy use and adoption of precision farming methods.

Approximately 568 hectares of land is currently under organic food horticulture production.

Horticulture is a labour-intensive industry with high input costs. The industry's particularly low margins make re-investment to meet further sustainability demands difficult to achieve.

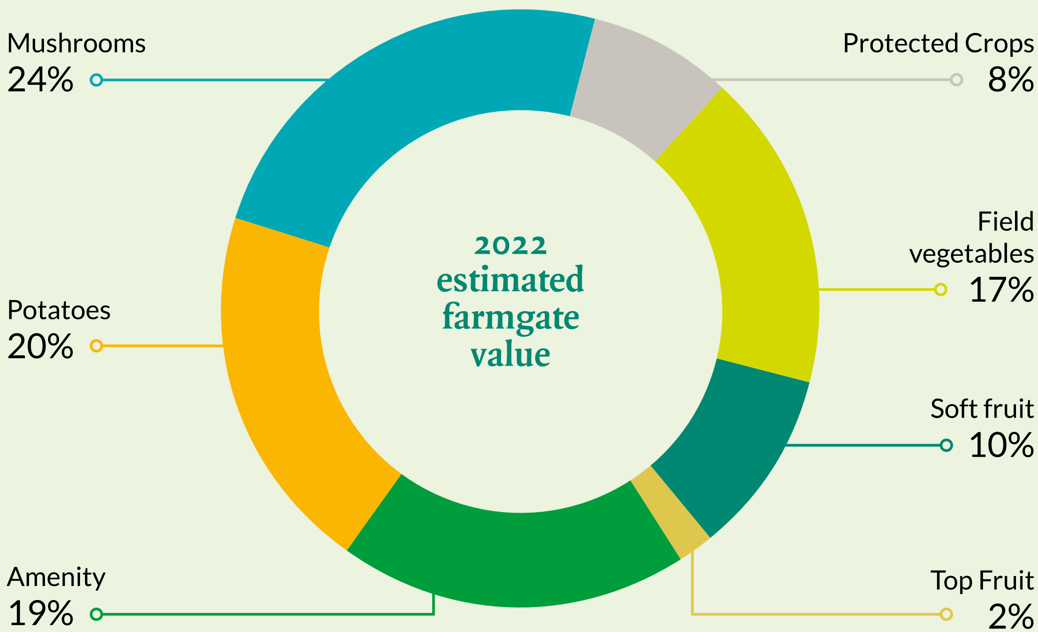
The horticulture industry makes a valuable contribution to the Irish economy. In 2022 the total estimated value of the industry was €529 million with €429 million for food horticulture and €100 million for amenity and other non-edible products. This valuation does not include the financial worth of the amenity sector's contribution to the economy through tourism and carbon sequestration, for example.

For food horticulture most of what is produced in Ireland is consumed domestically, apart from mushrooms where approximately 85% of production is exported to the United Kingdom. Amenity growers in Ireland service both the domestic and export market.



Horticulture in Ireland (continued)

In 2022 the total estimated value of the horticulture industry was €529 million



These figures incorporate organic growers' produce.

The Irish fresh produce retail market was valued at approximately €1.63 billion in 2022, where fruit accounted for €810 million, vegetables €593 million and potatoes €231 million.

Given Ireland's geographical position on the periphery of Europe, only high volume, high value or unique Irish grown fresh produce is suitable for export. Food horticulture imports will always be an important part of supply due to our relatively short growing season and consumer desire for a large variety of out of season produce but there are some real opportunities for import substitution which should be pursued.

Challenges and Opportunities

Industry wide Challenges

Cost of living crisis.

- Growers leaving the sector.
- Length of the Irish production season.
- Access to seasonal labour.
- Reduction in authorised pesticides limits ability to treat disease and pests.
- Continental retailers flex prices according to supply and demand; Irish retailers say consumers want to pay the same price for fruit and vegetables all year round.
- Competition for land is an increasing challenge for new and existing growers.
- The industry is labour intensive with high and increasing input costs and low margins through retail.
- The Irish market is relatively small which limits investment opportunities for major projects. Expanding capacity is limited not only by the capital requirements but also by low demand due to scale. Limited scale opportunities are a barrier to entry for innovative or sustainable players.
- Scale of food waste at farm level due to high retailer specifications particularly for organics.
- Replacing single use plastics while maintaining shelf life.
- Lack of funding for innovation by primary producers.
- Availability of growing media and awaiting research findings on peat alternatives.
- Increased paperwork for exporters following Brexit.

Industry and Sub Sector Opportunities

Consumer and retailer demand for Irish produce.

- Opportunity to revive Irish Seed potato sector via Seed potato scheme.
- Research into automation and technology to improve labour efficiency.
- Salad crops can technically be grown all year round in protected environments.
- Greater climate vulnerability of countries that grow at scale.
- Growing evidence to suggest consumers will pay more for local, fresh produce.
- Innovation in production methods including non-peat based alternatives.
- Diversification opportunities in ingredient powders, Medicinal Aromatic Plants, nutraceuticals, waste valorisation.
- Import substitution for chipping potatoes and apples and other in season fruit and vegetables.
- Leverage Ireland's international beef and dairy marketing expertise for horticulture exports.
- Ireland's high plant health status.
- Concerns around food security issues have highlighted the importance of domestic horticulture industry and the need for import substitution.
- Prove and capitalise on environmental credentials of locally grown fresh fruit and vegetables.

KSA	Strategic Interventions		Outputs	Impacts	Food Vision 2030
1, 2, 8	**Strengthened growers**	Collaboration and PO support Small grower support scheme Funding pathways for innovative growers Diversification models development Written charter between growers and retailers	• Increased number of POs and growers in POs • Improved access to finance for smaller growers and groups • New and bioeconomy business models developed • Written charter and working group	A more profitable and environmentally sustainable horticulture sector, valued by producers, retailers and consumers	Mission 1 & Mission 2
2	**Sectoral promotion & education**	Consumer understanding and awareness	• Consumer and industry social media and promotional campaigns	More resilient and socially sustainable primary producers	Mission 2
3, 4	**Talent, skills & labour**	Modern curriculum and training Seasonal worker scheme	• Inventory and curriculum needs identified • Apprenticeships and graduate training launched • Seasonal worker scheme in operation	More talent and skills attracted	Mission 4
5, 6, 7, 8	**Research, development, innovation & market supports**	Sectoral research & development Collect hortimetrics data Collect sustainability metrics data Market insights data Broader AKIS integration	• R & D needs identified • Higher innovation spend on product and process innovation including inputs and supply chain • Insights and intelligence for market development and sustainability • Improved data for policymakers • Pilot carbon footprinting for the sector	Integration of horticulture into an efficient and high quality Agricultural Knowledge and Innovation System (AKIS) More diversification and value-added through innovation	Mission 4 Mission 3 & Mission 4
					FV 2030

Levers: Promotion | Statutory Levy | Investment Aid | Commodity Groups | Producer Organisations | Working Groups

Key Strategic Action 1

Strengthen the position of the grower in the marketplace

Key Strategic Action 1.1

Maximise collaboration among growers, especially through the Producer Organisation Scheme

The challenge:
Many producers operate independently and on a relatively small scale. For larger growers there are no alternatives to selling to consolidators and supermarkets. There is historic reluctance to work together but in the long term, only collaboration between growers can mitigate the impacts of ever greater market consolidation by retailers.

Lead: DAFM

Stakeholders: Growers, Producer Organisations, Teagasc

Levers: Commodity groups, Producer Organisation Scheme

Cross cutting factors[1] covered:

Collaboration | Price | Margin

Actions	Outputs
• As a first step to collaboration and / or being recognised as a Producer Organisation, Teagasc to provide simple guidance on approaches to forming **producer groups**, disseminated through AKIS[2]	Information on forming producer groups produced by Teagasc and disseminated through AKIS
• DAFM to change perceptions of and increase participation in **Producer Organisations** (POs) through clearer information and advice. • Growers to join one of Ireland's five existing fruit and vegetable POs, start new POs in amenity and potato sectors using Early Stage Producer Organisation Support Scheme or form new POs in fruit and vegetables sectors • DAFM to facilitate talks by existing Irish PO members and trips to continental POs. • DAFM to encourage ongoing mentoring between continental and Irish POs. • DAFM to seek to streamline administrative burden on POs including seeking clarification from Commission.	Producer Organisation benefits awareness and information campaign run Q2 2023 20 new growers joined existing POs 5 new POs in the amenity, potato, soft fruit, top fruit, mushroom, field veg, protected crops sectors formed by 2027 At least one overseas PO trip organised Structured regular exchanges between Irish and continental POs POs understand opportunities and limitations of PO scheme

Food Vision 2030 — Mission 2, Goal 2, Actions 3 & 4

See also:
KSA 2, KSA 6, KSA 7, KSA 8

[1] See Appendix I

[2] AKIS – Agriculture Knowledge and Innovation System. See also KSA 7

Collaboration requires a mindset change, which if realised will lead to financial benefits for growers. The EU co-funded Fruit and Vegetable Producer Organisation (PO) Scheme offers a practical and legitimate route to concentrating supply and achieving better bargaining power for the producer whilst also providing financial support for actions in operational programmes that advance a range of objectives. The EU co-funded Early-Stage Support for Producer Organisations Scheme provides some financial assistance for setting up Producer Organisations in all horticulture sectors including the potato and amenity sectors.

Producer groups are informal buying groups which do not receive financial aid. They can be a first step to collaboration and / or being recognised as a Producer Organisation but do not benefit from exemption from competition rules. They can be a means to jointly fund activities by the members, share and learn from common experience and reduce costs, working together and benefiting the industry as a result.

The experience of the Maximising Organic Production Systems Project 2, led by the Irish Organic Association, demonstrated that by working cooperatively growers can improve the consistency of supply and individual farm profitability, through optimised crop planning, improvements in agronomy, and collaborative production and trade between growers. Total sales turnover of organic horticulture generated by the participating growers increased by 112% from €3.8 to €8.1 million between 2017 and 2020.

Key Strategic Action 1.2

Strengthen the position of the smaller grower in the marketplace through direct marketing support

The challenge:

Smaller and / or organic growers often wish to market direct to consumers or local restaurants but need more supports to do so. Smaller and / or organic growers do not see the Producer Organisation scheme as suitable for their needs.

Lead: DAFM

Stakeholders: Bord Bia, Organic and smaller growers

Levers: Commodity Groups, Producer Organisation Scheme, Scheme of Investment Aid for the Development of the Commercial Horticulture Sector

Cross cutting factors covered:

Collaboration | Price | Margin | Organic production

Actions	Outputs
• DAFM and Bord Bia to identify supports for smaller growers to collaboratively market direct to consumers or other suitable direct forms of marketing such as to high-end restaurants • DAFM to review **Producer Organisation scheme** and **Scheme of Investment Aid for the Development of the Commercial Horticulture Sector** from the perspective of smaller growers	Smaller growers are eligible for existing and future schemes from DAFM and business support available from Bord Bia

Food Vision 2030

Mission 3, Goal 4, Actions 10-14

See also:
KSA 2 and KSA 6.1

There is a need to examine collaborative options for alternative distribution channels including support for smaller and / or organic growers who wish to market direct to consumer.

Key Strategic Action 2

Develop a written charter between growers, consolidators and retailers, and increase consumer demand for local, in season, fresh, quality fruit, vegetables and plants

KSA 2

Key Strategic Action 2.1

Develop a written charter between growers, consolidators and retailers to support the long term production of local, in season, fresh, quality fruit and vegetables (including organic) as part of a framework to develop better partnerships and understanding of the industry by consolidators, retailers and consumers

The challenge:
Historically, promotional activity by retailers on fresh produce has focused on price, ultimately reducing returns from the market place for the grower. In addition, this has led to an undervaluing of fresh produce in consumers' minds and an expectation of low prices.

Lead: IFA

Stakeholders: Growers, IFA, Bord Bia, Teagasc, Retailers, Consolidators

Levers: Promotion, Commodity Groups

Cross cutting factors covered:

Collaboration | Price | Margin | Promotion

Food Vision 2030 Mission 2, Goal 2 Action 6

Actions

- Set up a working group with appropriate expertise to compile the charter
- Engage with stakeholders that the charter will impact and seek input
- Review / research existing charters and monitoring mechanisms that are considered best practise and adopt learnings
- Consider a similar charter for the Food Services sector and Amenity sector – especially around State funded institutions' procurement requirements

Outputs

Robust communication channel between retailers, consolidators and growers established

Retailers can develop a Unique Selling Point around the charter

Recognition for retailers who excel in charter implementation

Irish grown produce is valued as a premium product

Growers receive a fair price in order to allow them to remain in business, and to plan and invest in their operations going forward

Import substitution and reduced carbon footprint for retailers and consumers

See also:
KSA 1

More than 90% of all Irish produce at retail is sold by a mix of Irish and internationally owned branded retails chains. Out of an estimated one-thousand growers in commercial operation (which includes growers who sell direct to consumer), it is estimated that two hundred producers of fruit and vegetables supply 85% of the industry's output, selling directly to consolidators and Central Distribution Centres (CDCs).

Unlike the continental retail market where price is set by both contracts and weekly spot prices (which flex according to supply and demand and can better reflect increased input prices), Irish growers are often locked into annual contracts which do not always reflect increases in input prices. Long term retailer-grower preferred supplier partnerships with concrete, planned crop programmes which reflect the true costs of production / storage and transport / packaging would be ideal.

There is also a need to change consumers' mindset to understand the impact of their choices and help them to make informed choices when buying edible and non-edible horticultural produce. Some of the key considerations should be the benefits of freshness, reduced carbon footprint, seasonality, support for local communities and health and wellbeing benefits.

There is evidence that consumer appetite to pay more to local producers is growing. The cooperative brand *C'est Qui Le Patron? (CLQP)*[3], which enables consumers to collaboratively set fair-to-producer prices for commodity foods, is now established in seven European countries. In France, where the brand was initiated, over 30 products, supporting over 3,000 producers, are available from most retailers[4]. The Dutch CLQP cooperative recently introduced their "Honest" potatoes.

The Agricultural and Food Supply Chain Bill 2022 when enacted, will establish the new independent Statutory Authority, An Rialálaí Agraibhia (The Agri-Food Regulator) and define its functions covering the areas of price and market analysis and reporting, the prohibition of unfair trading practices in business-to-business relationships, and the promotion of fairness and transparency in the agricultural and food supply chain. In light of its planned powers there may be a role for the new Regulator in the education of consumers on the cost of producing food.

A Charter should be agreed between retailers and growers to create transparency around retailer commitment to supporting fresh, local, quality, in-season, fruit, vegetables and herbs. This charter could be backed by a social media consumer campaign, similar to CLQP's approach, encouraging consumers to pledge to buy fresh, local, in season quality produce.

[3] « C'est qui le Patron ?! » - La Marque du Consommateur (cestquilepatron.com)

[4] Où trouver les produits dans les magasins ? - « C'est qui le Patron ?! » (cestquilepatron.com)

Key Strategic Action 2.2

Increase consumer understanding of the horticulture industry

The challenge:
Change consumer purchasing behaviour through education on key benefits of purchasing horticultural produce grown in Ireland including key facts on the sub sectors and the people dependent on their decisions. It is only when the consumer is suitably informed can they make the best decisions in terms of the produce they buy. The planned new Agri-Food Regulator may have a role to play in this educational outreach.

Lead: Horticulture Industry Forum

Stakeholders: Growers, IFA, Bord Bia, Teagasc, DAFM, Agri-Food Regulator

Levers: Promotion, Commodity Groups

Cross cutting factors covered:

Price | Promotion

Actions	Outputs
• Run a social media campaign asking consumers to pledge to buy quality, fresh, local, in-season fruit and vegetables and Irish plants to demonstrate their support to protecting the Irish Horticultural industry o Campaign would highlight benefits of and need for paying a sustainable price to Irish growers • Highlight and recognise retailers who actively and positively participate in the charter and who prioritise and promote quality Irish horticultural produce and plants • Once established, engage with Agri Food Regulator to explore options for supporting transparency in the supply chain and the educational consumer campaign and retail charter	Consumers understand the effort and costs to grow Irish horticultural produce Consumer educational campaigns include a horticulture focus that include the positive impacts on consumers' carbon footprint, health and wellbeing Displacement of imports with Irish horticultural plants and produce

Food Vision 2030

Monitoring and Implementation Action 3 and Mission 2, Goal 4, Action 15

See also:
KSA 1.1, KSA 2.1

Key Strategic Action 2.3

Increase consumer demand for local, in season, fresh, quality fruit and vegetables (including organic) and Irish plants by educating consumers of all ages on the benefits of eating more and local fresh fruit and vegetables and the benefits of using Irish plants

The challenge:
Irish consumption of fresh fruit and vegetables is below the EU target. There is a lack of knowledge of how to cook using fruit and vegetables across certain demographics. Balance required in consumption of sweet fruit and vegetables.

Lead: Bord Bia

Stakeholders: Growers, IFA, Bord Bia, Teagasc, DAFM, Agri-Food Regulator, Department of Education, Department of Children, Equality, Disability, Integration and Youth, Department of Health, Local Authorities

Levers: Promotion, Commodity Groups

Cross cutting factors covered:

Promotion | Organic | Production

Food Vision 2030 **Mission 3, Goal 3, Action 1**

Actions

- Engage with Department of Education and Department of Health to coordinate activities emphasising health benefits of eating more vegetables and fruit
- Department of Children, Equality, Disability, Integration and Youth will build on the Nutrition Standards for Early Learning and Care services to develop a learning programme on fresh fruit and vegetables that is integrated with food provision within Early Learning and Care services
- Implement and support school-based programmes that encourage enthusiasm for gardening / growing, promote fresh produce consumption and healthy eating for example Food Dudes Healthy Eating Programme
- Work with local authorities to implement and support community gardens and allotments to encourage enthusiasm for gardening / growing and promote fresh produce consumption and healthy eating
- Roll out consumer facing fresh produce promotional campaigns that are focused on quality in-season produce with messaging around availability, nutrition and use
- Secure matching EU and industry funding to support the implementation of multi annual fresh produce promotional campaigns for key commodities building on existing campaigns which are currently rolling out in the fruit and vegetable; soft fruit, potato and mushroom sectors
- Ensure inclusion of organics in promotional campaigns
- Roll out communications campaign on the benefits of using Irish plants from a plant health and biosecurity standpoint

Outputs

Consumers' consumption of fresh fruit and vegetables increases

Sales of Irish horticultural produce (food and amenity) increases

Better understanding of the benefits of growing your own

Consumers' consumption of organic fruit and vegetables increases

See also: KSA 1.1

Key Strategic Action 3

Establish the framework for a permanent non-EEA seasonal workers' scheme for the horticulture industry to ensure a reliable supply of skilled seasonal workers in the short to medium term while innovation and research into automation is intensified

KSA 3

Key Strategic Action 3

Establish the framework for a permanent non-EEA seasonal workers' scheme for the horticulture industry to ensure a reliable supply of skilled seasonal workers in the short to medium term while innovation and research into automation is intensified

The challenge:
Horticulture is a particularly labour-intensive agricultural enterprise which requires a range of skills sets. The industry is experiencing a shortage of skilled and non-skilled labour across Europe. Attracting and retaining employees is a significant challenge. Given the nature of some roles in the agri-food sector, and the career and work preferences of people today, innovation and research into automation will need to be intensified to help alleviate labour shortages in the medium-long term.

Lead: Department of Enterprise, Trade and Employment (DETE)

Stakeholders: Growers, IFA, DAFM, Department of Housing, Local Government and Heritage

Levers: Commodity groups

Cross cutting factors covered:
Labour

Actions	Outputs
• DAFM to continue consultation with DETE on the Employment Permits Bill 2022 to ensure that sufficient safeguards are included in the Bill to allay fears of worker exploitation and to ensure a provision for seasonal employment permits for workers is included in the Bill • DAFM continue consultation with growers / stakeholders regarding sectoral labour needs and any further evidence required to support the Bill • DAFM to engage with Department of Housing, Local Government and Heritage regarding options for accommodation for workers	Enacted Employment Permits Bill 2022 includes provision for seasonal employment permits for horticulture workers DETE operated pilot scheme in operation

Food Vision 2030

Mission 4, Goal 6, Actions 1 and 2

See also:
KSA 4, KSA 5, KSA 6

Apart from the mechanised potato sector, the horticulture industry is dependent on skilled seasonal labour (fruit, many field crops, protected crops) and skilled all-year-round labour (mushrooms) for picking produce. The amenity sector requires both seasonal and all-year-round skilled labour to grow and manage their produce. The reality is that without reliable access to labour, many growers cannot harvest their produce.

High national employment is putting pressure on labour availability for the horticulture industry with 53% of growers consulted citing labour and skills as the number one priority for the industry.

The need for non-EEA seasonal workers, particularly in the horticulture and dairy sectors is understood by the State, and DETE, through DAFM, consulted with growers and stakeholders to obtain evidence in support of the need for a non-EEA seasonal workers permit system for horticulture.

In October 2022, the Employment Permits Bill 2022, sponsored by DETE, began its process of approval through the Oireachtas. Its purpose is to consolidate the current legislative framework, to improve its clarity and to retain the core focus of a vacancy-led employment permits system oriented to meeting the skills and labour needs of the State. This new Bill will also see the introduction of a seasonal employment permit. This will allow for non-EEA workers in certain sectors to be permitted to work in Ireland. This Bill is currently at stage 3 in Dáil Eireann and it is anticipated that a pilot seasonal workers scheme for horticulture will be introduced in 2024.

The pilot for the existing quota-based scheme for permanent non-EEA horticultural workers was introduced in 2018 and applications are now processed within 2-4 weeks. As of April 2023, 1,126 permits have been issued to the horticulture sector.

The immediate critical need is to ensure that there are adequate numbers of skilled seasonal workers for the horticulture sector in Ireland. Employers also need to engage on continuously improving working conditions, including provisions for the professional treatment of workers, ensuring compliance with any National or EU standards and requirement on workers' rights or other relevant standards or governing legislation. There must be clear career progression prospects to retain a skilled workforce.

Key Strategic Action 4

Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms to attract talent that will drive the horticulture sector to realise its true potential

KSA 4

Key Strategic Action 4

Review horticulture course availability and suitability for a modern dynamic industry, enabling the educational platforms to attract talent that will drive the horticulture industry to realise its true potential

The challenge:

Growers are leaving the industry and there is a decrease in the number of new entrants. A modern curriculum should excite and demonstrate the industry's potential and enable existing growers and new entrants to adapt to and mitigate the challenges faced by the industry, to maximise opportunities and ensure the sustainability of the industry.

Lead: DAFM

Stakeholders: Growers, Teagasc, Agricultural Colleges, Universities

Levers: Commodity groups

Cross cutting factors covered:

Education and training | Succession Planning | Labour | Insight and Intelligence | Circular Bioeconomy

Actions	Outputs
Establish a working group of stakeholders to consult with Agricultural Colleges, Teagasc, Irish and international universities, Department for Further and Higher Education, Research, Innovation and Science to identify best methods to attract, develop and retain talent in the industry and provide appropriate educational and training services with progression opportunities The working group will • Lead the development and modernisation of the horticulture training, CPD and education offering (to include bioeconomy, circularity and sustainability principles, low input and organic production, climate change adaptation and mitigation, innovative and best business practice and food safety) and input into currently-in-development apprenticeships by o looking to international experience o commissioning a consultant to advise on modernising the horticultural curriculum • Be the voice for horticulture education by raising awareness of opportunities in the industry to potential students	Working group established by Q3 2023 An inventory of all public and private educational courses in horticulture (and related) in Ireland from QQI Level 4 up Consultant led report identifying future curriculum and industry needs including a study to see what proportion of trainees enter the industry and which sub sectors are served by current educational offerings Curriculum changes implemented by Agriculture Colleges and Universities Horticulture apprenticeships launched, Graduate training schemes developed New entrants are attracted to the industry

Food Vision 2030

Mission 2, Goal 4, Action 13,
Mission 4, Goal 6, Actions 1 and 2

See also:
KSA 3, KSA 5, KSA 8

Key Strategic Action 5

Research and Development for the industry

Key Strategic Action 5

Research and Development for the horticulture industry

The challenge:
Industry and publicly-funded Research and Development for the horticulture industry needs to be supported to a much higher level, in order to increase productivity and enhance competitiveness, improve environmental credentials and foster new product innovation. Research and development into labour-saving devices are essential to long term competitiveness. The industry requires both knowledge of "what's out there" and access to funding for Research and Development.

Lead: DAFM

Stakeholders: Teagasc, Irish Universities and research institutes, Growers, IFA, Bord Bia

Levers: Working groups

Cross cutting factors covered:

New Product Development | Research & Development | Sustainability (including growing media) | Smart / Precision Agriculture | Plastic and Packaging | Labour | Circular Bioeconomy | Organic production

Actions

- Establish a working group to identify and respond to the research and development needs of the industry
    - DAFM recruit working group members by Q3 2023
    - Resource requirements to achieve objectives identified in Q3 2023
    - Taking into account international research, working group publish map of research and development gaps by Q2 2024
    - Identify opportunities to collaborate with UK on shared challenges
    - Working group communicate knowledge and research gaps to research sector by Q3 2024
    - Work with DAFM AKIS group to establish how research can be disseminated
- Identify measures that the industry could pursue to enhance its climate action and environment credentials – growing sustainably, improving soil health, enhancing biodiversity and low input farming

Outputs

Working group established and supporting the horticulture industry's research and development needs

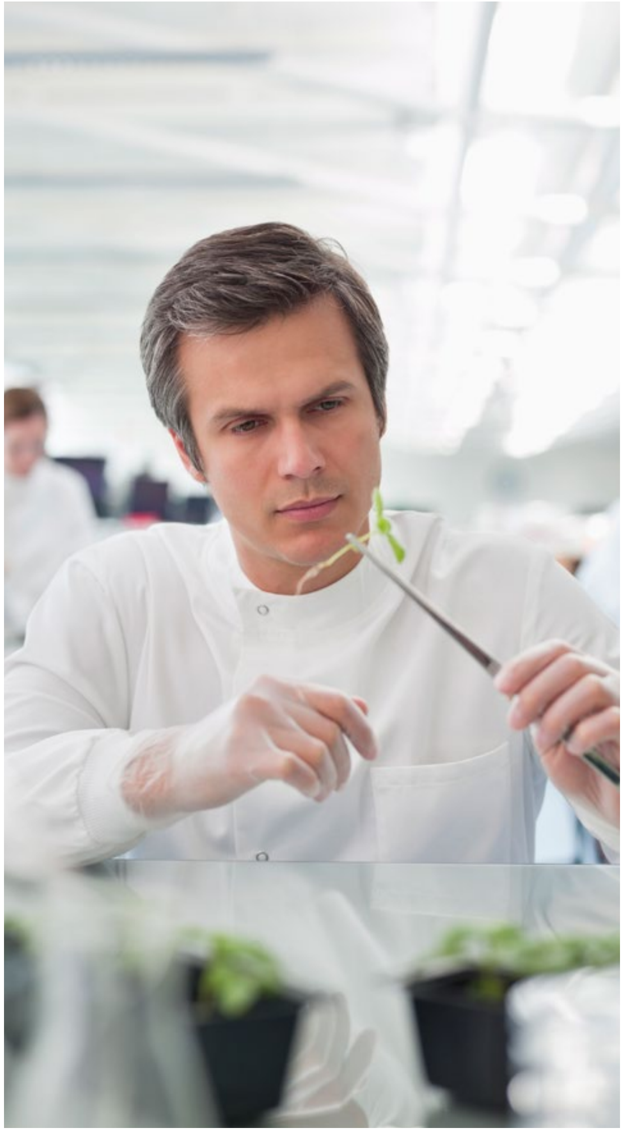
Research needs across the industry are identified and appropriate state and industry funding opportunities are targeted

Horticulture is included in wider research calls on topical issues including around digitisation, data gathering and modelling

Relationships are developed with Irish, UK and international research institutes encouraging a focus on horticulture

New knowledge creation and actionable advice from Irish and international research on relevant topics including suitable varieties, plant protection products, sustainable packaging, artificial intelligence, labour saving devices, reduction in waste, growing innovation, climate adaptation, organic and integrated production, bioeconomy and circular economy is leveraged to drive innovation and create opportunities

Continued →



Actions

- Identify methods towards labour use efficiency and smart horticulture (technology adoption) including for small scale farming
- Analyse the challenges that exist, that public and industry funded research could address, to enable the industry in its current state to pursue the opportunities identified
- Recommend supports and investment plan to help meet the needs identified

Outputs

Increased access to plant protection products, IPM and access to optimised growing practices

An increase in controlled environment horticulture (glasshouse crops) underpinned by the circular economy in particular regarding energy and fertiliser use

Food Vision 2030

Mission 4, Goal 3, Action 1,
Mission 4, Goal 2, Action 1, 2 and 3

See also:
KSA 6, KSA 7, KSA 8

Research and Development is a key enabler to support innovation and growth.

The learnings from Irish and international research should be made easily available to industry stakeholders through the AKIS.

A particular research focus for the industry is alternative production systems that do not use peat as a growing media and automation to reduce reliance on harvesting labour. In addition to several Producer Organisation co-funded research projects, €1.69 million in state funding has been allocated to researching alternatives to peat as a growing media.

To date, much of the research in horticulture has been industry led. There is a definite need to increase support for horticultural research in Ireland and apply this new found knowledge to develop innovative growing practices, labour-saving technologies and New Product Development (NPD).

Success in Research and Development is dependent on additional resources including human capital to develop proposals to secure future funding, and strong relationships with Irish and international research institutes to ensure research projects are led by the best researchers in their field.

Key Strategic Action 6

Better data and information for better insights

Key Strategic Action 6.1

Better data for better insights: Collect hortimetrics* data along the supply chain, from production data to sales data to identify growth opportunities and inform policy

The challenge:
The diversity of Irish horticulture produce has historically limited growers and agencies' ability to collect and share data.

Lead: DAFM

Stakeholders: Teagasc, Growers, IFA, Bord Bia, organisations representing smaller / organic growers

Levers: Commodity Groups, Producer Organisations

Cross cutting factors covered:

Insight and intelligence | New Product Development and Innovation | Organic Production

Food Vision 2030

Mission 3, Goal 3, Action 1, and Actions 10-14

Actions

- DAFM, Bord Bia and Teagasc to map out the minimum baseline of accurate Irish production data (conventional and organic growing systems) required to support opportunities for growth
- DAFM, Bord Bia, Teagasc and organisations representing organic / smaller growers to put in place effective mechanisms to collect, analyse and verify this data
- Stakeholders to measure and monitor the level of employment and labour requirement of the industry
- Stakeholders to analyse the dedicated human capital required to gather and maintain granular level data on the industry

Outputs

The development and maintenance of accurate datasets to allow for informed policy decisions

The production of hortimetrics that can be leveraged to drive innovation and growth in the industry

See also:
KSA 5, KSA 7, KSA 8

Data is the foundation of evidence informed policy making and insights derived from data will point to more opportunities for growth. Accurate data is needed to persuade growers, banks, potential investors and other agencies of the market possibilities of new opportunities. There is a granular level of market data required to assess the potential opportunities for Irish horticulture, analyse import substitution, export potential, and diversification opportunities. Significant gaps exist in horticulture datasets, specifically economic / production data within sectors and more generally the exact nature of import volumes, pack types, market destinations and supply chain dynamics. This must be addressed.

*The Irish horticultural industry needs access to detailed hortimetrics data including:

- Grower numbers, crops, volume, value, location and other relevant census type data
- Grower profiles, age, profitability, investment readiness level across all sectors

Like dairy systems and grassland production, Irish horticulture requires a similar level of national attention and fundamental research in digitisation, data and modelling in sustainability research. This will be important to prepare and predict future threats from climate change, continuing to align with the objectives of Ireland's national Climate Action Plan and Food Vision 2030.

Key Strategic Action 6.2

Collect sustainability metrics (Horti-enviro-metrics) to monitor evidence and communicate the industry's environmental credentials

The challenge:
There is market pressure from retailers and consumers to evidence the Horticulture sub sectors' environmental footprints.

Lead: Bord Bia and Teagasc

Stakeholders: DAFM, Growers, IFA

Levers: Commodity Groups

Cross cutting factors covered:

Food Waste | Sustainability

Actions	Outputs
• Pilot carbon footprinting data capture options in 2023 to establish the appropriate platform for carbon accounting across the sub sectors, taking account of inputs, processes and outputs	The development of a system to measure, understand and communicate the industry's environmental impact Quantification of what the environmental footprint is of Irish production compared to imported product

Food Vision 2030 dashboard of indicators

See also:
KSA 5, KSA 7, KSA 8

KSA 6

In line with Ireland's Climate Action Plan and given the growing commercial and consumer pressure, hortimetrics will therefore include a sustainability metric: horti-enviro-metrics. It will initially focus on testing and establishing a platform for monitoring the carbon footprint of Irish horticultural produce, which is regarded as the most pressing and important metric in food systems at the current time. Growers are facing increased market pressure from customers to capture data and report on their carbon footprint. The intention is that it will focus on carbon foot-printing initially, with energy, water, soil health, biodiversity and food waste metrics to follow.

Key Strategic Action 6.3

Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development

The challenge:
Ireland's horticulture industry operates in a European and global context. A multitude of data and insight exist via various platforms but gathering, co-ordination and dissemination of this valuable information needs to take place.

Lead: Bord Bia

Stakeholders: Growers, IFA, Teagasc, DAFM

Levers: Commodity Groups, Producer Organisations

Cross cutting factors covered:

Insight and intelligence | New Product Development and innovation | Brexit | Plastic and Packaging | Organic Production

Food Vision 2030

Mission 3, Goal 3, Action 1

Actions

- DAFM and Bord Bia, with commodity groups, map out topics to monitor for insight and market intelligence and market research (including route to market, packaging innovation, organics and climate adaptation)
- Bord Bia to continue and build its horticulture market insight research to measure the domestic fresh produce and amenity markets, identify evolving consumer trends and arising opportunities and disseminating this to the industry across multiple engagement touchpoints including on a 1-1 and group / sector basis
- Bord Bia to facilitate client companies in the horticulture industry using its suite of capability services to
  - o foster innovation / New Product Development in the industry
  - o support exporters post Brexit including a review of post-Brexit market opportunities
- Bord Bia to capture pricing and supply information in key EU countries including Netherlands and Spain, and the UK
- Bord Bia, Teagasc and DAFM to capture and share through AKIS networks, Irish and international market information including the impact of continental weather conditions on supply

Outputs

The total value and timing of the import of key crops into Ireland is quantified

Optimised production and value chain innovation

AKIS includes meaningful market insights leveraged from government and agencies' worldwide network

Growers understand competitive landscape from imports

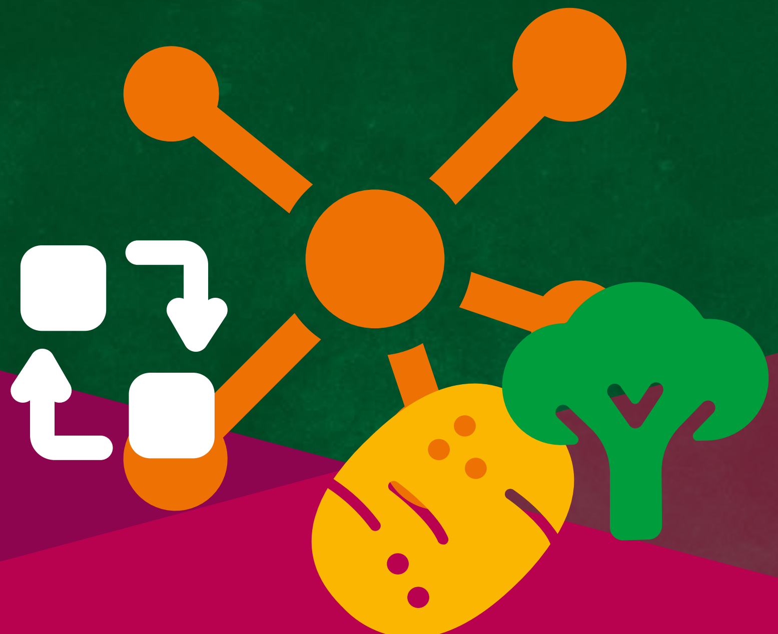
See also: KSA 5, KSA 7, KSA 8

Much of Ireland's horticulture industry is supply chain (commodity) based, which does not maximise competitive advantages to secure premium pricing in market. Better data can help to inform the industry of strategic market opportunities. Insight requires easy industry access to commercial domestic and international consumer and trade market research. Market and consumer insight needs to drive all commercial innovation and New Product Development. (New Process Development is driven by knowledge of science and technology.)

KSA 6

Key Strategic Action 7

Integrate Horticulture back into Agriculture Knowledge and Innovation System AKIS



Key Strategic Action 7

Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)

The challenge:
Horticulture is a very diverse industry with at least seven sub sectors. Given the range of crops and plants grown and variety of production methods, including organic, now in use, there is an ever increasing need to develop resources for Knowledge Transfer to ensure invaluable expertise is available for growers.

Lead: DAFM

Stakeholders: Teagasc, research institutes, advisory services, organics associations

Levers: Commodity Groups

Cross cutting factors covered:

Knowledge Transfer | Insight and Intelligence | Organic Production | Brexit | Research and Development

Food Vision 2030

Mission 1, Goal 7, Action 4

Actions

- Understand DAFM AKIS roadmap and its elements Q3 2023
- Check what other resources might be required to integrate horticulture into the AKIS
- Use the AKIS network to work with growers on supports, access to loans, funding opportunities
- Resource requirements to achieve objectives identified in Q3 2023
- Align and communicate AKIS opportunities through commodity groups from 2024

Outputs

Horticulture is embedded in DAFM's AKIS network and supported under the Cap Strategic Plan

Evidence based options for new products, technologies and climate resilient techniques and systems are highlighted for priority adoption in an Irish context

AKIS is used to communicate regularly with horticulture stakeholders

Benefits of embedding are communicated to ensure continued AKIS integration

Case studies, collaborative links and integration with horticulture centred AKIS in other jurisdictions

Understanding the best systems approach for Ireland in terms of developing the horticultural element of AKIS

Creating the innovation pathways for the industry including provision of wrap around services and funding

See also:
KSA 5, KSA 6, KSA 8

“When knowledge is co-created, used efficiently and shared widely, this will further support the development and scaling up of innovative solutions that work in practice.”[5] This is the means of sharing and engaging with the data collected under KSA insight and market intelligence and KSA research and development.

Horticulture lacks a knowledge sharing system which can support growth, focus on the business knowledge, sustainable growing principles, climate change mitigation and technical knowledge required for horticulture growing including organic production.

[5] https://agris.fao.org/agris-search/search.do?recordID=FR2021061434

Key Strategic Action 8

Support innovation and diversification

Key Strategic Action 8.1

Support innovative growers who are adding value by ensuring a clear pathway to funding for primary producers for innovation

The challenge:

With the limitations imposed by the Industrial Act of 1986 (which does not allow primary producers to benefit from Enterprise Ireland funding) innovative primary producers have struggled to access existing funding platforms. There needs to be a clear pathway for funding for existing innovative primary producers. There is no scarcity of bright ideas but due diligence is required to determine which ideas to support and scale.

Lead: DAFM, with DETE

Stakeholders: DETE, DAFM, Teagasc, growers

Levers: Align Scheme of Investment Aid for the Development of the Commercial Horticulture Sector with National Horticulture Strategy objectives, Commodity groups

Cross cutting factors covered:

New Product (and Process) Development | Innovation and value-added products | Smart / Precision Agriculture | Research and Development | Plastic and Packaging | Circular Bioeconomy

Actions	Outputs
• DAFM to map out the investment pathways for New Product and Process (both technical and value chain / business model) development for new and existing horticulture growers and businesses • DAFM to ask DETE to review the Industrial Act 1986 • DAFM to prepare for State aid approval a realignment of the Scheme of Investment Aid for the Development of the Commercial Horticulture Sector to include innovation funds and value chain / business model development for new and existing businesses.	Clarity on pathway to funding for primary horticultural producers

Food Vision 2030

Mission 4, Goal 5, Action 3

See also:
KSA 5, KSA 7

Key Strategic Action 8.2

Develop diversification models for new and existing businesses and growers built on the results of research and development and market intelligence and insight

The challenge:

Larger growers are reliant on the retail sector for distribution. The industry needs to investigate the circular bioeconomy model from a zero-waste / sustainability / innovation outlook to identify new business models. There are opportunities to work collaboratively at a regional level, linking to renewable energy sources, and looking at different growing systems from land to other (indoor, vertical etc) and examining higher value-added opportunities alongside full crop / current approaches as well as high-value powders and other biobased products. MAPs (Medicinal and Aromatic Plants) are to be considered alongside this approach. Investing in innovation and the development of value-added products can unlock latent opportunities for the industry in addition to current business models.

Lead: DAFM

Stakeholders: DETE, DAFM, Bord Bia, Teagasc, growers

Levers: Working groups, Commodity groups, Align Scheme of Investment Aid for the Development of the Commercial Horticulture Sector scheme with National Strategy for Horticulture objectives

Cross cutting factors covered:

New Product (and Process) Development | Innovation and value-added products | Smart / precision agriculture | Research and Development | Plastic and Packaging | Circular Bioeconomy

Food Vision 2030

Mission 2, Goal 3, Actions 5 and 7

See also:
KSA 7

Continued ⟶

Actions

- DAFM to set up a dedicated innovation working group focused on bioeconomy opportunities to
  - o Identify and benchmark new product formats and value-added business models against international best practice
  - o Showcase existing innovation and diversification successes
  - o Identify and develop opportunities for cross industry collaboration which leverages regional funding models
  - o Explore further opportunities around Food Works programme for primary producers to develop new ideas in a controlled and supported environment
  - o Engage with Shannon ABC, Bioconnect Centre Monaghan, NorthWest Bioeconomy Hub
- Innovation working group will work with commodity groups to identify, develop and promote sustainable blueprints for
  - o Crops
  - o Plant-based ingredients (powders etc)
  - o Biobased products
  - o Medicinal, Aromatic Plants (MAP)
  - o Seeds and plant propagation

Outputs

Economically and environmentally sustainable business opportunities available as alternative production models

Economically modelling and appraising potential options for horticultural production in Ireland

Quantifying the scale needed to grow fresh produce for Ireland and certain export markets considering age demographics, recommended dietary intake and population growth

Horticulture based initiatives integrated into Food Works programme where possible

Horticulture integrated into bioeconomy stakeholder network

Profitability blueprints available for existing crops as well as new types of product

Potential for MAP sector fully understood

Levers to achieve change

Promotion

Bord Bia promotes the consumption of horticulture produce and the purchase of plants for gardening to consumers. Bord Bia also engages with school children to educate them on the role fresh produce plays in a healthy diet and its origin. Bord Bia Bloom is the annual consumer showcase and major promotional platform for the horticulture industry.

The horticulture industry has an array of benefits to publicise and promote. These benefits include health benefits from eating fruit, vegetables and potatoes that are locally grown but also the wellbeing benefits that are attributed to growing your own plants and activities such as gardening.

***Use Buy fresh, local and in-season / organic* as the key message of all state and EU funded campaigns to consumers.**

Amplify the impact of campaigns by pre-informing stakeholders through commodity groups and providing campaign assets for stakeholders to share.

Statutory levy

Legislation exists to introduce a statutory levy across horticulture (including growers and consolidators) to provide a source of funding for additional promotion, research and development and gathering data and insight. When industries make direct contributions to the promotion and development of their industry this ensures that participants have a direct involvement in the future plans of the industry. Certain EU campaign funds require industry contribution.

Policy alignment

Make horticulture part of wider policy conversations across DAFM and other relevant departments on issues including health, innovation, education, sustainability, housing and transport.

Producer Organisation Scheme in the Fruit and Vegetable Sector

Producer Organisations in the Fruit and Vegetable sector (not potatoes) are eligible for EU funding of 50% of costs (excluding production) and up to 80% aid for approved environmental sustainability actions and research if more than 20% of their actions are spent on these areas. Since 2018 Irish Producer Organisations have received nearly €25 million in EU co-funding for their Operational Programmes.

Where new Producer Organisations are formed in mushroom, soft fruit, top fruit, field vegetable and protected crops sectors, the PO can claim back 60% EU funding for all eligible approved costs, excluding production, on its first Operational Programme.

Align Scheme of Investment Aid for the Development of the Commercial Horticulture Sector with National Strategy for Horticulture objectives

For over 10 years The Scheme of Investment Aid for the Development of the Commercial Horticulture Sector (horticulture grant scheme) has provided targeted support to the sector by providing grant aid towards funding capital investments.

For 2024 onwards this scheme could be realigned to include continued support for on farm investment, adoption of innovation and technology, climate change mitigation and reduction of use of pesticides as well as Research and Development, bioeconomy investments and new product development by the primary producer.

This scheme is operated with funds provided by the Exchequer and must be approved by the European Commission under State Aid rules.

Set up working groups

Working groups are an important tool when progressing strategic objectives, they have the power to combine the expertise and knowledge to provide focused, targeted, objectives and recommendations. A number of working groups will be required to enable progress of the National Strategy for Horticulture 2023-2027. Working groups need to include relevant stakeholders including growers, retailers, government agencies and departments.

The working groups proposed are

1. **Retail charter**
2. **Education / training**
3. **Research and development**
4. **Innovation and new product development**
5. **Better data**
6. **AKIS**

Commodity groups

To ensure that the implementation of the Key Strategic Actions is effective at a sub sector level and that sector specific actions are addressed, sub sector leads will need to be involved. This function can be performed by existing and new commodity groups and / or Horticulture Industry Forum / IFA sub sector leads / committees. **It is proposed that the existing Potato Development Group, Apple Development Group and Irish Hardy Nursery Stock Association, for example, alongside newly formed Vegetable and Berries Development Groups / sub sector leads assume this role.**

Timeline of actions

The initiation phase of each Key Strategic Action has been mapped to the timeline below.

Q2 2023

- Producer Organisation benefits awareness and information campaign starts
- Pilot starts for carbon footprinting data capture options to establish the appropriate platform for carbon accounting across the sub sectors, taking account of inputs, processes and outputs
- Investigate State funded institutions' procurement requirements

Q3 2023

- Understand DAFM AKIS roadmap and its elements
- Engage with Department of Education and Department of Health and Local Authorities to coordinate activities emphasising health benefits of eating more fruit and vegetables and growing your own
- DAFM to ask DETE to review the Industrial Act 1986
- DAFM to prepare for State aid approval the realignment of the Scheme of Investment Aid for the Development of the Commercial Horticulture Sector to include innovation funds and value chain / business model development for new and existing businesses
- Statutory levy discussion initiated
- Resource and human capital needs identified

Q4 2023

- Working groups for Retail charter, Education / training, Research and development, Data, Innovation and new product development, AKIS established
- Commodity groups identified / established
- Information on forming producer groups produced by Teagasc and disseminated through AKIS
- DAFM and Bord Bia to identify supports for smaller growers to collaboratively market direct to consumers
- DAFM to review Producer Organisation scheme from the perspective of smaller growers
- Review / research existing charters and monitoring mechanisms that are considered best practise and take learnings
- Engage with stakeholders that the charter will impact and seek input
- Explore the options around running a social media campaign asking consumers to pledge to buy fresh, local, in season, fruit and vegetables to demonstrate their support to protect production by local Irish farming families
- Once established, engage with Agri Food Regulator to explore options for supporting educational consumer campaign and retail charter
- Conduct an inventory of all public and private educational courses in horticulture (and related) in Ireland from L4 up
- Horticulture apprenticeships launched
- Consultant led report identifying future curriculum and sector needs including a study to see what proportion of trainees enter the sector and which sub sectors are served by current educational offerings

- DAFM, Bord Bia and Teagasc to map out the minimum baseline of accurate Irish production data required to identify opportunities for growth
- DAFM and Bord Bia, with commodity groups, map out topics to monitor for insight and market intelligence and market research (including route to market, packaging innovation and climate adaptation)
- Bord Bia to capture pricing and supply information in key EU countries including Netherlands and Spain, and UK
- DAFM to map out the investment pathways for New Product and Process (both technical and value chain / business model) development for new and existing horticulture growers and businesses
- Innovation working group will work with commodity groups to identify, develop and promote economically and environmentally sustainable profitability blueprints

Q1 2024

- DAFM to facilitate trips to continental POs.

Q2 2024

- Map of knowledge and research gaps published by working group

2024 onwards

- Curriculum changes implemented by Agriculture Colleges and Universities
- Align and communicate AKIS opportunities through commodity groups
- Pilot seasonal workers scheme for horticulture introduced
- Graduate training schemes developed
- DAFM, Bord Bia and Teagasc data collection and analysis requirements in place
- Energy, water, biodiversity and food waste metrics horti-enviro-metrics captured
- Irish and international market information including the impact of continental weather conditions on supply available
- Access to loans, funding opportunities communicated via AKIS

Appendix I Cross cutting factors

These cross-cutting factors were identified in KPMG's report Opportunities for the Irish Horticulture Sector

Labour – Growers / producers are reliant on temporary workers, supply of which is falling. Securing sufficient labour is a challenge. The sector is reliant on employment permits, attracting and retaining employees is a significant challenge	KSA 3, KSA 4
Pricing – Increases in input costs are not matched by prices. Five branded chains control over 90% of the fresh produce retail market; growers are price takers. Downward price pressure from imported goods	KSA 1, KSA 8
Margins – Low margins make re-investment difficult in light of sustainability demands	KSA 1, KSA 2
Scale – The Irish market is relatively small which limits investment opportunities for major projects. Expanding capacity is limited not only by the capital requirements but also by low demand due to scale. Limited scale opportunities are a barrier to entry for innovative or sustainable players	KSA 1, KSA 2, KSA 3, KSA 5, KSA 6, KSA 8
Research and Development– Research and Development is a key enabler to support innovation and growth. Funding constraints curtail the role for Research and Development to support the sector. Research and Development is much needed in terms of both technical sector research and market intelligence	KSA 5, KSA 6
New Product Development and innovation – Linked to the need for Research and Development, new product development and innovation can help to create new opportunities to grow the sector	KSA 8
Sustainability (including growing media) – The sector's sustainability credentials present an opportunity to support growth. However, while the sector has a relatively low environmental footprint, finding alternatives to peat-based growing media is a significant challenge. There is a research challenge to find alternative growing media which are available, affordable and sustainable, while meeting the yield and quality parameters required. There is pressure to reduce chemical pesticide use which requires a full sector shift given current dependence in the growing process. The sector needs access to essential pest control products that still meet sustainability requirements	KSA 5, KSA 7
Knowledge transfer – Horticulture needs to be integrated back into the broader Agriculture Knowledge and Innovation System (AKIS) to create an environment conducive to growth. Greater resourcing of horticulture advisory services is needed	KSA 7

Education and training – Education and training programs can be enhanced by considering the current needs of the sector. On the consumer side, consumer education, especially through school programmes and initiatives, can raise awareness and consumption of healthy products from the horticulture sector	KSA 4, KSA 2
Succession planning – Ageing producer base, low level of succession planning and lack of new entrants. There is a need to attract new entrants, so reducing the average owner age from 57 to mid 40s	KSA 4
Insight and intelligence – There is a lack of sector and farm management data. Implementing mechanisms to collect, analyse and disseminate sector and farm management data can help to inform the policy makers and growers to support strategic decision making. Better data and further research can help to inform the sector of strategic market opportunities	KSA 6
Promotion – The sector can be promoted (create awareness) by leveraging the sector's health, wellbeing and environmental credentials. In addition, local produce can be promoted during the Irish growing season. These levers can help to increase consumption of local produce, thereby gaining a greater share of the home market and reducing the trade deficit	KSA 2
Inventory of soil and site suitability – Linked to Research and Development and sector intelligence, an inventory of soil and site suitability can support the identification and targeting of product opportunities	KSA 5
Collaboration – Producers can benefit from greater collaboration to increase their bargaining power and to help grow their business. Producer organisations (POs) are a key example, however, other forms of collaboration such as knowledge sharing can be equally important for growers that are not part of a PO structure	KSA 1
Producers and retailer collaboration: can help to better meet the needs of consumers, support the viability of the Irish grower base, develop the domestic market to benefit both growers and retailers	KSA 2
Plastic and packaging – Consumers want packaging that is convenient and saves them time. Equally, increasing environmental concerns necessitate a move to more sustainable packaging. However, the increased cost of sustainable packaging is not necessarily matched by higher producer prices	KSA 5

Food waste – There is limited information about the extent of food waste in the primary production sector in Ireland. Reducing food waste on the farm level will have positive social, economic and environment impacts, as well as support sustainability of growers	KSA 5
Energy – Energy is an important input costs across sub-sectors, especially for soft fruit, protected crops and nursery stock. Rising energy costs tied with low margins place producers under increased pressure. Alternative energy sources for own generation can help to alleviate this pressure but funding support would be needed to invest	KSA 5, KSA 7
Brexit – Horticulture exports to the United Kingdom (UK) now face additional barriers due to the increased administrative burden created by Brexit	KSA 7
Organic production – Organic production presents a market opportunity, however, the balance between higher costs and producer prices are a key factor	KSA 1, KSA 2, KSA 3, KSA 4, KSA 5, KSA 6, KSA 7, KSA 8
Understanding the sector's overall impact – A cost-benefit analysis (CBA) of the sector can inform policy makers on the relative importance of the sector, to guide the level of resources and funding support provided to the sector	KSA 5
Innovation and value-added products – Investing in innovation and the development of value-added products can unlock latent opportunities for the sector. For example, plant based ingredients and plant protein processing businesses	KSA 8
Circular bioeconomy – The circular bioeconomy presents market opportunities to grow the horticulture sector and support sustainability objectives	KSA 5, KSA 8
Smart / precision agriculture – The adoption of smart / precision agriculture can help to increase efficiency and boost competitiveness. For example, technologies and practices such as vertical farming, hydroponics and Internet of Things (IoT)	KSA 5, KSA 7
Sustainable nutrition applications – Sustainable nutrition builds on the concept of a sustainable food system (SFS) by adding a health / nutrition dimension to the environmental, economic and social sustainability dimensions. The horticulture sector is ideally placed to support sustainable nutrition	KSA 2, KSA 5

Appendix II Sub sector specific actions

The *Opportunities for the Irish Horticulture Sector Report* identified 88 cross cutting and sub-sector specific actions to address challenges and maximise opportunities.

Due to resource constraints, it is not feasible to implement all of the actions identified. Therefore, cross cutting actions were prioritised to identify those considered to have the highest impacts compared to resource inputs. These eight Key Strategic Actions are described in detail on pages 13 to 46.

The table in this Appendix shows the link between the eight cross-cutting Key Strategic Actions and the sub sector actions. These sub sector specific actions will need to be championed by commodity groups as part of the implementation of the National Strategy. The successful implementation of the Strategy will require collaboration between and commitment from the sector's key players.

Mushrooms

Strategic Ambition:
To become the most sustainable global leader in primary and value-added mushroom products, driven by increasing demand for plant-based solutions

Mushrooms			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Environmental footprint	Understand the environmental impact of mushroom production	Develop "Horti-enviro-metrics" as a common measure to understand and communicate the sector's environmental impact	KSA 6.2 Collect sustainability metrics
		Benchmark against international competitors and best practice examples	KSA 6.2 Collect sustainability metrics
	Improve and reduce the sector's environmental footprint	Invest in research and knowledge transfer to optimise the sector's environmental footprint	KSA 5 Research and Development
	Understand consumer sentiment toward the sector's environmental impact	Conduct consumer research to generate insight	KSA 6.3 Gather and share market insight and intelligence
		Refine communication with consumers accordingly	KSA 2.2 Increase consumer understanding of the horticulture sector
		Similarly communicate to the broader trade sector	KSA 2.2 Increase consumer understanding of the horticulture sector

Mushrooms			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Environmental footprint (Continued)	Find alternatives to peat production systems	Conduct research and provide research funding for knowledge creation and dissemination	KSA 5 Research and Development
		Adopt a multi-disciplinary approach to resource the research challenge	KSA 5 Research and Development
Production system evolution and Research, Development and Innovations (RDI)	Increase labour use efficiency	Provide training in lean management, agronomy best practice and labour retention strategies	KSA 3 Seasonal workers scheme KSA 7 AKIS
		Invest in Research and Development, for example, labour-saving technology	KSA 5 Research and Development
		Develop and implement an enhanced permit system and provide support for access to accommodation	KSA 3 Establish the framework for a permanent non-EEA seasonal workers' scheme
	Review and monitor labour needs	Establish and maintain a bi-annual labour survey. Allocate the required funding and resources	KSA 6.1 Collect hortimetrics data
	Adapt existing technologies into the Irish system	Allocate resources and support for Research and Development	KSA 5 Research and Development
		Facilitate international collaboration	KSA 5 Research and Development
		Develop the required competencies by investing in local skills	KSA 4 Modern horticulture curriculum
	Create bespoke systems for the Irish marketplace	Invest in Research and Development to develop bespoke systems that can enhance labour efficiency whilst lowering the overall labour requirement	KSA 5 Research and Development

Mushrooms			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Production system evolution and Research, Development and Innovations (RDI) (Continued)	Create bespoke systems for the Irish marketplace (Continued)	Facilitate international collaboration to develop and foster domestic competencies	KSA 5 Research and Development
	Increase compost use efficiency	Invest in R&D activities that support a focus on increasing efficiency for growers	KSA 5 Research and Development
	Foster innovation across the total production system by challenging existing assumption on how mushrooms are grown	Focus Research and Development on developing the next evolution for the mushroom sector, a "Mushroom sector 3.0"	KSA 5 Research and Development
	Packaging innovation	Learn from and adopt international best practice	KSA 5 Research and Development
		Monitor global packaging trends	KSA 6.3 Gather and share market insight
		Identify solutions that minimise food waste	
	New food product development, based on health and nutrition benefits	Develop consumer trend insight	KSA 6.3 Gather and share market insight
		Develop bespoke approach based on the local context while learning from international best practice	KSA 8.2 Develop diversification models for new and existing growers
	Develop an innovation pathway for the sector in terms of new food products and bio-based materials	New food products: develop market insight and invest in the required research capacity	KSA 8.1 Support innovative growers who are adding value

Mushrooms

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Production system evolution and Research, Development and Innovations (RDI) (Continued)		Bio-based materials: Embed the mushroom sector in the circular economy and circular economy practices	KSA 8.2 Develop diversification models for new and existing growers
	Increase product shelf-life	Invest in Research and Development to enhance product shelf-life	KSA 5 Research and Development
		Develop bespoke approach based on the local context while learning from international best practice	KSA 5 Research and Development
	New product development (New Product Development), including exotic mushrooms	Follow international best practice, consider key learnings from the Dutch and New Zealand sector experience	KSA 8.2 Develop diversification models for new and existing growers

Amenity

Strategic Ambition:
Make Irish grown plants the first choice of buyers at home and abroad, driven by Ireland's high plant-health status and sustainability credentials

Amenity

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Identification of export and B2B market opportunities	Identify opportunities for exporting existing products	Engage with existing key exporters	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development
		Identify additional research that is required to inform growers of export opportunities	KSA 5 Research and Development for the horticulture industry
		Engage with export markets and develop networks for market intelligence	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development

Amenity

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Identification of export and B2B market opportunities (Continued)	Identify and build networks with key purchasers of Irish products at both retail and commercial scale	Identify who they are	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development
		Understand their needs and wants	
		Develop a network with the Irish supply base	
		Facilitate engagement	
	Import substitution	Develop a network of market intelligence to inform import substitution efforts	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development
		Increase the domestic share of plants we grow and import	N/A (Outcome)
		Conduct commercial feasibility studies	KSA 8.2 Develop diversification models for new and existing and growers
	Enable the sector to build capacity and enhance capabilities	Invest in Research and Development and knowledge transfer	KSA 5 Research and Development for the horticulture industry
		Develop training and education offering	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities

Amenity			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Identification of export and B2B market opportunities (Continued)	Enable the sector to build capacity and enhance capabilities (Continued)	Secure the required funding	KSA 5 Research and Development for the horticulture industry KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities
Develop Horti-enviro-metrics	Measure the environmental footprint of amenity production	Develop an environmental balancing statement across crop models	KSA 6.2 Collect sustainability metrics (Horti-enviro-metrics) to evidence industry environmental credentials
		Benchmark against international best practice	
		Conduct a LCA (life cycle assessment of environmental impacts)	
	Improve and reduce environmental footprint	Invest in research and knowledge transfer	KSA 5 Research and Development for the horticulture industry KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Reduce the use of plastics, conduct Research and Development to inform this	KSA 5 Research and Development for the horticulture industry

Amenity

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Develop Horti-enviro-metrics (Continued)	Improve and reduce environmental footprint (Continued)	Fill the knowledge gap on Integrated Pest Management (IPM)	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Follow best practice for sustainable production	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Provide relevant education to consumers and the trade sector	KSA 2.2 Increase consumer understanding of the horticulture sector
	Drive the purchase of Irish grown plants	Identify the key messages to use for promoting Irish grown plants, based on the benefits for consumers and B2B buyers	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
		Develop a toolkit to communicate the story and benefits that can help to add a premium for plants of Irish origin	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
	Find alternatives to peat production systems	Conduct research and provide research funding for knowledge creation and dissemination	KSA 5 Research and Development for the horticulture industry
		Adopt a multi-disciplinary approach to resource the research challenge	KSA 5 Research and Development for the horticulture industry

Amenity			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Lack of specialist plant production and commercial feasibility knowledge	Develop education and plant production methodologies	Augment the curriculum in horticulture to reflect these methodologies	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities
		Include modern / commercial production techniques	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities
	Identify the skills deficit in plant production	Develop a knowledge transfer programme to meet the current deficit through continuous professional development (CPD)	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
	Develop a masters programme linked to European colleges / institutions	Identify sources of funding	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities
		Short-list candidate universities	
		Set-up placement programmes	
	Integrate horticulture into AKIS and develop the required policies	DAFM team to spearhead this initiative	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Review the current structure and understand the path to integration	

Amenity

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Lack of specialist plant production and commercial feasibility knowledge (Continued)	Innovation and new knowledge creation	Invest in applied Research and Development	KSA 5 Research and Development for the horticulture industry
		Adopt international best practice	KSA 5 Research and Development for the horticulture industry
		Leverage grower collaboration and knowledge sharing	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Facilitate the role of growers as new knowledge creators	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
Policy alignment	Make horticulture part of policy conversations across DAFM and other departments such as transport, environment and education	Spearhead by DAFM	Levers
		Share information on key policy timelines	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
	Support sector's understanding of policy development	Communication and understanding of policy developments and changes, and call out opportunities	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
	Local authority and town council education at the government department and local level	Communicate benefits of using Irish grown trees and plants	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
		Encourage the uptake of Irish grown trees and plants	
		Support Green Cities Initiative	

Amenity			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Health and wellbeing	Identify the health and wellbeing credentials of amenity horticulture	Invest in Research and Development on the physical, mental, environmental and societal benefits. Communicate this to consumers and B2B buyers	KSA 5 Research and Development for the horticulture industry KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
	Communication of health and wellbeing credentials to consumers	Develop the sector's key messages and a toolkit to communicate them	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
	Capture the economic value of wellbeing benefits	Conduct a CBA to better understand this value	
	Commercial greening	Build the sector story and educate the B2B audience, planners, landscapers and architects	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
		Conduct a CBA to better understand this value	

Potatoes

Strategic Ambition:
To sustainably grow the potato sector by increasing the penetration of Irish potatoes in key channels, adding value through new product development, and building new routes to market enabled by a sustainable supply of quality seed

Potatoes			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Identify value-added opportunities	Develop innovation pathways for new food and drink products, including bio-based materials	Develop market insight and resources to support the research	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development
		Consider international developments	KSA 5 Research and Development for the horticulture industry
		For bio-based materials: the potato sector should be embedded in the circular economy	KSA 8.2 Develop diversification models for new and existing and growers
	Identify different product format opportunities	Determine the size of the prize considering end use, competitors, feasibility and the options in the frozen market	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development

Potatoes			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Identify value-added opportunities (Continued)	Promote locally grown produce	Continue to support and build a strong communication and promotional platform, based around the local sustainable supply and nutritional benefits messaging	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
	Develop packaging innovation	Learn from best practice	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Monitor global trends	
		Identify solutions that minimize waste	
Maximise marketable yield (inside farm gate)	Grower adoption of best practice and technology	Invest in Research and Development and consider international best practice	KSA 5 Research and Development for the horticulture industry
		Education and knowledge transfer on best practice	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
	Improve storage and reduce waste during storage	Research and Development into how different varieties behave when stored	KSA 5 Research and Development for the horticulture industry
	Adoption of IPM* practices and disease control strategies	Invest in Research and Development to support the adoption of best practice for IPM and disease control. Facilitate knowledge transfer of research to the sector	KSA 5 Research and Development for the horticulture industry KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)

Potatoes

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Maximise marketable yield (inside farm gate) (Continued)	Variety development for import substitution	Invest in Research and Development for varieties that can support import substitution and meet consumer preferences	KSA 5 Research and Development for the horticulture industry
	Renewable energy adoption	Facilitate knowledge transfer and funding support	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS) Levers
Reduce and replace imports	Prioritise chipping potatoes for import substitution	Develop a model business case for market entry, including market intelligence and support for growers	KSA 8.2 Develop diversification models for new and existing and growers
	Increase storage capacity (on farms and / or centrally)	Explore financial supports	Levers
	Trade education (B2B trade)	Promote local chipping potatoes to trade sector, of equal value to import alternatives	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
		Tie trade sector back to growers	
	Consumer education	To support and build a strong communication platform based around the local sustainable supply message	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
		Promote different ways of cooking to appeal to younger markets	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants

Potatoes			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Reduce and replace imports (Continued)	Reduce and replace imports	Capitalise on pilot growing completed to date	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development
		Identify the size of the prize by channel	
		Develop market segmentation insight	
Priority area: Develop the Irish seed potato sector (use experts)	Establish the opportunity	Consider: land availability, cost of production, incentives and business case models	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development 8.2 Develop diversification models for new and existing and growers
		Understand the market structure	
	Supports to develop capacity in the sector	Explore funding options to help seed potato sector invest in specialist facilities and equipment	Levers
		Invest in education of growers	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities

Field vegetables

Strategic Ambition:
Halt the decline and rebuild a viable sector based on principles of fair trade, sustainability and innovation to protect local production by Irish farming families

Field vegetables			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Supply chain engagement	Develop a factual basis for retailer and consolidator engagement	Conduct a supply chain analysis	KSA 6.1 Better data for better insights: Collect hortimetrics data along the supply chain, from production data to sales data to identify growth opportunities
		Understand the share of retail price across product lines and what does the primary producer receive	
		Identify and define key engagement platforms across the supply chain, encouraging constructive engagement by the main parties and to ensure alignment of messaging and inputs	KSA 2.1 Develop a written charter between growers, consolidators and retailers to support the long term production of local, in season, fresh, quality fruit and vegetables (including organic) as part of a framework to develop better partnerships and understanding of the sector by consolidators, retailers and consumers

Field vegetables			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Supply chain engagement (Continued)	Develop a fair trade mechanism	Define and develop a fair trade concept for the horticulture sector	KSA 2.1 Develop a written charter between growers, consolidators and retailers to support the long term production of local, in season, fresh, quality fruit and vegetables (including organic) as part of a framework to develop better partnerships and understanding of the sector by consolidators, retailers and consumers KSA 2.2 Increase consumer understanding of the horticulture sector
		Ensure alignment with UTP Regulations (national context) and UTP Directive (EU context)	
		Incorporate a broader Retail charter and promote to retailers and consumers	
	Drive consumer demand for fair trade	Improve consumer and retail perceptions of the fair trade concept, focussing on the Ireland context	
		Based on market insights to support and build a strong communication platform for retailers and consumers based around local sustainable supply with positive environmental and health benefits credentials	
Financial feasibility (costs and returns)	Identify current variable costs	Identify the state of play in the horticulture sector	KSA 6.1 Better data for better insights: Collect hortimetrics data along the supply chain, from production data to sales data to identify growth opportunities
		Establish a dashboard for horticulture input costs, track this over time, support knowledge transfer and advisory services, develop sustainable agronomy support services (Teagasc)	

Field vegetables			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Financial feasibility (costs and returns) (Continued)	Enable more one-to-one advisory with growers	Develop research programmes and support greater resourcing for advisory services on vegetable production	KSA 5 Research and Development for the horticulture industry KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
Policy change	Establish possible options to sustain the sector	DAFM horticulture team to spearhead	Levers
	Establish what policy changes are needed and engage with the Agri Food Regulator	IFA to spearhead engagement with key stakeholders and policy makers	KSA 2.1 Develop a written charter between growers, consolidators and retailers to support the long term production of local, in season, fresh, quality fruit and vegetables (including organic) as part of a framework to develop better partnerships and understanding of the sector by consolidators, retailers and consumers
	Develop POs to increase collaboration among growers	Maximise the opportunities under CAP to support POs	KSA 1.1 Strengthen the position of the grower in the marketplace through collaboration
Route to market	Increase domestic market share in the food services sector	Develop insight to understand the sector's needs, the supply chain players and network	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development

Field vegetables			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Route to market (Continued)	Develop alternative routes to market	Assess and analyse opportunities for alternative routes to market	KSA 1.2 Strengthen the position of the smaller grower in the marketplace through direct marketing to consumers Levers
Innovation and New Product Development	Frozen products opportunity	Develop insights to understand the potential market opportunity in this category and the feasibility of supplying it in both the retail and food service sector	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development KSA 8.2 Develop diversification models for new and existing and growers
		Where viable opportunity identified scope out plan to activate	
	Chilled products opportunity	Develop insights to understand the potential market opportunity in this category and the feasibility of supplying it in both the retail and food service sector	
		Where viable opportunity identified scope out plan to activate	
	Secure funding	Engage with Enterprise Ireland and the Department of Trade, Enterprise and Industry	KSA 8.1 Support innovative growers who are adding value
	Farm level innovation	Facilitate adoption of labour-saving technologies	Levers
		Evolve production systems to take account of IPM practices	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
	Propagation / Plant material	Adopt best practice and build capacity	

Strawberries

Strategic Ambition:
To profitably and sustainably grow and promote Irish strawberries, by modernising production systems that maximise in-season output

Strawberries			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Select varieties and growing programs suitable for Irish producers	Develop a framework for smart variety screening and planting programmes	Conduct a sensory evaluation including propagation and supply chain engagement for strawberry varieties. Identify production protocols which optimise the programme of varieties available across a longer season of production while maximising agronomic performance	KSA 5 Research and Development for the horticulture industry
	Research, advisory and training	Invest in the appropriate Research and Development on strawberry and other potential soft fruit including blueberry, raspberry and blackberries	KSA 5 Research and Development for the horticulture industry

Strawberries			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Select varieties and growing programs suitable for Irish producers (Continued)	Research, advisory and training (Continued)	Invest in developing appropriate competencies in soft fruit research and advisory	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Follow international best practice and identify modern production techniques, including for all soft fruit	
		Support knowledge transfer	
		Develop knowledge networks	
		Develop horticulture college education offering	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities
Maximise grower margins	Achieve efficiency gains at the farm level	Adoption of lean principles	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Adopt and promote more glasshouse production	Levers
	Safeguard growers return at the retail level	Understand costs for all pack sizes	KSA 6.1 Better data for better insights: Collect hortimetrics* data along the supply chain, from production data to sales data to identify growth opportunities

Strawberries			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Maximise grower margins (Continued)	Safeguard growers return at the retail level (Continued)	Develop promotion around the local value proposition	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
	Innovation and New Product Development	Invest in Research and Development to identify and develop innovation pathways	KSA 5 Research and Development for the horticulture industry
Promote and drive consumer demand	Education on the value of in-season strawberries across the retail and food services sectors	Based on market insights, to support and build a strong communication platform for buyers and consumers based around the local sustainable supply with positive environmental and health benefit credentials	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
		Use marketing tools to drive awareness	
Growing media	Find alternatives for growing media	Invest in Research and Development in terms of availability, functionality and affordability	KSA 5 Research and Development for the horticulture industry

Apples

Strategic Ambition:

To profitably increase the volume share of fresh Irish eating apples to 25% in 10 years, while maximising the opportunities for cooking and cider apples through the development of value- added products

Apples

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Develop an overarching research programme prioritising selected varieties and growing systems suitable to the Irish growing environment	Develop a framework for smart variety screening and planting systems	Conduct a sensory evaluation including propagation and supply chain engagement	KSA 5 Research and Development for the horticulture industry
		Assess varieties with potential market acceptance and agronomic characteristics for Irish conditions	KSA 5 Research and Development for the horticulture industry
	Research advisory and training requirements	Invest in the appropriate Research and Development, including variety trialling and testing	KSA 5 Research and Development for the horticulture industry
		Follow international best practice	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Support knowledge transfer	
		Develop knowledge networks	

Apples			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Develop an overarching research programme prioritising selected varieties and growing systems suitable to the Irish growing environment (Continued)	Research advisory and training requirements (Continued)	Develop horticulture college education offering	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities
	Invest in agronomic intelligence	Conduct feasibility studies	
		Develop detailed cost analysis	KSA 8.2 Develop diversification models for new and existing and growers
Develop more orchards and attract more growers	Develop a business case for expansion and / or market entry	Conduct a CBA for the sector	KSA 8.2 Develop diversification models for new and existing and growers
		Conduct feasibility studies	
		Communicate the available funding to growers	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Make potential prioritised funding available	Levers
	Fill the knowledge deficit	Develop education and training programs	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities
		Learn from international best practice	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)

Apples			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Develop more orchards and attract more growers (Continued)	Fill the knowledge deficit (Continued)	Explore different business models	KSA 8.2 Develop diversification models for new and existing and growers
	Finance package availability	Align supports, grants and other supports, for example, accelerated capital allowances, seed capital scheme or equivalent	Levers
		Alignment of policies	Levers
	Development of POs	Encourage growers to join POs	KSA 1.1 Strengthen the position of the grower in the marketplace through collaboration
		Create accelerated training programmes for market access and knowledge acquisition	
Develop value-added, New Product Development and waste valorisation opportunities	Develop innovation pathways for NDP and bio-based products	Develop market insight and secure sufficient resources to conduct research	KSA 8.1 Support innovative growers who are adding value Levers
	Increase penetration of traditional Irish craft cider in the Irish market (alcohol and non- alcoholic)	Incentivise craft cider by lowering the customs and excise barrier	Levers
		Set standards that specify Irish apple usage by volume in Irish branded products	Levers
		Engage with distributors and identify the size of the market price for non-alcoholic cider	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development

Apples			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Develop value-added, New Product Development and waste valorisation opportunities (Continued)	Develop different product formats, for example, apple flour for baked goods	Research the size of the prize based on end use	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development KSA 8.2 Develop diversification models for new and existing and growers
		Conduct feasibility studies	
	Grow the sale of locally made juice	Package and promote the locally produced product story	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants

Glasshouse crops

Strategic Ambition:
To stabilise and enable the building of capability in the protected crops sector, adding value through premiumisation and increasing the domestic market share underpinned by sustainability and innovation

Glasshouse crops			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Expand volumes from existing producers to grow more	Make the sector more appealing	Create incentives through increased funding for the sector	Levers
	Premiumisation in retail	New Product Development and innovation programmes for value-added products	KSA 8.2 Develop diversification models for new and existing and growers
		Develop market segmentation	
		Increase promotion of the benefits of Irish grown crops. Establish the value around an `Irish Tomato' and expand that to other crops such as cucumbers and salad leaves etc.	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
	Innovation and Research and Development	Identify alternative uses to find alternative buyers and routes to market	KSA 8.2 Develop diversification models for new and existing and growers

Glasshouse crops			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Expand volumes from existing producers to grow more (Continued)	Innovation and Research and Development (Continued)	Consider trends in crop types in the Netherlands and the rest of Europe	KSA 6.3 Better data for better insights: Gather and share Irish and international market insight and intelligence to drive commercial innovation and new product development
		Evaluate international trends in snack pack offerings and varieties across the salad crop market	
Horti-enviro-metrics and Life Cycle Assessment	Establish Horti-enviro- metrics	Develop "Horti-enviro-metrics" as a common measure to understand and communicate the sector's environmental impact, conduct an LCA	KSA 6.2 Collect sustainability metrics (Horti-enviro-metrics) to evidence industry environmental credentials
		Develop research competency in overall sustainability of CEA (Controlled Environment Agriculture)	KSA 5 Research and Development for the horticulture industry
	Use findings to improve sustainability credentials	Communication and knowledge transfer	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Inform growers of funding support available to improve their sustainability	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Establish the merits of producing more food under this system	KSA 5 Research and Development for the horticulture industry
	Explore ways to improve the sector's Horti-enviro- metrics	Look at existing innovation and international best practice	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)

Glasshouse crops

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Energy	Develop the business case for carbon credits	Discuss the Research and Development findings with key departments and government agencies, such as the Department of Finance	Levers
	Identify alternative renewable energy sources	Assess the merits of emerging technologies	Levers KSA 5 Research and Development for the horticulture industry
		Identify the potential best solutions for the sector	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Provide funding support	Levers
Promote and drive consumer demand	Education on the value of in-season produce across the retail and food services sectors	Based on market insights, support and build a strong communication platform for buyers and consumers based around the local sustainable supply with positive environmental and health benefit credentials	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
		Use marketing tools to drive awareness	

Salad Crops

Strategic Ambition:
To profitably increase salad crop production through modernising production systems that can maximise output while enhancing the sector' environmental sustainability

Salad crops			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Modernise production systems to be more sustainable	Automate growing and harvesting	Invest in Research and Development, with a greater emphasis on food safety and irrigation water quality	KSA 5 Research and Development for the horticulture industry
		Identify the optimal technologies for local conditions	
		Knowledge transfer: communicate options to growers	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Provide funding to drive investment	Levers
	Develop the business case	Undertake a market analysis	KSA 8.2 Develop diversification models for new and existing and growers
		Establish market appetite for changes to production systems	

Salad crops			
Sub Sector Needs	**Priority area**	**Actions from Opportunities for the Irish Horticulture Sector Report**	**Link to Key Strategic Action(s) / Levers**
Select varieties and growing programs suitable for Irish producers	Develop a framework for smart variety screening and planting programmes	Facilitate a trial site in Ireland and invite seed companies to submit varieties. Provide additional resources through which Teagasc could facilitate such a trial site	KSA 5 Research and Development for the horticulture industry
	Research, advisory and training	There is currently no research or advisory capacity and limited expertise to describe in detail what the market opportunity in the glasshouse and salad crops sector could be and what the strategy should be. More detailed work needs to be conducted to assess the opportunity for CEA from both a market and technical perspective	KSA 5 Research and Development for the horticulture industry KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Invest in the appropriate Research and Development	KSA 5 Research and Development for the horticulture industry
		Follow international best practice	KSA 7 Integrate horticulture back into the broader Agriculture Knowledge and Innovation System (AKIS)
		Support knowledge transfer, develop knowledge networks	
		Develop horticulture college education offering	KSA 4 Review horticulture course availability and suitability for a modern dynamic sector, enabling the educational platforms which can attract talent and realise opportunities

Salad crops

Sub Sector Needs	Priority area	Actions from Opportunities for the Irish Horticulture Sector Report	Link to Key Strategic Action(s) / Levers
Promote and drive consumer demand	Education on the value of in-season produce across the retail and food services sectors	Based on market insights, support and build a strong communication platform for buyers and consumers based around the local sustainable supply with positive environmental and health benefit credentials	KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
		Use marketing tools to drive awareness	
	Education and consumer awareness on the benefits of local produce	Emphasise the carbon footprint of locally produced crops versus the importation of a crop that is 90% water. Conduct LCA on Irish produced salad crops with complimentary marketing approach	KSA 6.2 Collect sustainability metrics (Horti-enviro-metrics) to evidence industry environmental credentials KSA 2.3 Increase consumer appetite for local, fresh fruit and vegetables and amenity plants
	Collaboration with retailers and facilitators	Develop grower's collaboration with retailers and facilitators to help better meet the needs of consumers	KSA 2.1 Develop a written charter between growers, consolidators and retailers to support the long term production of local, in season, fresh, quality fruit and vegetables (including organic) as part of a framework to develop better partnerships and understanding of the sector by consolidators, retailers and consumers
		Develop viable and sustainable business supply models with Irish growers	

Notes

An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine