

Joint Oireachtas Committee on Agriculture, Food and the Marine

Challenges facing the Fruit and Vegetable Industry in Ireland with reference to food waste in the sector.

Opening Statement by Teagasc

October 18th, 2023

Firstly Chairman and members, thank you for the invitation to address the committee this evening on the challenges facing the fruit and vegetable industry in Ireland.

Introduction

Valued at €530m (farm gate value) with two key sub-sectors; horticulture food representing €430m and amenity horticulture representing €100m, the horticulture sector presents significant opportunities for expansion and growth. Most Irish horticulture produce is consumed in the domestic market with only two sectors having significant export trade; mushrooms and amenity horticulture. Horticulture is the fourth largest sector after dairy, beef and pigs in terms of gross agricultural commodity output value. **Employment** in Horticulture is estimated at 7,000 full time in primary production with a further 11,000 employed in downstream businesses.

Whilst the number of growers in fruit and vegetable production has reduced considerably in the last two decades, areas under production have held up in most cases. High capital investment requirements, issues with labour availability, reducing margins, a highly competitive domestic retail market characterised by central distribution, availability of peat, energy costs and succession planning are some of the key challenges facing the horticulture sector. The existing grower base consists of a resilient group of growers and companies who have had to scale up production to remain viable.

Input price inflation

In recent years, input price inflation in the horticulture sector in Ireland has accelerated rapidly. The inflation had its roots in Brexit, the pandemic, and more recently the Russian invasion of Ukraine. Between 2020 and 2023, all sub sectors of horticulture reported significant input price inflation. Teagasc has reported on this, the most recent 2023 report has been circulated to the Committee. Output prices did not keep pace with input price inflation and a significant number of primary producers in the vegetable sector and other sectors have ceased trading. A more recent phenomenon is that while growers have exited, other growers have not taken up the acreage, and the respective crop areas have been lost. Teagasc estimate that the area of field vegetable production is down by 7% in 2023 based on direct engagement with growers.

Access to land is a significant issue for field vegetable producers. Depending on the crop, vegetables usually require about 4-6 years (rotation) before a crop from the same plant family can be grown in that field again. Competition for rental land is heating up significantly and growers need suitable land in the right location close to their packing and storing facilities. Besides land needing high nutritional

and soil health status, access to irrigation sources is a pre-requisite for these high value crops, as periodic drought is becoming a feature of production.

Capital investment

While horticulture has had a level of consolidation, it has benefited greatly from over a decade of capital investment, supported by the DAFM scheme of investment aid and access to Producer Organisation funds. The soft fruit sector has moved out of the field and under protected structures including glasshouses. This has brought with it higher production efficiency with high quality fruit. Similarly, the mushroom sector has been at the forefront in terms of technology adoption and innovation from the composting process right through to the growing system. Glasshouse growers and field vegetable producers too have made significant investments in automation, packing and storage.

Teagasc research and advisory

Teagasc Horticultural Development Department (HDD) is an integrated research and advisory department providing research and advice on horticultural-related matters to support the sector and stakeholders. We collaborate and work closely with the Horticulture Industry across research, advisory and education. We are a member of the Horticulture Industry Forum, which includes grower's representatives from each sub sector of horticulture and other state agencies. Recently we have contributed to The Department of Agriculture, Food & Marine National Strategy for Horticulture 2023-2027 that we fully support.

Our horticulture research and advisory activities align fully with the concept of smart horticulture, which relates to labour saving technologies, evolving production systems, finding replacements for peat based growing media, optimising the approach to crop protection, and increasing economic and environmental sustainability.

Teagasc Horticulture apprenticeship

Teagasc education have recently launched a Horticultural Apprenticeship Programme. The apprenticeship is targeted at anyone who wishes to pursue a career in the horticultural sector or existing personnel employed in a horticultural company who would like to gain a recognised qualification. There is a dedicated information point at <https://www.teagasc.ie/education/apprenticeships/>

Food Loss and waste

We noted in the committee invitation that the **Committee are interested specifically in the food waste aspect at both consumer and production stages of the food chain.** It is impossible to de-couple horticulture food loss and waste (FLW) at the primary producer side from the challenges described above for the horticulture sector. Food loss and waste is a symptom of agronomic challenges and supply chain inefficiencies, many of which are outside the control of the producer. Pest and disease issues can frequently affect crops, inadequate crop protection strategies and up to date integrated pest management may be the cause, but this could be reduced with adequate access to appropriate research, advice and crop protection products. Lack of availability of labour can and does result in

crops being left in the field, or production unit. Climate change and adverse weather can also have a similar effect. This can routinely result in crop loss. However the labour issue can be resolved in a similar way to other jurisdictions, namely through a non-EEA permit scheme and a seasonal workers scheme.

We have seen many instances where weather, market gluts and sudden changes in market dynamics can lead to increased loss. One-year supply arrangements are precarious for primary producers. Proper forecasting and long term collaborative arrangements between producers, consolidators and retailers are needed to minimise loss and waste and maximise economic and environmental efficiency. More understanding is required on the part of the retailers in terms of the risks and challenges taken by primary producers and they should work with growers to accommodate the vagaries of climate and adjust product specification and requirements where possible.

In line with national policy towards zero food waste and recycling of food waste in the circular bioeconomy, every opportunity possible should be taken to reduce food loss and waste and to valorise unavoidable horticultural waste, and this is an area that Teagasc is seeking to develop.

Conclusion

The horticulture strategy launched in June calls out the key challenges and opportunities for the horticulture sector in Ireland. It is consistent with the Food Vision 2030, which brought much attention to the term 'food system' and that 'Ireland should become an international leader in sustainable food systems over the next decade'. The fruit and vegetable sector chiefly supplies the domestic market delivering positive societal impacts – in this case healthy food with low environmental footprint as well as the economic benefits. Retailers and consolidators import very significant quantities of fruit and vegetables from regions of the world, some of which have come under considerable climate change pressure in recent times. The traditional international supply base for fruit and vegetables is contracting due to climate change so supporting and expanding our indigenous sector will need to be prioritised. Technologies exist to mitigate traditional comparative advantages between countries and bring production closer to consumption, underpinning shorter supply chains.

We have included additional information in an appendix and circulated an additional Teagasc document on input price inflation 2023. We would be more than happy to answer any questions you may have. Thank you.

Appendix

Some key projects in our Research programme:

Beyond Peat: funded by the Department of Agriculture Food and the Marine (2021R499) is a collaborative project, led by Teagasc with partners the Agri-Food and BioSciences Institute, University College Cork, University College Dublin, University of Limerick and the Technological University of the Shannon. Beyond Peat seeks to understand the current potential for peat dilution and replacement based on commercially available growing media blends across five critical horticultural crops (Mushrooms, Strawberry, Hardy Nursery Stock, Ornamentals and modular vegetable plants. Given the diversity of crops and challenges associated with reducing and ultimately replacing peat in crop production we have sought to build formal research linkages with similar organisations in Europe. Specifically, Teagasc is a partner on a recently submitted project proposal entitled Substr8-2 under the Horizon Europe Framework Programme. Additionally, Teagasc have been involved in preparing a Cost Action proposal (Entitled: 2PFreeHort) which will be submitted by October 24th 2023, to develop a European Network to identify what existing scientific and stakeholder knowledge is available to support a transition to peat free horticulture and what are the knowledge gaps impeding this.

Leaf no Waste: Teagasc horticulture department is a partner in the SFI funded *Leaf No Waste* collaborative project led by the Technological University Dublin investigating approaches to reduce fruit and vegetable waste through a combination of crop fortification and tailored compostable packaging solutions to improve the shelf life of horticultural produce and reduce food and plastic packaging waste.

Apple sector development: Teagasc has recruited a new Fruit research Officer and established a new apple research orchard at its crops research centre in Oak Park, Carlow during 2023. This new research programme represents a fundamental step in developing the apple sector in Ireland. The research programme is expected to deliver essential preliminary data for the future recommendation of apple tree genotypes with high productive potential and fruit quality under Irish conditions, as well as to future proposal of a modern and high-efficiency production model to achieve high yields, high fruit quality with reduced labour costs.

Hortimetrics: Significant sustainability research in the form of life cycle analysis and product environmental footprint analysis is required for various Irish horticultural production systems similar to the agricultural sector, to provide metrics and ultimately the evidence base for sustainability claims and ultimately mitigation strategies in the future. A Teagasc led carbon footprint pilot project across the horticulture sector in Ireland is underway to test and recommend carbon footprint calculators for the sector. The intended outcome of the pilot is to recommend the best available carbon calculators for the horticultural sector in Ireland and to accurately, measure the impact of mitigation measures in the future.

Softgrip: Teagasc are part of a consortium funded by Horizon 2020 supporting the development of soft gripper technology for robotic harvesting of mushrooms. SoftGrip will introduce a self-actuating soft robotic gripper for the autonomous picking of delicate white button mushrooms. The project aims for low-cost, intelligent soft robotic grippers with embedded actuation, tactile sensing, recyclable materials, and advanced fabrication techniques.