



Cultivating Success

Priorities for increasing
sustainable production to
meet growing demand

The Fruit and Vegetable Alliance

March 2023



Submitted by the Fruit and Vegetable Alliance UK to Defra ahead of the Horticulture Strategy for England.

March 2023

The Fruit and Vegetable Alliance which is a diverse group of producer organisations and charities who are unified by a desire to get the nation eating more fruit and vegetables. Through its work, the Alliance is striving to increase UK production and consumption.

Current Members

National Farmers Union
British Growers Association
British Apples and Pears
British Berry Growers
Landworkers' Alliance
CSA Network
Soil Association
Organic Farmers and Growers
Organic Growers Alliance
Sustain
Warwick University
Lantra
The Food Foundation



Executive Summary

Edible horticulture is at a crossroads.

Choose one road and it leads to decline and even disappearance of the sector. Choose the other and the sector grows and strengthens to become a world-class example of nationally secure, financially rewarding and environmentally sustainable edible horticulture production.

The UK needs more fruit and vegetables to feed our population and improve public health. Yet due to financial pressures, lack of investment in research and development, climate related challenges and lack of skilled labour, there is a real risk that production will decline in the coming years.

At present, the UK produces 3.1 million tonnes of fruit and vegetables. To meet the potential demand if everyone were to follow public health advice and eat 7 portions per day, we would need 15.2 million tonnes, representing an almost fivefold increase in current production. While imported produce is likely to remain a significant source of fruit and vegetables for the foreseeable future, to base our long-term supply strategy on imports seems highly unwise given that many of the countries we import from are already suffering water scarcity. There is a clear opportunity here to increase both production and consumption, supporting jobs, ensuring food security and improving health and UK growers are ready to rise to the challenge!

The Fruit and Vegetable Alliance (FVA) is a consortium of bodies representing a diverse range of growers' organisations. We are calling for the creation and implementation of the "Horticulture Strategy for England" announced in the National Food Strategy White Paper in June 2022, to provide a clear policy framework that will support and enable UK growers to achieve their ambitions to increase production and

improve environmental sustainability. Our paper, "Cultivating Success," sets out priorities agreed by the FVA, for both the short and the long term. We urgently need a strategy that looks at the future of horticulture as a whole, rather than addressing problems in a piecemeal fashion, and we are eager to work with Defra in developing this strategy.

In the short term (1-2) years, it is essential that the following five issues are addressed by the Edible Horticulture Strategy:

- labour
- supply chain fairness
- the environment
- productivity investment
- access to an affordable energy supply

Without targeted action in these five areas, it is likely that we will see a continued decline in UK production, and increasing reliance on imported fruit and vegetables. Growers who are unable to achieve prices that cover their costs of production will reduce the acreage they plant to vegetables and fruit, and will not be able to invest in equipment and infrastructure to improve productivity, sustainability and renewable energy generation. The best efforts of the Environmental Land Management Scheme will be in vain if commercial pressures prevent growers from innovating to improve soil care, store and use water more efficiently, and reduce their reliance on chemical plant protection products. The cost and availability of fresh produce will continue to rise, preventing British people from following public health advice to eat more vegetables, leading to a costly increase in diet-related ill health.



Over the next 10-20 years, but starting work right now, the following are our priorities:

- A multi-departmental approach that connects the potential future health savings to be made from improved dietary choices to the immediate need for investment in a productive and sustainable horticulture sector
- Water security is essential for ensuring a resilient supply of fresh produce
- An Environmental Land Management Scheme that is accessible, attractive and meets the needs of a diverse and complex horticulture sector
- A greater role for SME organic and agroecological growers selling through farmer focused routes to market
- An ambitious, multi-faceted horticulture renewal programme aiming to grow a new generation of UK growers through recruitment, training, capital grants and access to land, and improving the financial viability of the sector
- Establish a coherent research and innovation funding pipeline
- Public engagement to provide shoppers with a better understanding of the realities of British horticulture so their choices will support seasonal, environmentally friendly production

The FVA is keen to work with Defra to develop an ambitious horticulture strategy that enables the sector to grow, flourish and feed the UK population with the fruit and vegetables it needs.

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1. Edible Horticulture at a Crossroads

The UK edible horticulture sector is at a crossroads. It could become world leading - delivering abundant fresh and healthy food, produced to the highest standards of sustainability, while attracting a skilled and motivated workforce from home and abroad and contributing millions more to the UK economy. There is potential for a dramatic increase in production to meet existing domestic need for fresh produce, and to meet increased demand if the British population were to follow public health recommendations for fresh produce consumption. However current economic conditions are driving many growers to reduce the acreage they are committing to fruit and vegetable production, as they can no longer cover production costs. Without urgent intervention to address issues ranging from recruitment and training to supply chain fairness, the future of UK horticulture looks bleak. The recent salad shortages could quickly become shortages of all UK grown fruit and vegetables, leaving us vulnerable to political and climate induced food insecurity.

Public health advice is that people should be eating 5-7 portions of fruit and vegetables, but at present the average consumption of F&V is 3.4 portions per day. Even at this low level of consumption, the UK is reliant on imports for 85% of fruit and 43% of vegetables.





Many of these imports come from countries which are already struggling with water scarcity issues. 76% of the freshwater used in the production of fruit and vegetables supplied to the UK is withdrawn elsewhere including from countries with high risk of water scarcity such as Spain, South Africa, Chile, Morocco and Israel! Projections from climate change scientists indicate that droughts and climatic extremes will increase. By contrast, the UK is a country that has plentiful water at certain times of year, as well as high quality soils. With vision, wisely targeted and adequate investment and practical forward planning, productivity in UK horticulture could be increased significantly to meet a much larger percentage of increasing domestic demand.

The financial benefits to the UK economy from the thriving horticulture sector we envisage would be significant, including:

- “£3.2 billion direct GDP contributions from the UK fresh produce industry in 2032, compared with £2.7 billion in 2020 if productivity is aligned with an increase in consumption”
- “Up to £126 billion of long-term economic benefits from a healthier, more sustainable UK food system of which increasing fruit, vegetable and fibre consumption is a core component”, and
- “£21 – £105 million benefit in annual carbon savings if net zero is achieved in UK fruit and vegetable production”.²

1. Goudie, S. (2020) *Is the UK's supply of fruit and vegetables future proof? SHEFS Briefing No. 1*, Food Foundation and Welcome Trust, p6

2. University of Warwick (2023) *Growing British: A strategy paper for promoting fresh produce production in the UK*.

However, there is an acute risk that UK production will reduce in coming years, due to a perfect storm of rising production costs (energy, fertiliser, transport, packaging, labour), lack of access to labour, and a cost of living crisis placing strong downward pressure on prices reducing already slim margins to below the cost of production. At the same time, despite an underlying trend towards higher yields over the last twenty years, the increasing frequency of extreme weather events such as drought and extreme cold due to climate change, is regularly having a negative impact on crop production. Uncertainty about future availability of labour combined with growing concerns about financial viability are causing growers to shift from vegetable to arable crops, while top fruit growers are thinking twice about investing in new orchards due to energy price rises pushing the cost of fruit storage beyond the point of profitability.

Horticulture requires a large workforce of skilled and motivated workers in order to function efficiently. From the manual dexterity of pickers and technical knowledge of machinery operators and glasshouse managers, to the knowledge of soil science, pest and predator ecology and crop husbandry needed by any fruit or vegetable grower, horticulture can provide meaningful, cutting edge and attractive employment.

At present, much of the horticulture sector is reliant on overseas labour and suffers from an image problem, which needs to be addressed by adequate investment in recruitment and training. The edible horticulture sector suffers from an image problem among UK workers, leading to a reliance on workers from overseas.

The impact of Brexit and Covid has been to restrict the labour supply, resulting in acute labour shortages in recent years. In the short-term, the sector appreciates the announcements made in December 2022, increasing the number of visas in the Seasonal Worker Scheme to 45,000, with the potential for an extra 10,000 if the need is evidenced. At the same time, a small, but growing movement of organic and agroecological growers, selling via “farmer focussed supply chains” is attracting young people and career changers into the horticultural sector. They are motivated by the potential to produce food in an environmentally friendly way, whilst developing skills and working in a green and convivial environment,³ yet their access to appropriate training, land and capital for business start up is limited. At present such businesses represent a tiny fraction of UK production, but they are keen to work closely with Defra and the rest of the sector to increase their production capacity.

We urgently need a strategy that both addresses immediate problems and a 10-20 year plan to build the skills, environmental sustainability and financial viability of the UK horticulture sector. Both elements of the strategy must be implemented simultaneously, to ensure that the sector is able to face current challenges without a reduction in production and productivity, while ensuring that long term capacity and resilience are developed. The current crises and future resilience of the sector are closely connected, and a failure to create and implement an ambitious long term vision will result in continued “fire-fighting” against crises such as labour shortages, declining margins and the increasing impact of climate change.

The Fruit and Vegetable Alliance (FVA) is a consortium of industry leading producer groups, which represent the highly diverse UK edible horticulture sector, and includes representatives of large scale vegetable production fruit and vegetable production (National Farmers Union, British Growers Association, British Apples and Pears, British Berries); and small scale agroecological and organic growers (Landworkers Alliance, CSA Network, Soil Association, Organic Farmers and Growers, Organic Growers Alliance, Sustain); and academic and training bodies (Warwick University, Lantra). The FVA was established in 2018, with the help of the Food Foundation's "Peas Please" campaign, with the aim of increasing production of vegetables and fruit to meet public health consumption targets. Our production systems, scales and approaches to horticulture are highly diverse, but the FVA is unified by a desire to get the nation eating more fruit and vegetables, and we are committed to working together to seek positive change for the horticulture sector.

We therefore want to see progress on the following short and long term policy aims, which will enable the UK horticulture sector to survive its current challenges in order to have a bright, productive and sustainable future.

Our priorities below include matters that fall outside Defra's remit, such as energy subsidies and GSCOP. However, we are setting them all out in this paper, since to be really effective a Horticulture Strategy for England needs to be cross departmental. Furthermore, we recognise that many influences on the horticulture sector, most notably the market, lie partially outside government control.

To ignore the influence of the market, however, would be to paint an incomplete picture. The FVA represents growers operating and selling to markets at a variety of scales. An ideal outcome would be for markets at all scales to work effectively to pay growers a fair price for their produce, to enable continued investment in productivity and environmental best practices, whilst ensuring that fresh fruit and vegetables are affordable and accessible to the whole population. At present there are significant differences in the mode of operation, the scale and the reach of different markets, as well as their profitability. We are keen to play our part, and would like to work with Defra to create the conditions for the ideal outcome set out above to be achieved.

This paper focuses specifically on the edible horticulture sector throughout, rather than the entire horticulture sector, even though subsequent sections just mention horticulture. Section 2 sets out five short term priorities, which require urgent attention to prevent a contraction of the horticulture sector and the food insecurity that would bring. These need to be addressed in the next 1-2 years. Section 3 sets out nine longer term objectives for building the world leading horticulture sector we envision. Although less urgent than the priorities in section 2, we strongly recommend that work on these objectives begins forthwith, since they will take longer to materialise. The longer we wait to get started, the less likely we are to reap the rewards of a truly vibrant, healthy and productive fresh produce sector.



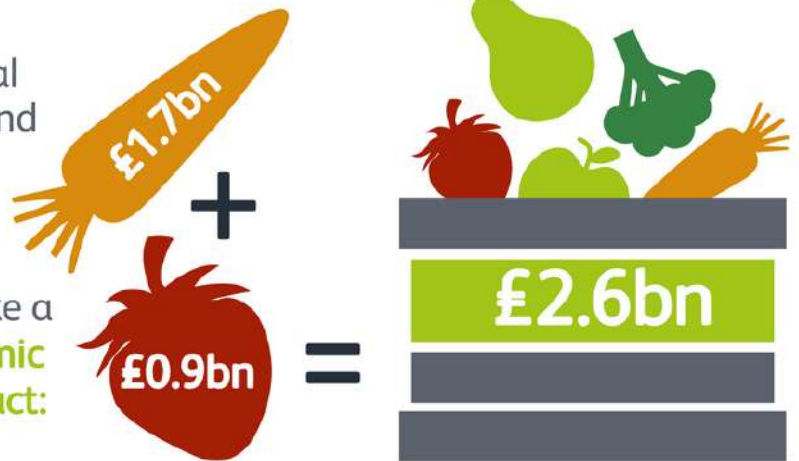
Fruit and Vegetable Alliance

The **Fruit and Vegetable Alliance** consists of organisations which represent the highly diverse UK horticulture sector, and includes representatives of large scale vegetable production, fruit, small scale agroecological and organic production as well as academic and training bodies.



Less than **1%** of the UK's agricultural area is used for fruit and vegetables...

...but both make a **big economic impact:**



UK Government dietary advice supports eating fruit and vegetables to the level of...



=



**SEVEN
A DAY**

40% of an adult's daily food consumption by weight

To meet this demand we need to increase availability to **15.2m** tonnes



Current availability: **8.3m** tonnes

Leaving a deficit: **6.9m** tonnes



Which is equivalent to **86bn** portions

For further background information on the figures featured in the infographic:

See: *Cultivating Success: Priorities for increasing sustainable production to meet growing demand*
 A paper by the Fruit and Veg Alliance 2023

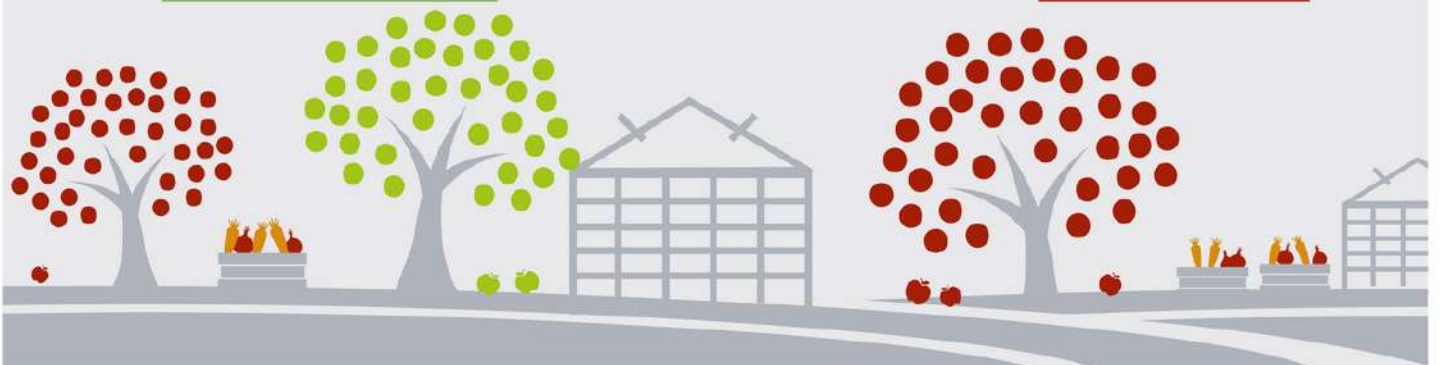
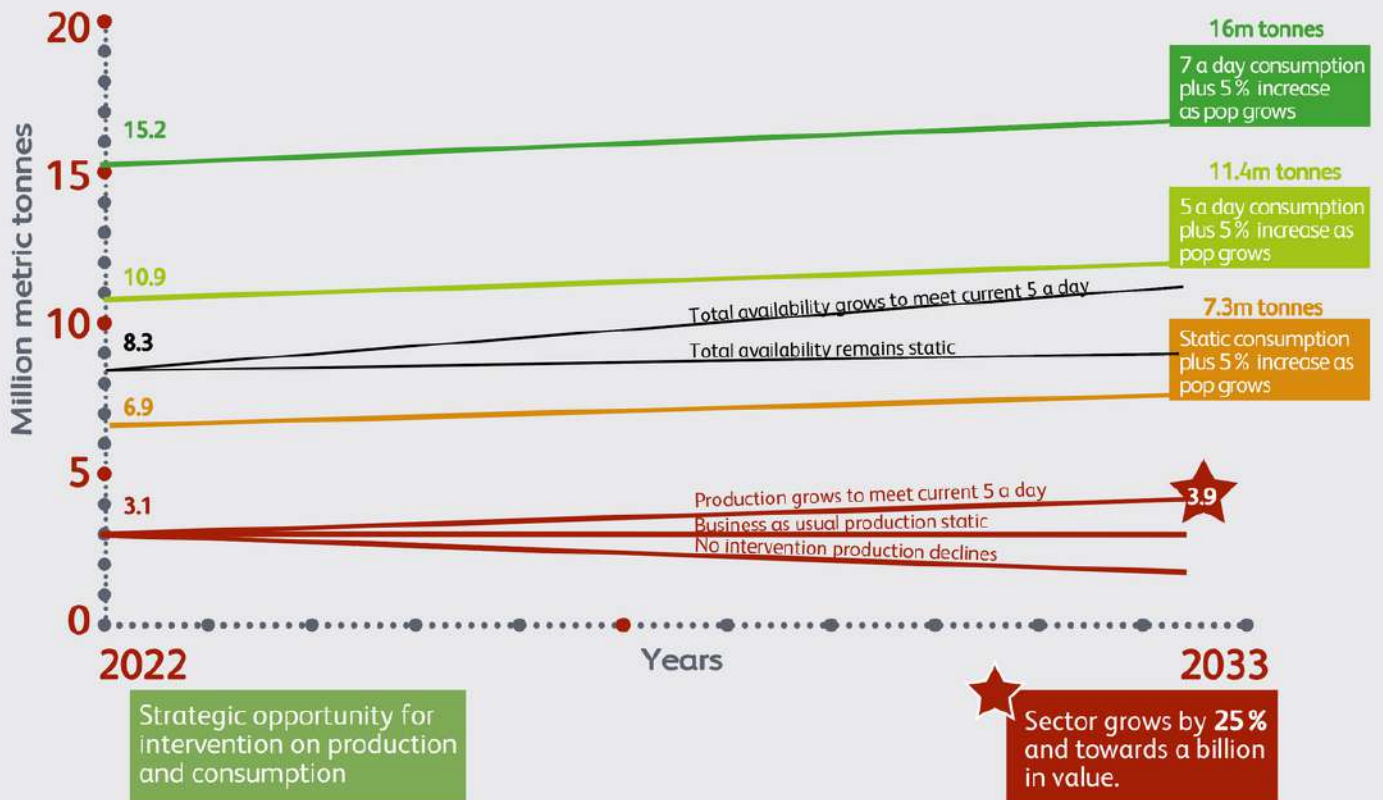
The Fruit and Veg Alliance are calling for a strategic vision for growth for the fruit and vegetable sector that addresses in the short term 1. Labour 2. Supply chain fairness 3. Environment 4. Productivity Investment and 5. Access to a reliable and affordable energy supply.

And in the Long Term

- 1. A multi-departmental approach
- 2. Water Security
- 3. Growing the Goods Catalogue to be adopted as part of the Environmental Land Management Scheme
- 4. A greater role for SME organic and agroecological growers selling through farmer focused routes to market
- 5. A horticulture renewal programme
- 6. Establish a coherent research and innovation funding pipeline
- 7. Public engagement



We aim to:



*Please see Appendix 2 for breakdown of calculations

Structure of the UK Edible Horticulture Sector

UK Fruit and Vegetable Production - Data from Defra 2021 Hort Stats

	Annual Production (tonnes)
Field scale vegetables (excl potatoes)	2,286,000
Protected cropping	261,900
Fruit	576,200
Total	3,124,100

UK Supply (Production-Imports+Exports) (tonnes)

	Production	Imports	Exports	Supply
Vegetables (field and protected)	2,548,300	1,978,100	69,300	4,457,100
Fruit	576,200	3,327,200	37,100	3,866,300
Total	3,124,500	5,305,300	106,400	8,323,400

Produce required annually for UK population to meet public health recommendations (tonnes)

	Current ⁴ consumption	"Five A Day" ⁵ consumption	"Seven a Day" consumption
Vegetables (excl.potatoes)	4,348,302	5,428,248	7,599,548
Fruit	2,549,229	5,428,248	7,599,548
Vegetables and Fruit	6,899,157	10,856,497	15,199,096

4. Calculated from multiplying the most recent NDNS fruit and veg consumption data with the most recent UK population and age structure data by Dr. Amber Wheeler

5. Population Health Requirement calculation methodology used and updated with most recent population and age structure - based on Dr. Amber Wheeler's PhD research and subsequently developed in conjunction with the Food Foundation e.g. Veg Facts 2021.

Make-up of the UK Horticulture Sector as represented by the Fruit and Vegetable Alliance member organisations

Organisation	Membership
NFU Horticulture and Potatoes	55,000 members of which 3,500 are horticultural growers and 1,500 are potato growers
British Berry Growers (BBG)	Represents over 95% of UK commercial berry growers. This is in excess of 90 farms. Our members production for supermarkets alone is over 110,000 tonnes in 2022
British Growers Association (BGA)	40 members. British Growers comprises the main veg crop associations which represent upwards of 80 % of production on the main veg lines grown in the UK*
British Apples and Pears	150 members
Landworkers' Alliance (LWA)	869 agroecological horticultural producer members
Organic Growers Alliance (OGA)	434 members
CSA Network	200 CSAs (Community Supported Agriculture)
The Soil Association	707 members representing 11,190ha of organic horticultural land
Organic Farmers and Growers (OF&G)	130 fruit and vegetable growers
Biodynamic Association	90 growers
Tyfu Cymru	312 fruit and vegetable growers from Wales

NB - The total of all these figures does not accurately represent the number of growers in the UK, as growers may be members of more than one organisation, and some growers may not have joined any organisation. While Defra data is the most comprehensive, many smaller scale growers have not been included in the June survey due to not being in receipt of agricultural payments. In the absence of a comprehensive survey, this is the best snapshot we can provide.

**Grower numbers are a far less meaningful number than BGA representation of total production. Take Brassicas where circa 80% of production is probably controlled by 6 companies and a similar situation applies with carrots. 2 companies probably account for 80 of UK mushroom production hence the suggestion of using percentage of production rather than numbers of growers.*

2. Five Short Term Priorities

The following five issues are all seen as being of equal and urgent priority in order to stem the risk of a decline rather than an increase in production. Such a decline would have long term implications for the ability of the sector to recover and grow in future, due to further loss of skills and infrastructure.

It is therefore essential that immediate action is taken in these five areas over the next one to two years. There is overlap between some of these actions and the longer term strategy, since some of the actions need to begin at once, but will take longer to complete.

2.1 Labour

Where are we now:

- Without sufficient access to a productive and motivated workforce, the UK horticulture sector will continue to contract.
- Seasonal roles in particular are difficult to fill from the domestic workforce, and every developed country in the world has access to overseas workers for these vital roles.
- While investment in robotics and automation are viewed as medium to long term solutions for the horticulture sector, our need for human labour will be ongoing for the foreseeable future. Furthermore, robotics and automation will change the profile of a proportion of the labour demand, requiring seasonal and trained professionals with technical skills.





Where we want to be:

- To provide confidence to invest for the mid to long term, growers need certainty within the seasonal worker scheme for the long term.
- Greater research and investment in automation and robotics is required to fast track the commercialisation of technologies for the most labour intensive roles.
- To address the multitude of environmental challenges and new pests faced by the horticulture sector, growers need an expanded range of skills to manage land in a way that builds fertility and soil health; water, so that winter rainfall is stored for summer droughts, and pests with a new generation of more environmentally benign plant protection products.

How we propose to get there:

- It is critical that the Seasonal Workers Scheme continues to provide sufficient labour to meet the industry's needs and has longer term certainty - for a minimum of a 5 year rolling programme.
- Early decisions by government are crucial in giving the industry the confidence and security to plant and harvest their crops.
- In tandem with an expanded Seasonal Workers Scheme, it is essential that new entrants are attracted to the industry and trained for a diverse range of roles. High quality vocational and technical horticultural courses, opportunities for careers with a positive environmental and social impact, and the prospect of decent livelihood will make horticulture more attractive to new entrants and will build our long term labour supply.
- Once measures to achieve this are in place, effort is required to improve the image of the industry.
- We eagerly await the results of the independent labour review.

2.2 Supply chain fairness to achieve economic, social and environmental sustainability

Where we are now:

- Growers are struggling to maintain sustainable margins, fuelled by colliding issues such as inflationary pressures, and a long term fiercely competitive marketplace. As a result, they are unable to recover sustainable farm gate returns from the market. We are at risk of shrinking the horticulture sector at a time when the government has a stated ambition for growth.
- Whilst food supply chains have developed to be as cost efficient as possible, there is still a considerable concern that primary producers are unable to recover a sustainable return from the marketplace. Diminishing margins of primary producers are leading to a restructuring of the sector, which has already seen a decline in production by as much as 20-30% in some sectors. A recent report by Promar International⁶ cited growers' cost of production has increased by as much as 27% in the 12 months to Autumn 2022. The report warned that despite food inflation at record highs, growers are not achieving the returns needed to run sustainable, profitable businesses.
- As a result, growers are looking at shifting cropping plans into alternative sectors with better margin return, reducing horticultural production or even leaving the horticulture sector entirely. This shift has been in part fuelled by the marketplace's pressure to resist absorbing inflationary cost price increases, burdening primary producers with unfair risk and cost of doing business with the grocery market.

Where we want to be:

- A thriving UK horticulture sector, operating within a fair and transparent trading environment and allows businesses to have the ability to be productive, reinvest and grow.

6. NFU, *The real impact of cost pressures on the horticulture sector.*
<https://www.nfuonline.com/updates-and-information/promar-report-the-real-impact-of-cost-pressures-on-the-horticulture-sector/>





How we propose to get there:

- The future viability of UK horticulture requires a fair and transparent trading environment across the chain, and the backing of the government to deliver greater fairness in the supply chain. We call on Defra to work with the horticulture sector to promote a fair and transparent trading environment using the powers within the Agriculture Act, the retention of the Groceries Code Adjudicator role, and renew and refresh the GSCOP Code to embed the GCA's 7 golden rules.
- We ask that the Government uses its powers in the Agriculture Act to assess the risk profile within the horticulture supply chain by launching a consultation to gather evidence of the worst inequalities within the supply chain.
- The Secretary of State must also use its powers within the Agriculture Act to improve fairness and transparency in the supply chain, particularly acting to support primary producers who fall out of scope of GSCOP, and therefore inherently at risk of unfair trading practices. A fast-moving, demand led supply chain can create unfair trading practices at all stages across the value chain, but the risk and cost of such tends to fall on the shoulders of primary producers. For example, last minute order cancellations or unambiguous terms and conditions can unnecessarily bleed value out of an already small margin business operation. Without regulation to underpin best practice trading, primary producers have little power to address unfair trading in the supply chain.
- The Principle of Fair Dealing defined in law under GSCOP, is a good example of how government can create a framework which promotes trading best practice to prevent value leaking out of an already stretched value chain.
- Smaller scale growers' organisations will work with Defra to develop alternative "farmer focused routes to market" where appropriate, and facilitate access to public procurement contracts for UK growers through dynamic procurement.

2.3 Protect and regenerate the environment, which is the foundation of productivity

Where we are now:

- Horticulture both impacts and is impacted by environmental changes, ranging from biodiversity and soil health to climate change and water availability.
- Growers who want to address this impact are forced to shoulder the cost and either absorb those costs through increasing efficiencies in the business or charge a higher price, reducing the competitiveness of their produce.
- Short term tenants have little incentive to join agri-environment schemes due to the long term nature of contracts and funds being retained by landowners.
- Currently there are few, if any, opportunities for protected edibles to be part of a future ELMS as the current emphasis is very much on the use of 'land'. This is problematic for protected edibles in the glasshouse and polytunnel sectors, as they produce intensively on a small footprint and often with relatively little physical area around polytunnels or glasshouses for a delivery of the classic view of 'ELMS'. However, the intensive horticulture involves increasing adoption of environmentally friendly practices and techniques. There is also mitigation of the area of land use for food production through intensive, sustainable production, with minimal use of pesticides through the use of natural systems (predators etc) and a much more controlled environment. Furthermore many growers, where land is available, will collect 'roof water' and those who do not are often choosing not to mainly because costs can be prohibitive in relation to overall value of the water captured.

Where we want to get to:

- The whole sector being incentivised, by a combination of an adequately funded, specialist horticulture E.L.M. scheme, P.O.s and the market, to adopt more sustainable practices to ensure that productive capacity can be preserved in the long term and that sustainably produced fruit and vegetables are accessible to the whole population.
- For all growers, including those working on less than 5 hectares of land, to be able to access E.L.M.S. and have the public goods that they deliver rewarded at a level that compensates for the costs of more sustainable production.
- For E.L.M.S. to reward the many public goods offered by the protected cropping sector such as Integrated Pest Management, combined heat and power, and highly efficient and controlled watering via drip irrigation. Access to assistance to put capture infrastructure in place would enable many of those who, currently, do not, and would certainly be a significant 'public good'. Within the sector there are many other potential examples of capital intensive or premium cost systems that deliver environmental benefits and should be considered for assistance.

How we propose to get there:

- Work with Defra to create a specialist and adequately funded E.L.M. scheme that is sufficiently attractive to growers to enable them to address environmental impacts and become more resilient to extreme weather.
- Co-design horticulture specific SFI standards for orchards, field scale production, market gardens and protected cropping and introduce these as soon as possible.
- Ensure that E.L.M.S. has adequate provision to make schemes accessible and attractive to short term tenants.
- Good information about the upcoming E.L.M.S. innovations will give growers the confidence to plan, addressing the destabilising effects of uncertainty.
- An E.L.M.S. Test and Trial focussing on the opportunities for the protected cropping sector to be rewarded for the public goods it does and could deliver, including efficient water use and rainwater harvest, efficient energy use and pesticide free crop protection, would enable co-design between growers, growers' organisations and Defra to create a workable solution.



2.4 Productivity investment

Where are we now:

- Domestic UK food security in the fresh produce sector is growing increasingly important, not only due to the Ukraine War, but also as countries where we source our fruit and vegetables are affected by droughts and other climate change impacts.
- The industry has a long history of investment and innovation and has in particular benefitted from the funding through the EU Fruit & Veg Aid Scheme which, once introduced, enabled rapid yield and productivity gains across the industry. However, funding for the scheme is due to end in 2025 with no replacement developed.
- Both large and small growers find it is too risky to invest in new equipment even when capital grants are made available through the Farm Technology and Investment Scheme, due to the match funding element of the scheme.

Where we want to be:

- The industry continually seeks to increase productivity, reduce inputs and waste, and deliver better environmental outcomes.
- With the right level of investment and confidence, further efficiency and environmental gains are possible. However, margins remain incredibly tight and the challenges posed by energy insecurity, labour availability, and the drive towards Net Zero are difficult to achieve by growers alone.

How we propose to get there:

- Government backing, by delivering a dedicated horticulture productivity scheme, open to both individual growers and collaborative groups, can provide the confidence and investment capacity required to continue to drive innovation forward.
- It is critical that Defra works with the industry to develop a replacement to the EU Fruit & Veg Aid Scheme as soon as possible. While this is also a long term aim, along with R&D, it is listed as a short term priority due to the urgency with which the sector needs certainty in order to invest in long term productivity measures.
- Redesign the Farm Equipment and Technology Scheme to remove the risk, by making more 100% grants available (ie without matched funding element). Allow more flexibility in the equipment and technology that can be purchased. Please see Wales' "Horticulture Development Scheme" as an example of how capital grants can be made more accessible to those who would benefit from them.

2.5 Access to reliable and affordable energy supply

Where are we now:

- For protected crops and those with long term storage, energy costs can be a high proportion of overall production costs.
- With the current levels of energy inflation, many businesses have cut back production significantly and in some cases by as much as 20-30%.

Where we want to be:

- The close link between energy and food means the government must prioritise access to affordable energy for food and horticultural production and the supply chain. It is critical that businesses are protected in the short term from energy price spikes and supported to invest in long term solutions.
- Energy generation on-farm, such as via combined heat and power plants and renewables such as solar and wind energy, are increasingly being adopted on-farm and have the opportunity not only to support food production but to export energy back to the grid.

How we propose we get there:

- Government support for investment in farm scale commercial renewable schemes and batteries, alongside investment in grid infrastructure to take surplus energy back to the grid, would build resilience to further energy shocks with immediate effect, while reducing the sectors' need for ongoing energy subsidies.
- The energy support package launched in the autumn provided some protection against sharp peaks in energy costs, but horticulture has not been recognised by the replacement Energy and Trade Intensive Industries (ETII) scheme, leaving growers severely exposed to future shocks.
- It is critical that energy intensive horticulture sectors are recognised under the scheme to prevent business failure in the event of further rising costs.

3. Key Elements of a Long Term Horticulture Strategy

The “world leading horticulture strategy” that Defra intends to create must blend long term thinking with addressing the short term goals set out above. The FVA is willing to work with Defra to build a horticulture strategy that is productive, sustainable and attractive to a new generation of growers and workers. In our view, we start immediately and work together on the following elements over the next 10-20 years, to create a diverse, thriving and productive horticulture sector that can meet the UK’s fruit and vegetable needs into the future:

- A greater role for SME organic and agroecological growers selling through farmer focused routes to market
- An integrated programme of recruitment, training, capital grants and horticulture renewal programme
- Growing the Goods Catalogue to be adopted as part of the Environmental Land Management Scheme.
- Investment in water storage capacity to build resilience
- Public engagement to ensure understanding of seasonality and the technical and environmental context of horticulture production
- A multi-departmental approach to horticulture policy
- Establish a coherent research and innovation funding pipeline



3.1 A Multi-departmental Approach

Where we are now:

- Increased supply of fruit and vegetables needs to occur in tandem with increasing demand.
- At present fruit and vegetable production are the province of Defra's Horticultural Team, while measures to increase demand through education, public health, diets and food welfare schemes, and facilitate the development of business through planning are addressed in separate government departments, leading to a siloed approach to policy making.

Where we want to be:

- Cross-departmental governance structures must be introduced to link work across the Department of Environment, Food and Rural Affairs, (horticultural production, food retail, and supply chains), the Department of Health and Social Care (public health, diets and welfare food schemes), Department for Communities and Local Government (planning policy) and the Department for Education (school food).
- This would enable a less siloed approach to policy making on fruit and vegetables to be taken, ensuring policies aimed at increasing production are matched by policies aimed at increasing consumption.
- The financial dividends, in terms of health spending in the decades ahead, from a genuinely coordinated approach cannot be underestimated. The National Food Strategy (The Plan) estimates that a healthier, more sustainable UK food system would bring a positive long-term economic impact of £126 billion. The University of Warwick highlights that increasing fruit, vegetable and fibre consumption is a core component in achieving such an economic impact.⁹

How we propose to get there:

- Policies such as public procurement (school meals, hospital and prison food focusing on seasonal British produce), expansion of England's School Fruit and Vegetable Scheme (and introducing similar schemes in other devolved nations) to normalise consumption should be considered.
- Incentives are also needed to encourage businesses to focus promotions and advertising budgets on healthier options, including fruit and vegetables, and to ensure they are cheaper than unhealthy foods.
- These interventions will help to build a secure market for British-grown fruit and vegetables, which is necessary to ensure that producers have the confidence to invest in increased supply and training a future workforce.
- Planning policy also needs to be supportive of horticultural infrastructure, while protecting the best agricultural land from housing development.

9. University of Warwick (2023) *Growing British: A strategy paper for promoting fresh produce production in the UK*.

3.2 Water Security

Where we are now:

- The major areas for fruit and veg production are in the drier parts of the UK, such as East Anglia and Kent. Summer water abstraction can legally be switched off under Section 57 of the 1991 Water Resources Act. As a result of climate change, we are already experiencing drier summers and wetter winters, with the expectation that this trend will intensify in the foreseeable future. At the same time population growth is increasing the demand for water. For many producers, water security is their biggest concern and for many more it restricts production.
- In higher value sectors such as soft fruit, irrigation is very efficient with water delivered precisely to the plant roots. In lower value sectors such as field veg, less efficient spray irrigation is the only affordable solution.
- The UK is only 54% self-sufficient in veg and 16% in fruit. Since most fruit and veg are over 80% water, the majority of imported produce is essentially importing water from water-scarce countries. This is unethical, unsustainable and poses significant risks to security of supply.
- Farmers and growers use less than 2% of the total water abstracted annually in the UK.

Where we want to be

- To meet the urgent need to optimise the potential for UK fruit and veg production, producers must have affordable access to sufficient water to meet current and future needs.
- In return, producers will need to take all reasonable measures to conserve water and use water efficiently.
- This needs to be achieved in conjunction with other users such as industry, homes and amenity, so that all sectors can flourish.

How we propose to get there:

- We will collaborate with and be supportive of other bodies in this area such as the NFU, UK Irrigation Association (UKIA) and Water for Food.
- Water for food production should be designated as an 'essential water need' alongside water for people and for energy. Our nation's food security depends on water. Water restrictions on food production may have a significant impact on our nation's future economic and social development and should be prioritised accordingly.
- We will lobby with other bodies representing primary food producers to work with DEFRA and the Environment Agency to produce a framework that enables the optimisation of UK food production whilst ensuring damaging environmental impacts are avoided. This needs to include support for on farm and larger multi-use winter storage reservoirs, water efficient technologies and research, such as into new technologies, drought tolerant and water-efficient crops.
- Policy incentives should enable producers to use water more efficiently; for instance ensuring measures to gather rainwater are part of all new developments, including polytunnels, where the concentrated runoff between tunnels can also cause a serious soil erosion risk.

3.3 Adoption of the Growing the Goods (GtG) Catalogue as part of the E.L.M Scheme

Where we are now:

- Since 2020, the Growing the Goods horticulture E.L.M.S. Trial has worked with over 90 growers to codesign a system for incentivising and rewarding the delivery of public goods. At the outset, growers emphasised the need for a straightforward, transparent and easy to use system of payments which would be attractive to growers of all scales, crop types and production systems. The outcome is the Growing the Goods Catalogue and Land Management Plan system.
- When combined with GIS mapping, using The Land App, it highlights the opportunities for growers within a given landscape to collaborate with one another and other land managers to amplify the impacts of the individual public goods actions they are implementing. The GtG catalogue addresses the problematic nature of area based payments by measuring public goods actions with metrics that are appropriate to each action. Our proposals have so far received favourable reactions from participants in the trial.

Where we want to be:

- For an adequately resourced, appropriately targeted horticultural E.L.M.S. scheme to be piloted and launched as soon as possible. This would include both SFI standards for orchards, field scale growers and market gardens, and Countryside Stewardship plus options relating specifically to horticulture.
- Many growers have put considerable effort and thought into designing a system that could work for them and meeting the dual challenges of being easy and straightforward to use and meeting the diverse needs of the UK horticulture sector. We hope that Defra will include the GtG approach in the final E.L.M.S. offer to the horticulture sector.

How we propose to get there:

- LWA and the participants in Growing the Goods will continue to work with Defra to develop both specialised horticulture SFI standards and to test and refine the Growing the Goods Catalogue. Where possible we will collaborate with other Tests and Trials to share findings. From 2023, we will work with field scale vegetable growing tenants to address the barriers to participating in ELMS faced by tenants.

3.4 A greater role for SME organic and agroecological growers selling through farmer focused routes to market

Where we are now:

- Small and medium scale organic and agroecological vegetable and fruit growers are already attracting new entrants and supplying high quality fresh produce via vegetable box schemes, food hubs and wholesale to restaurants and independent shops.
- Lack of data makes it hard to determine the significance of this sector at present, but it is likely to represent less than 1% of UK fresh produce sales. A few cities have integrated systems of “Better Food Traders” supplying citizens with fresh produce from local urban, peri-urban and rural growers, supplemented by organic produce bought from wholesalers sources nationally, from Europe and further afield.
- Such “Food Zones” supply systems or “farmer focused routes to market” have the potential to deliver £3.72 worth environmental and social benefits for every £1 spent on fruit and vegetables (See Appendix A5 for more details).

Where we want to be:

- The agroecological sector would like every city and large town in the UK to have access to a value based “food zones supply system”, while every small town and village would be supplied by at least one community supported agriculture (CSA) scheme or other form of direct market or “Better Food Trader”.

7. Better Food Traders is an organisation that makes it easier for people to buy food that is good for the planet and people. We do this by accrediting and supporting food businesses governed by principles that ensure the food they trade is farmed sustainably, and the way they trade is fair to farmers and transparent to customers.





- As this network of overlapping “food zones”, centring on settlements across the UK grows, increasing numbers of customers would have the option to buy their fresh produce from organic or agroecological farms, while growers would have routes to a market that provide a reasonable return. Already, initiatives such as the CSA Network, Open Food Network, Better Food Traders are supporting growers to connect to markets through which they can achieve better prices. Our target over the next 10 years is to scale up the capacity of agroecological and organic growers to enable people in every city, town and village in the UK to access fresh produce from a Food Zones supply system, CSA or other kind of “Better Food Trader”.

How we propose to get there:

- Our target of a “Food Zone or CSA in every city” will require a dramatic increase in the number of rural small farms and CSAs, peri-urban and urban agriculture initiatives.
- Such an increase will only be possible with a strategy to recruit, train and establish thousands of new market gardens, set out below in the LWA’s proposed Horticultural Renewal Programme.
- The produce they grow will be sold directly or via farmer focussed supply chains, which deliver a price to growers that is sufficient to enable them to reinvest and attract a skilled workforce.
- Such farmer-focussed supply chains can also deliver significant public goods and value for money, including enhanced agrobiodiversity, clean water and carbon negative production systems, thus working to support the objectives of E.L.M.S., as the customers who buy from them are motivated to support more environmentally friendly production methods and are often willing to pay more for such produce.

3.5 A Horticulture Renewal Programme to recruit, train and establish a new generation of agroecological market gardeners

Where we are now:

- Organic and Agroecological growers' organisations are supporting their members through a patchwork of training schemes, campaigns and initiatives designed to support the development of resilient food systems.
- Most of these organisations have experienced an increase in demand for their services over the past 10-15 years, reflecting a growing interest in sustainable horticulture careers and business start-ups. Both the Landworkers Alliance and CSA Network have seen rapid growth in the ten years since they each established, with LWA now having 868 members practising horticulture and CSA Network having grown 89 member farms in March 2020, to having 200 member farms in 2023.
- Recently established Level 2 and 3 accredited training courses in Regenerative Agriculture (including horticulture) at The Apricot Centre in Devon, found they had 206-283 applicants for 22-23 places, and nearly 500 expressions of interest for the Level 3 course. From the 2022 cohort most have either gone into horticultural or livestock related employment, or gone on to Level 4 (which had 45 applicants for 15 places). Longer running courses at Organiclea (NE London) and Kindling Trust (Manchester) are also popular.*
- What is lacking is a comprehensive and co-ordinated programme which can attract new entrants with the promise of accredited vocational training, opportunities to start businesses and a market that returns sufficient to enable business development and a secure livelihood.

Where we want to be:

- To grow our own UK workforce of skilled growers, a long term strategy is required. LWA has proposed a "Horticulture Renewal Programme" to achieve the recruitment, training, establishment of businesses (access to land, investment in equipment and infrastructure), and the rapid development of local and regional farmer focused supply chains.
- It is essential that all of these issues are addressed simultaneously, to ensure that new entrants are attracted and rewarded by a viable livelihood, while supply keeps pace with demand created for local /regional fruit and vegetables through public engagement and public health messaging.
- This approach could either be focussed on just the agroecological sector, or extended to the entire horticulture sector, where it would be complementary to The Institute of Agriculture and Horticulture (TIAH), already being developed to support the continuing professional development of horticultural workers.
- What is necessary is an ambitious and multifaceted programme that will change the public perception of horticulture, so that it becomes a career option that attracts intelligent, motivated and practical people who are keen to apply themselves to the challenges of sustainable and healthy food production.

**Level 3 2022: Applicants - 283, EOI - 496 (23 spaces)/ Level 3 2023: Applicants - 206, EOI - 260 (22 spaces) / Level 4 2023: Applicants - 45 (15 spaces) - not advertised as widely as its a pilot in order to offer to previous Level 3 and Level 2 students / Level 2 2023: Applicants - 42 (12 spaces)*

Ongoing placements: Level 3 cohort 2022: 8 went on to Level 4, 17 went on to growing/herdsperson/livestock farmer job, 1 - travelling to woof on a variety farms, 1 - year out before going to study further and inherit family farm, 1 - Became butcher, 3 - left early (1 due to bereavement, 1 due to not wanting to work in growing, 1 became a tree surgeon).

How we propose to get there:

- Organic and agroecological growers' organisations are already co-ordinating initiatives to address issues such as lack of accredited training, access to land and markets that deliver a decent price to growers.
- Many of these initiatives are funded by short term grants, so have a limited lifespan and without government support, progress in developing this sector is unlikely to keep pace with demand. A Horticulture Renewal Programme would provide an overarching framework into which existing and successful initiatives could fit, supplemented by new initiatives to fill the gaps. We would work together with Defra to identify where they could support us to develop existing and new initiatives, which could be supplemented through a blend of public and grant funding. We would also work with local authorities, to develop access to land through the County Farm Estate. The key elements that a Horticulture Renewal Programme requires are:
 - A recruitment programme for school, college and university students and career changers
 - Training initiatives including accredited⁸ courses, and traineeships/apprenticeships.
 - Farmstart Programmes/Incubator Farms
 - Mentorship programmes to enable experienced growers to pass on their skills
 - Capital grants/low interest loans for equipment and infrastructure
 - Access to land and secure tenancies, to give new entrants the confidence to invest.
 - Development of markets, through the development of Food Zones/Farmer focused routes to market as described above as well as public procurement contracts.
- The LWA is already working with Defra on the New Entrant Support Scheme (NESS) Pilot in the South East and South West of England, while Regather Sheffield is running a NESS Pilot in the North of England.
- We are open to working with TIAH and large scale growers organisations where they are willing. Above all we would like to work with Defra to grow a thriving and motivated UK horticultural workforce that can meet the demand for fresh produce that would be unleashed if public health advice to eat 5-7 portions a day was followed.

8. Farmstart Programmes or Incubator Farms are initiatives which enable new entrants to build their business skills in a sheltered business environment, where they have access to a small acreage of land, shared tools/infrastructure and existing markets (e.g. a large urban veg box scheme). They are also provided with training in crop planning, business management, record keeping, but are able to make their own decisions about what to grow and how to grow it, and thus learn from their successes and mistakes.



3.6 Establish a coherent research and innovation funding pipeline

Where we are now:

- The fresh produce sector faces significant challenges which will require support from research.
- These include climate change mitigation and adaptation, the arrival of alien pests and pathogens, and the drive to reduce inputs with potentially adverse environmental impact such as pesticides and fertilisers.
- For some years the AHDB Horticulture levy has served as the only major applied research funder for the fresh produce sector. With the levy ceasing in April 2022, £7.59 million per year of public good research and innovation has been lost to the industry.
- At a time when change is needed, research and innovation are at risk of being lost in the UK.

Where we want to be:

- UK growers need a system which can respond rapidly to emergent threats, before it becomes fragmented and insular.
- The fresh produce sector needs a nationally agreed strategy for public good research linked with a capability for best practice knowledge exchange.
- Academic institutions and the UKRI must work in close partnership with growers to ensure that research agendas meet the practical and policy needs of growers.

How we propose to get there:

- The system needs to become integrated. Government and industry must work together to produce a joined-up R&D pipeline where funding for fundamental discovery, strategic, translational, and applied research is balanced, and work together in a virtuous circle.
- Develop a sector-wide high-level strategic plan for fresh produce crops and systems.
- Co-design a targeted, mission-driven framework to drive and support innovation within a structure of decarbonisation. The sector has a lot to offer towards carbon net zero.
- The co-discovery, co-design model will ensure that innovation is not seen as linear but instead a circular system where results of applied research are fed back into the next cycle of research through the filter of farmer and grower experiences.
- Policies need to be sequenced and costed with the involvement of economists, best practice promoted, and exemplar pathways supported as part of a wider knowledge exchange framework in the sector.
- Initiate a training structure to ensure that the industry has the skills to evaluate and implement new innovation/technology as well as the technical skills to operate it.

3.7 Public Engagement

Where we are now:

- Due to the success of the supermarket supply system, which has made fresh produce from across the world available all year round at competitive prices, the public has become disconnected from the realities of food production. Seasonal variation of fruit and vegetable availability, and the variable pricing that indicates shoppers whether a product is out of season and scarce, and therefore more expensive, or in season and abundant, and therefore cheap, is viewed as an “old fashioned phenomenon” despite the fact that this is the way pricing works in most other countries across the world.
- The recent salad shortages have highlighted the fact that many people expect to have tomatoes and peppers all year round, and that UK supermarket buyers are unwilling to pay the higher prices due to poor weather, so have missed out on salad stocks to continental buyers who are willing to pay the extra cost of production.
- Many shoppers are unaware of the abundant variety of seasonal produce that is available, often at lower prices than imported produce.
- Similarly, many shoppers are disconnected from the processes required to bring them cosmetically perfect, even-sized produce.
- While some high quality public engagement occurs through initiatives such as Open Farm Sunday, school visits, volunteering and Community Supported Agriculture, access to farms is patchy and it does not influence enough of those who make food buying decisions to raise

awareness of the trade-offs faced by growers between economic viability and environmental protection.

Where we would like to be:

- The British public are well informed about fruit and vegetable production, and motivated to support British growers by buying predominantly seasonal produce from the UK.
- Shoppers are able to make informed decisions about the production systems used to produce fruit and vegetables and, if they choose, have connections with local farms due to farm visits for seasonal events.
- A wide programme of public engagement, not just for the general public, but for chefs, supermarket buyers and other decision makers in the food chain is in action, to increase knowledge about horticultural production and develop skills in cooking with seasonal produce. This would include farm and glasshouse visits, seasonal events and celebrations of different crop harvests and cooking demonstrations, as well as more opportunities for peri-urban volunteering, community supported agriculture (CSA) and informal short courses in horticulture.
- A higher profile for the horticulture sector and transparency about the different roles it involves could, over time, increase the flow of people wanting to work in the sector, as they become aware of the diverse and rewarding careers in this sector.

How we propose to get there:

- We will build on existing initiatives, such as the LEAF Marque Farm visits and Open Farm Sunday, the CSA Network and peri-urban volunteering.
- We call for Defra to reinstate public engagement as a priority public good in the E.L.M.S. and introduce a Public Engagement SFI standard that is accessible to horticultural growers of all scales and types. In E.L.M.S., more demanding models of public engagement for growers should also be incentivised through the Countryside Stewardship plus.
- Other media will also be employed to widen the reach of the horticulture sector's public engagement. Matched Defra funding for a refreshed "Veg Power" campaign would stimulate demand for fresh produce among the public. We would suggest that there is an argument for accessing additional funds from the Dept of Health for measures to increase public awareness of fruit and vegetable production and consumption. Public health evidence suggests that there would be significant savings to be made to the NHS were the UK population to eat the recommended "7 a Day".
- UK growers could have a significant potential role in encouraging the public to eat more fresh produce and keeping physically active, through engagement, product development and public access, but this requires government support to enable such roles to be combined with running viable businesses.



4. Conclusion

A visionary horticulture strategy for England is needed urgently to ensure that we have the current and future capacity to meet domestic demand for fresh produce. While certain issues – labour, energy and supply chain fairness – require immediate attention to prevent any further decline in the industry, significant strategic long term thinking is required. Given the right policy and financial support, the horticulture sector has the potential to achieve the productivity increases and financial growth desired by this government, whilst also addressing the pressing crises of climate change, biodiversity loss, resilient vegetable supply and public understanding of the fresh produce sector. We stress once again that work should begin on the long-term objectives straight away, to build resilience and growth potential, while working on the five short term priorities

There is room in the UK for significant expansion of production, in order to build resilience in the supply system (to import disruptions and climatic extremes), meet public health requirements and save billions in health spending:

- In 2021, total UK fruit and vegetable production is 3,124,100 tonnes (Defra 2022).
- For there to be sufficient fruit and vegetables for the UK population to eat “7 a Day”, a total of 15,199,096 tonnes of produce would be required (allowing for modest waste), and for “5 a day” 10,856,497 tonnes would be necessary.
- To achieve the public health benefits of everyone eating 5-7 portions per day, the benefits of which would reach far beyond Defra, combined with a more resilient domestic supply of fresh produce, we need to triple or more than quadruple our production.
- Even assuming we continue to import Mediterranean and tropical crops, there is still potential to double or triple production, in tandem with policy efforts to support more people to increase the amount of fresh produce they eat.

Resilience and strength lie in diversity.

The Fruit and Vegetable Alliance is made up of representatives of a diverse range of different horticultural types and scales. All are willing and eager to work closely with Defra to overcome barriers to productivity, attract and train up a new generation of UK growers and rise to the challenge of building a vibrant, productive and sustainable British horticulture sector.

Appendix 1: Points to consider in preparing a horticulture strategy

Preparation and implementation of a long term horticultural strategy, which aims to rebuild the UK's domestic production capacity, increase productivity, attract and train a new generation of growers from the UK workforce and achieve net zero and biodiversity net gain, should begin forthwith. The five priorities in the short term strategy are urgent measures required to prevent further decline in production, whereas the long term strategy sets out the measures necessary to create a vibrant and productive future for the horticulture industry. In preparing for long term resilience and productivity, the following points should be considered:

A.1 Growing demand

While public health advice is to eat 5-7 portions of fruit and vegetables per day, current average consumption is 3.4 portions per day. The total supply of fruit and vegetables in the UK is still well below the amount required for everyone to eat five portions per day, even if no food was wasted, and if optimum consumption targets for public health were met, demand for fresh produce would increase to 12,873,749 tonnes per year. Allowing for a modest amount of waste (ie at the level recommended by the Sustainable Development Goals), 15,199,096 tonnes of fruit and vegetables would be needed. An increase in horticultural production must be matched with policies to grow a reliable market, to give growers the confidence to increase production. The Food Foundation, with their Veg Power and Peas Please campaigns, and the Soil Association, with its "Food for Life" and "Out to Lunch" campaigns, have made a significant start on growing demand for vegetables and fruit. The FVA is committed to working with these campaigns but believes progress in growing demand would be faster if national and local Government took a leadership role.

Government leadership through public procurement policies that prioritise British grown fresh produce, would provide a foundation for growth by providing confidence among growers to invest in technology and training. The threat of losing out on a market due to being undercut by cheaper imports is a serious disincentive for growth. Prioritising UK produce in public procurement contracts for hospitals, prisons and other public canteens, using dynamic procurement technologies, and introducing a target-based approach such as those employed in Denmark and France, would send a signal to the horticulture sector that the Government is committed to supporting a thriving horticulture sector.

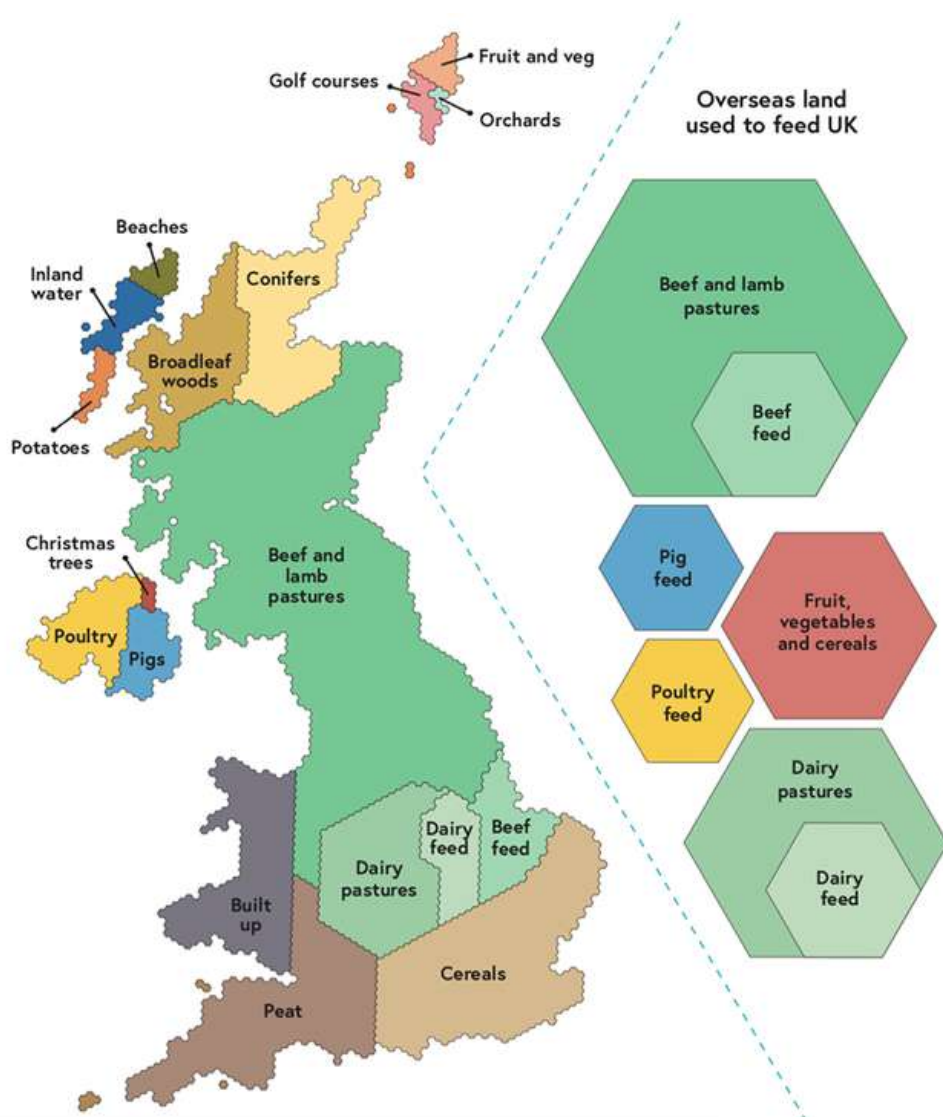
Government could also show leadership by requiring retailers, out of home businesses, and caterers to improve transparency on their fruit and vegetable sales to enable progress to be monitored - this could be undertaken as part of the new Food Data Transparency Partnership (FDTP) which was committed to in the Government Food Strategy.

Other policies that are aimed at increasing consumption of fruit and vegetables - such as expansion of England's School Fruit and Vegetable Scheme (and introducing similar schemes in other devolved nations), investment in fruit and vegetable advertising, and incentives to encourage businesses to focus promotions and advertising budgets on fruit and vegetables and ensure they are cheaper than unhealthy foods - should also be taken forward.

To ensure that low-income consumers are also able to access sufficient fruit and vegetables, the Government should expand of Free School Meal eligibility, broaden the eligibility criteria for Healthy Start vouchers, remain committed to trialling fruit and vegetable prescriptions, and ensure food environments enable low-income consumers to easily access fruit and vegetables.

A.2 A Good Country for Horticultural Production

Horticulture in particular relies on high quality soil, adequate supplies of water and a stable climate. The UK has a climate that provides high volumes of rainfall, especially in the autumn and winter, while having large pockets of Grade 1 and 2 agricultural land and large areas of Grade 3, which can also be used for small-scale horticulture. By contrast, many of the countries upon which we currently rely for imports of fresh produce are already experiencing water scarcity, brought about by climate change.¹⁰ Even the UK is already experiencing the impacts of climate change, in particular with the droughts and extreme heat of summer 2022, and intense rainfall during the recent autumn and winter. Our long term strategy should be to manage our natural resources better, by building storage capacity for winter rainfall, protecting high quality agricultural land against building developments, enhancing our biodiversity and developing the skills and ambition of a diverse new generation of UK horticultural workers. Horticulture has a relatively small land footprint compared to other agricultural land-use, due to its high productivity. A 50% increase in horticultural production would still require less than 2% of current agricultural land.¹¹ We need a vision for how we can increase domestic resilience of horticulture supply, and prepare for a future when climate change might force the UK to become the garden of Europe. The below infographic shows how little land would be needed if horticultural area was increased by 50% (see *The National Food Strategy Part II 'The Plan'* p95.)



Source: *The National Food Strategy Part II*

10. Goudie, S. (2020) *Is the UK's supply of fruit and vegetables future proof?* SHEFS Briefing No. 1, Food Foundation and Welcome Trust

11. University of Warwick (2023) *Growing British: A strategy paper for promoting fresh produce production in the UK*

A.3 Attracting a new generation of horticultural workers and business entrants

At present, the mainstream horticulture sector struggles to attract new entrants and UK workers, due to a perception of the work being physically hard with long hours and low pay. Furthermore, lack of appropriate skills among UK workers also forces large scale growers to look overseas to find sufficient labour. Employment conditions vary greatly, and the reputation of the employer, quality of management and what the work involves affect the attractiveness of horticultural work. Small scale, organic and agroecological market gardens are attracting new entrants – both young people and later life career changers – who are drawn to the prospect of work that is beneficial to the environment and providing healthy food.¹² A report produced by Tyfu Cymru for the Resilient Green Spaces project found several trends including an escalating interest in growing commercially and an increased demand for local food. It looked at the impact of labour shortages and the increased interest in organic and regenerative techniques. Many who are attracted to the industry have high level qualifications which are not specific to horticulture.¹³ These trends are at present still a trickle in relation to the labour need of the UK horticulture sector as a whole, numbering in the hundreds rather than the tens of thousands, but there is potential to convert this interest in greener horticulture into an increasingly skilled workforce. Some may remain in small-scale organic horticulture, whereas others may venture into larger scale horticulture as it embraces the challenges of net zero and biodiversity loss through E.L.M.S. A study by the Soil Association¹⁴ explored why new entrants are more attracted to small scale independent market gardens as opposed to large scale production horticulture and revealed that young people are attracted by the autonomy and perceived fulfilment of running their own business, but also found that many new entrants weren't aware of the opportunities in larger scale horticulture. It is hard to assess what the true

interest in horticultural careers is at present, due to the barriers that those who enter the industry have to overcome, which may be off-putting to other potential new entrants. Scarce training opportunities, lack of access to land and capital for infrastructure and equipment and overly rigorous application of planning policy for agricultural workers' dwellings and lack of affordable housing for people on a growers wage, mean only the most determined, able or well resourced new entrants are able to establish successful businesses.

The current financial pressures being experienced by the sector make it even less attractive to new entrants, so any policy to recruit and train a skilled UK horticultural work force must be implemented in tandem with policies to reverse the economic decline of the sector. People will be more attracted to a sustainable sector, where investment, growth and development are focused on addressing such challenges as climate change and providing accessible, healthy food for society. If we get the results we are asking for in terms of the environment, supply chain fairness and training, the UK horticulture sector will attract new entrants. A thriving UK horticulture sector would attract skilled horticulture workers, for seasonal or permanent employment by growers, as well as new entrant horticultural entrepreneurs. In both cases, a clear career development path to a rewarding and stimulating livelihood, with opportunities for progression and continuing professional development (CPD) would result in a skilled and flexible workforce.

There are multiple pathways into horticulture, from volunteering and traineeships at peri-urban farms to agricultural colleges and vertical farming

12. Styles, G., Talks, I and Tomlinson, H (2022). *The Attraction of Agroecology and the barriers faced by new entrants pursuing agroecological farming and landwork*. Landworkers Alliance.

13. Lantra Wales (2022) *Mapping of existing horticulture training provision (and current sector requirements)*. Resilient Green Spaces funded

14. Eldridge, H (2018). *Digging into Horticulture: Encouraging the next generation of producers*. Soil Association

start-ups, some of which members of FVA are already pioneering. The FVA are committed to working with Defra to make the sector more attractive to new entrants at all scales and different production systems and levels of technology, and welcome the opportunities created by TIAH for creating bespoke training pathways. Furthermore, we are keen to contribute to the development of T-levels, to raise the profile of horticulture among 16-18 year olds. We caution against an approach that “puts all the eggs in one basket”, such as overly focusing on high energy consumption production systems, such as vertical farming, which are as yet unproven and at risk to energy price shocks.

A.4 The Environment is the Foundation of Productivity

A healthy natural environment, composed of assets (soil, water, biodiversity etc) and regulatory ecosystem services (a stable climate, natural pest control and pollination, soil water holding capacity) is a fundamental requirement for sustained horticultural production. While humans have developed their capacity to manipulate the natural environment in recent decades to increase yields, protect against pest attack and improve efficiency, the impacts of climate change, soil erosion, water pollution and biodiversity loss threaten to undermine our capacity to produce fruit and vegetables. We support the approach of E.L.M.S. which seeks to direct public money to incentivise the delivery of public goods, and to protect and enhance natural assets and ecosystem services, but it is essential that UK horticulture production systems are suitably recognised within the SFI standards and Countryside Stewardship plus, otherwise ELMs fails to deliver for our sector.

A.5 Supply Chain Fairness

In recent decades supermarkets have revolutionised access to fresh fruit and vegetables, offering convenience and variety which enable consumers to access produce from across the world at affordable price points. Retailers are also the UK horticulture’s largest customer, providing economies of scale. Many growers have built successful businesses through strategic partnerships with the major multiples, and in the past have benefited from business alignment and investment to lengthen British seasons, develop new products and invest in new technologies. However, recent retail price wars such as “Price Match” strategies, coupled with a fiercely competitive market environment that has forced margins to the bone has impacted on growers inability to recover a sustainable return from the marketplace. This challenge has significantly worsened over the last 18 months.

Grocery inflation is now at record highs. Retailers have increased shelf edge prices in line with rising inflation, yet reports from growers suggest they are not receiving sustainable farmgate returns. The recent report by Sustain, “Unpicking Food Prices” reveals that the percentage of the profit margin on five commonly purchased food products (including apples and carrots) received by farmers is often less than 1%.¹⁵ British Apples and Pears report farmgate price increases have only risen by as low as 0.8%, when cost of production has rocketed by 23%. Diminishing grower margins are leading to a restructuring of the sector and are causing some growers to leave the industry altogether, while others may be surviving but are unable to invest.

15. Sustain (2022) Unpicking Food Prices: Where does your pound go and why do farmers get so little?

Further upstream in the value chain, a consolidating food industry with large intermediary takeovers and buyouts is increasingly becoming commonplace. As a result, growers are concerned about the power imbalance of intermediaries and retailers vs primary producers and the impact this has to their exposure to unfair trading practices and ultimately their ability to recover value from the market.

The Competition Commission investigation of 2008, which contributed the building blocks with which to establish GSCOP, found excessive buying power has the potential to impact consumer choice. GSCOP therefore set in place a legal framework, regulating only the top UK retailers buying power, seeking to prevent risks and costs from stifling innovation. The industry welcomes the role of GSCOP. The GCA, however, does little to protect primary producers downstream of the retail direct supplier. A fast-moving, demand led supply chain can create unfair trading practices at all stages across the value chain, but the risk and cost of such tends to fall on the shoulders of primary producers, many of whom supply processors and manufacturers outside of the scope of GSCOP. For example, last minute order cancellations or unambiguous terms and conditions can unnecessarily bleed value out of an already small margin business operation. Without regulation to underpin best practice trading, primary producers have little power to address unfair trading across the entire supply chain. The Principle of Fair Dealing, defined in law under GSCOP, is a good example of how the government can create a framework which promotes trading best practice to prevent value leaking out of an already stretched value chain. Given the current state of the grocery market, the government must use its powers under section 23 of the Agriculture Act 2020, and work with the sector to ensure a fair and functioning marketplace.

We call on Defra to work with the horticulture sector to promote a fair and functioning trading environment by seeking to retain the Groceries Code Adjudicator role, and renew and refresh the GSCOP Code to embed the GCA's 7 golden rules. We ask that the Government also uses its powers in the Agriculture Act to assess the risk profile within the horticulture supply chain by launching an urgent consultation to gather evidence of the worst inequalities of trading behaviours within the supply chain. The Secretary of State must also use its powers within the Agriculture Act to improve fairness and transparency in the supply chain, particularly acting to support primary producers who fall out of scope of GSCOP, who are inherently at an increased risk of unfair trading practices.

Building a diverse system of alternative routes to market for conventional and organic growers will also spread risk and create a fairer food system. Policy must provide the mechanism for growers to collaborate more effectively. The PO model has advantages in re-balancing the buying power dynamic, as it allows growers to come together in the face of an increasingly consolidated food industry and have stronger negotiating power. A revamped PO model which is fit for a post-Brexit agricultural economy would provide a focus for collaboration, as well as a vehicle for investment in productivity and environmental innovations.

To conclude this section, for the horticulture sector to thrive and become resilient, it is necessary to set out clear rules for both the retail, the processing and the wholesale sectors, to ensure the trading environment across the horticulture market is fair. Four things are needed: 1. Robust and clear regulation of retailers, wholesalers and processors to create a level playing field, 2. An urgent government led consultation into fairness in the supply chain; 3. A new PO model to encourage collaboration and investment and 4. an increase in alternative routes to market for British growers including through farmer focused routes to market and public procurement contracts, so that growers have more options for how to sell their produce.

A.6 Farmer Focused Routes to Market

A more diverse, values-based distribution system is already emerging, but currently represents a tiny fraction of the fresh produce market. Farmer focused routes to market include all those direct and retail sales options which prioritise environmental sustainability, the farmer being paid a fair price for their produce and worker welfare all along the supply chain (i.e. a living wage, good working conditions). The organisation Better Food Traders (BFT) was established in 2019 to accredit and support the growing number of enterprises that are trialling innovative ways to apply the principles of sustainable farming, trading fairly with farmers and being transparent with customers. Enterprises accredited by BFT include vegetable box schemes, food hubs and independent retailers. Other farmer focused routes to market are direct sales, such as farmers markets, farm shops, vegetable box schemes and community supported agriculture (CSA) schemes.

CSA is a particularly interesting model, in that customers undertake to share the risk of production by purchasing a share in the harvest and accepting that their weekly delivery of produce might vary in value

according to the success or failure of different crops. CSA schemes also involve a much greater degree of member involvement in the farm, often including member workdays, social events and farm visits. This in turn results in customers having a better understanding of the environmental and social impact of their food purchase decisions.

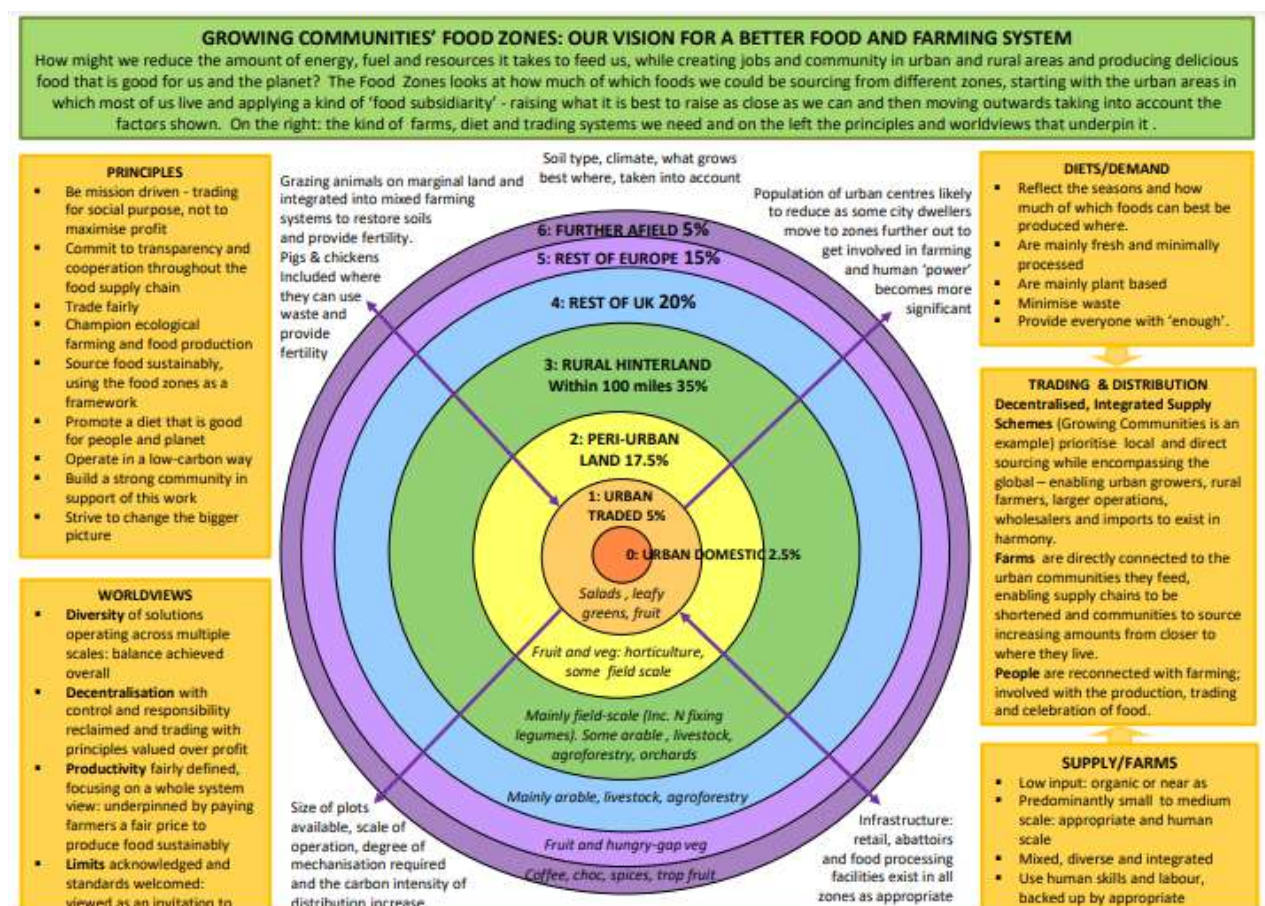
Growing Communities has developed an idealised model of the food supply system for cities and other urban areas, called the Food Zones (see below). This consists of three zones of directly traded produce, with urban, peri-urban and rural hinterland producers who would supply about 60% of fresh produce. The remaining 40% would be sourced from wholesalers supplying produce from the UK, Europe and further afield. The Landworker's Alliance has been modelling what a supply system based on the Food Zones model, supplemented by CSAs supplying villages and small towns might look like, if it was supplying 15% of the current UK production of fruit and vegetables. Landworkers' Alliance hopes to publish the resulting report later in 2023.

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A cost benefit analysis by the New Economics Foundation of the organic fruit and vegetable box scheme Growing Communities in the London Borough of Hackney in 2020 showed that "Growing Communities generated £6,293,700 in economic, commercial, social, and environmental value in 2019/2020, from £1,688,600 of costs (including the opportunity costs) giving it an overall cost-benefit ratio of £3.73 of value generated for each £1 of costs" (Ref Jaccarini C., Lupton-Paez M. and Phagoora, J. (2020) "Farmer Focused Routes to Market: An evaluation of the social, environmental and economic contributions of Growing Communities". New Economics Foundation and NEF Consulting. Additional benefits of farmer focused routes to market are that there is less waste and packaging, as produce is fresher and requires less refrigeration due to being harvested a short time before delivery.

A7 Examples of a target based approach

The Welsh Government, on the recommendation of Tyfu Cymru, has adopted the target of increasing fruit and vegetable production by 25% overall by ??? . Should England be following suit? A target based approach to agricultural policy is not unprecedented. Denmark was the first country in the world to draw up an organic action plan, in 1996.

Collaboration between organic farmers and food companies, as well as consumers, the labour market and environmental and farm organisations has resulted in the creation of an organic food policy which has political support across the spectrum of political parties and changing governments. For example they introduced the national goal of 60% of food used in public kitchens becoming organic and pro organic policies that have resulted in a doubling of the amount of organic farmland since 2017. The market share for organic produce is 13%, with 80% of Danes purchasing organic products, and over half buying organic food every week¹⁶ (Danish Agriculture and Food Council 2020). In 2021 the The Food and Farming Minister, Rasmus Prehn, set targets of "three visionary goals for organic" to be achieved by 2030, including, "First, the Government will double the organic agricultural area. Second, we will double organic consumption in Denmark. And, third, we will double organic exports". To achieve this, he said, the Government will be allocating €484 million, as part of a new political agreement for Danish agriculture.¹⁷

A.8 The power of public engagement

Lack of understanding about the physical parameters of horticulture, such as seasonality, resource use and pest control options among the general public, supermarket buyers, chefs and other actors in the supply chain is contributing to purchasing decisions that do not always support sustainable and economically viable practices. For example, the stringent size and cosmetic demands of supermarket buyers requires growers to use more plant protection products, and sometimes to waste crops when they don't meet requirements. Use of out of season produce on restaurant and public catering menus, results in imported produce being used in favour of abundant in season British produce.

16. Danish Agriculture and Food Council (2020) *The Organic Way: The Danish Model. Organic Denmark and Food Nation*.
17. <https://naturalnewsdesk.co.uk/2021/11/17/denmark-backs-visionary-goals-for-organic-with-e484-million-of-government-funding/>

The public engagement aspect of E.L.M.S. seems to have been sidelined, risking the loss of an important element of the programme for helping the taxpayer understand why public payments are necessary to support the horticulture sector. Furthermore, targeted programmes of public engagement aimed at both the general public and people with decision making power in the supply chain are necessary to re-inform and motivate people to make choices that support sustainable practices over other options that may be more damaging to the environment. An effective public engagement programme will require collaboration between the Government, the horticulture sector and others involved in retail, catering and public health. A programme of in-person and online workshops, in tandem with farm visits, has the power to change hearts and minds when it comes to making daily choices about which fruits and vegetables to purchase, cook with and place on menus.

A.9 Upholding standards in trade

With the UK importing half the veg and around 85% of the fruit we consume, it is critical that growers are not undermined and outcompeted by lower standard products. Importing foods simply because they can be produced at lower cost elsewhere would see us offshoring our environmental and water footprint to other places at precisely the time we are trying to halt the degradation of important habitats across the world. It also removes our management of labour markets and risks moving production to countries where modern slavery risks are higher. It is critical to embed within new trade deals that we have consistent production standards from imported produce and do not allow practices that would be illegal for UK growers.

Appendix 2: Breakdown of calculations in FVA infographic

Million metric tonnes	2022	2023
Current consumption rate static plus 5% increase as pop grows	6.9	7.3
UK Production remains static	3.1	3.1
Total Fruit and Veg Supply (including imports) remains static	8.3	8.3
UK Production declines by 25%	3.1	2.3
UK production increases to meet 5 a day with same home supply ratio	3.1	3.9
Total Fruit and Veg Supply increases to meet current 5 a day	8.3	10.9
5 a day consumption plus 5% increase as pop grows	10.9	11.4
7 a day consumption plus 5% increase as pop grows	15.2	16.0

