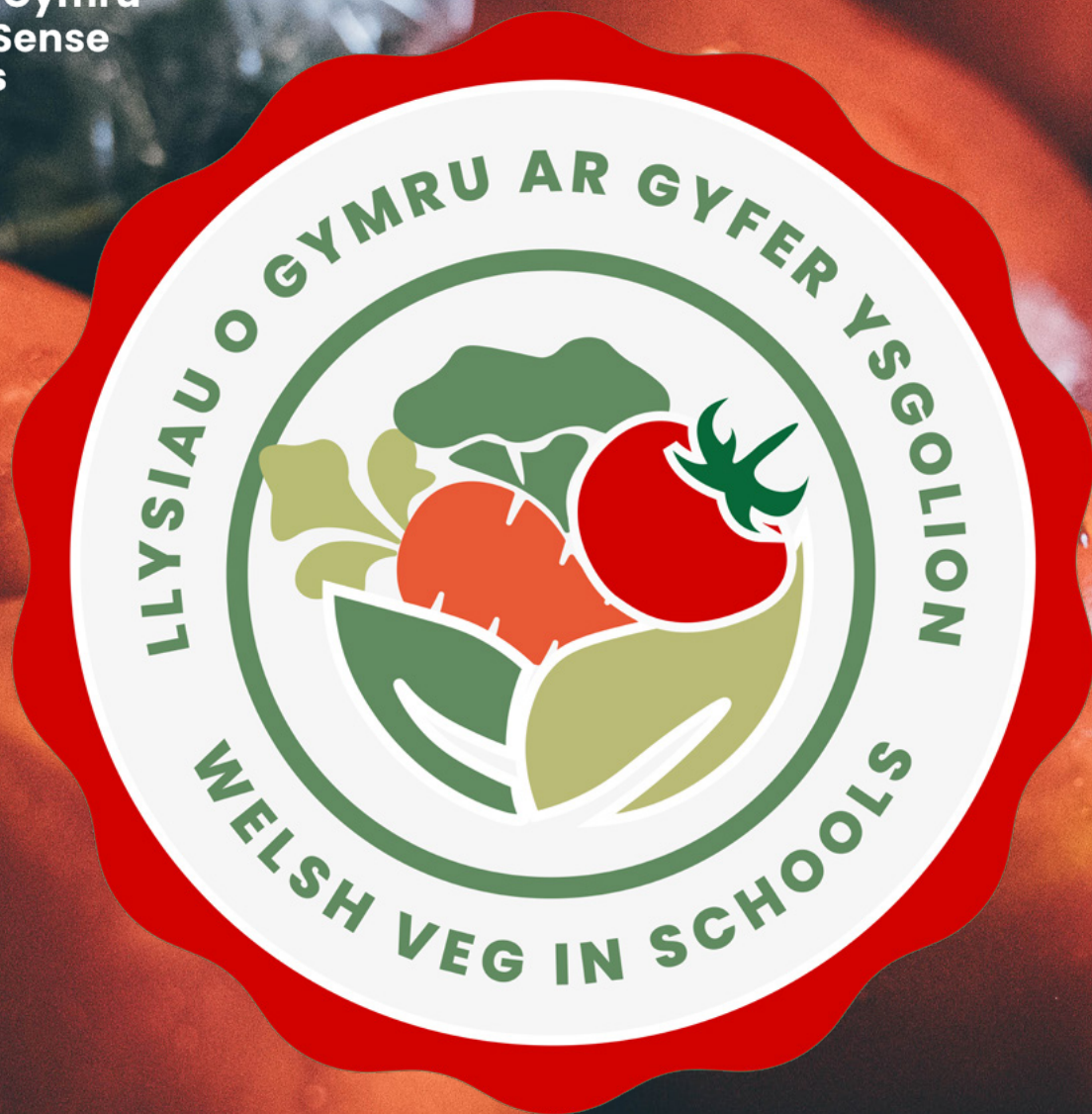




Synnwyr
Bwyd Cymru
Food Sense
Wales

April 2025



TONNES OF CHANGE

WELSH VEG IN SCHOOLS
2023 - 2025

FULL REPORT



Welsh Veg in Schools 2023 – 2025 Full Report

By Dr. Amber Wheeler for Food Sense Wales

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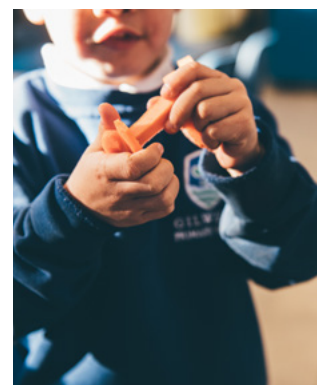
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INTRODUCTION

There is a growing sense of urgency to ensure Wales can sustainably produce the ingredients needed for a healthy diet given a changing climate, global political instability and increasing numbers of households unable to meet the costs of a healthy diet.

UK vegetable production is in decline and there have been calls to increase domestic production, by [Welsh Government](#)¹ and others, to build resilience and fulfill a global responsibility to be less reliant on produce from climate vulnerable countries.

Multiple reports have been written about the perceived challenges of public procurement in realising the potential to incentivise for greater sustainable local production. Two developments; the [Social Partnership and Public Procurement \(Wales\)](#)² Act 2023; and the commitment to provide Universal Free School Meals to primary school children, have placed a new emphasis on Government's leadership role in this space.

[In 2022 only 6% of veg](#)³ bought for the public sector in Wales was being sourced from Wales. **Welsh Veg in Schools** has been addressing how sustainable local veg production can supply into procurement and showing, through action research, what the real versus perceived challenges are.

It is also providing evidence on the role organic veg production has to play in ensuring horticulture is a viable career, improving food security and health, increasing biodiversity, reducing carbon emissions, mitigating climate change and building resilience.



¹ Welsh Government (2024) Written Statement: Horticulture Policy Development in Wales

² Legislation.gov.uk (2023) Social Partnership and Public Procurement (Wales) Act 2023

³ Brookdale Consulting (2022) Welsh Public Sector Food Procurement



The [Courgette Pilot report](#)⁴ published in 2023, showed it was possible to get Welsh agroecologically produced vegetables into primary schools in Wales. The learnings and relationships formed, evolved into **Welsh Veg in Schools**, which in 2025 is now working with fifteen small scale growers to get a variety of organic vegetables into primary schools across twelve Local Authorities in Wales. It is a huge achievement.



Many of the key learnings came about when things didn't go to plan. In the words of a wholesaler involved

'Don't wait for perfect. Give things a try and you'd be surprised where it might take you.'

This report looks over the years 2023-2025 to show what happened; the benefits and the costs; the people and groups involved and the key roles they played. It also looks at the hard earned learnings, to show the processes that make local procurement of veg a reality. The report ends with a vision and recommendations for the future.

The expansion has been made possible by the hard work of all involved, particularly the growers; in kind support from Food Sense Wales, Castell Howell and Farming Connect Horticulture - Lantra, Welsh Government Backing Local Firms/ Foundational Economy, Bridging the Gap and Shared Prosperity funding made available through Monmouthshire Food Partnership. There was also beneficial co-working with other Welsh Government Backing Local Firms funded projects like DTA Wales and BIC innovation and also the Local Food Partnerships involved and other UK Bridging the Gap pilots.



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government



monmouthshire
sir fynwy

⁴ Food Sense Wales (2023) Courgette Pilot



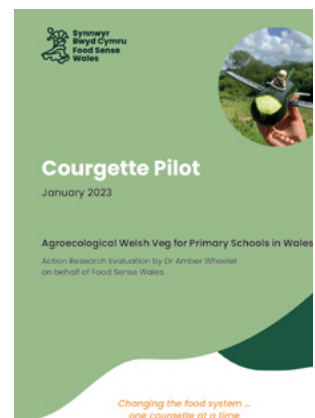


POLICY CONTEXT UPDATE

The policy context and rationale for increasing the amount of Welsh grown veg going into primary schools in Wales remain similar to that outlined in the 2023 [Courgette Pilot report](#)⁴ but there have been some changes worth outlining.

Increasing cost of a healthy diet

Healthy diets, of which fruit and veg should make up 40% by weight, remain less affordable than unhealthy diets. According to the most up to date data, households on the lowest income with children in the UK now have to [spend 70%](#)⁵ of their disposable income on food to afford the government recommended healthy diet. We know that [28% of children in Wales live in relative poverty](#)⁶ and so are likely to be struggling to afford to eat enough fruit and veg and in 2023, UK household purchases, due to rising costs of living, had fallen to their [lowest level in 50 years](#)⁷.



⁵ Food Foundation (2025) The Broken Plate Report 2025

⁶ Welsh Government Relative income poverty: April 2021 to March 2022

⁷ The Food Foundation (2023) Cost of living crisis results in lowest vegetable purchases for 50 years



Looking after our future generations

The [Well-being of Future Generations \(Wales\) Act \(2015\)](#)⁸ continues to set a welcome overarching facilitative context but this has been further solidified by the Future Generations Commissioner 2023-2030 strategy '[Cymru Can](#)'⁹ which highlights food as a focus. The report says "Wales needs a resilient, long-term plan that shifts agricultural impact towards having a positive outcome on climate and nature restoration, ensuring safe, affordable, healthy diets for people, especially children."



From 2024 [Free School Meals](#)¹⁰ became available to all primary school children in Wales, providing a fantastic opportunity for children to get a nutritious meal funded by the Welsh Government at the same time as investing in the development of local sustainable farming and food supply chains. [The Healthy Eating in Schools \(Nutritional Standards and Requirements\) Regulations 2013](#)¹¹ that govern the food and drink that children and young people can choose from in primary and secondary school are currently being reviewed. The proposed changes may require Local Authorities to serve two portions of veg in primary school meals as standard, rather than one.



⁸ Well-being of Future Generations (Wales) Act 2015

⁹ Future Generations Commissioner Strategy 'Cymru Can' (2023-2030)

¹⁰ Welsh Government (2024) Universal Primary Free School Meals

¹¹ Legislation.gov.uk (2013) The Healthy Eating in Schools (Nutritional Standards and Requirements) (Wales) Regulations 2013





The role of the public sector to lead by example

A 2024 [Independent Review into Public Sector Food Procurement](#)¹² in England has called for mandatory environmental and nutritional standards to extend across the whole of the public sector, and be properly monitored for compliance. It has also called for an increase in school food funding, and more inclusion of farmers and small and medium enterprises in being able to access opportunities for supplying food and drink to the public sector. On top of this all the major UK political parties have made some commitments to sourcing local and sustainable food, including Labour, [who set out in their manifesto](#)¹³ to source at least 50% 'local or sustainable' food for the public sector.

The [Social Partnership and Public Procurement \(Wales\) Act 2023](#)² is now law. A contracting authority must seek to improve the economic, social, environmental and cultural well-being of its area by carrying out public procurement in a socially responsible way. Contracts are now being awarded based on criteria that include a social value component and this typically forms 5-15% of the scoring for a tender, with quality and price still making up the highest scoring component. Nevertheless, social value is now influencing tender processes in Wales. How social value is defined by Local Authorities is currently quite broad with local and fair employment a key factor, although any aspect that helps deliver on the objectives of the Well-being of Future Generations Act could go towards social value scoring, including educational activities and biodiversity gain.



¹² Independent Review into public sector food procurement (2024)

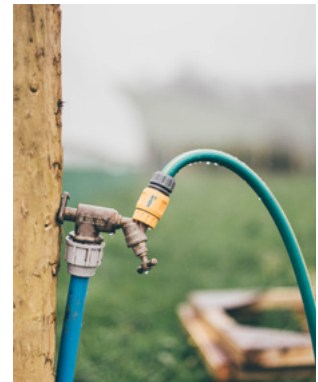
¹³ Sustain (2024) 2024 Political Manifestos



Mitigating and adapting to climate change

The impacts of climate change worldwide continue to be felt with Defra stating in their [2024 Food Security report](#)¹⁴ that 'Significantly, the UK is largely dependent on a few key countries for its imports of fresh fruits and vegetables, creating regional supply risks such as extreme weather events associated with climate change.'

The Welsh Government has committed to try to achieve [Net Zero carbon emissions by 2050](#)¹⁵. As such all public bodies are encouraged to report annually on carbon emissions. Data from the [Welsh Government Energy Service](#)¹⁶ in 2023 shows that the carbon footprint for the 22 Local Authorities of Wales was around 1,374 kt CO₂ e. Of this, the Supply Chain (67%) was the key contributor. The most recent UK Carbon budget report [by the Climate Change Committee \(CCC\)](#)¹⁷, on progress to reduce emissions, says that to meet legally binding climate change commitments, agriculture must reduce greenhouse gas emissions by 39% by 2040. Anything that Local Authorities and agriculture can do to decrease carbon footprint should be seriously considered.



¹⁴ Defra (2024) United Kingdom Food Security Report 2024: Theme 2: UK Food Supply Sources

¹⁵ Welsh Government (2021) Climate change targets and carbon budgets

¹⁶ Welsh Government Energy Service (2024) Net Zero Reporting Welsh Public Sector 2023 Carbon Emissions

¹⁷ Climate Change Committee (2025) The Seventh Carbon Budget

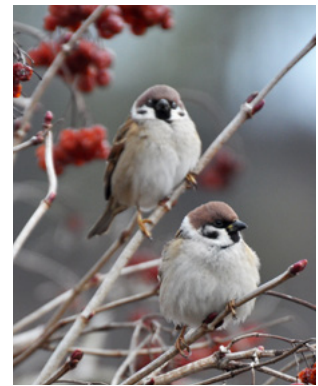




Reversing biodiversity loss

The [Environment \(Wales\) Act 2016](#)¹⁸ aimed to reverse the decline in biodiversity. Among other things, it placed an enhanced duty for biodiversity and resilience of ecosystems on public authorities. Data released in 2025 by an [Audit Wales Committee](#)¹⁹ shows that Welsh wildlife has decreased on average by 20% between 1994 and 2023. And around 1 in 6 Welsh species were at risk of extinction in 2023. Audit Wales also found that half of public authorities had not complied with the requirement to both prepare and publish a biodiversity plan and a quarter have at no point complied with the requirement to publish a biodiversity report and that overall the nature emergency has not been given high enough priority by Local Authorities.

In the summer of 2025 a new biodiversity [Bill is set to be introduced into the Senedd](#)²⁰ that will establish an environmental governance body for Wales and introduce statutory duty and targets to protect and restore biodiversity. The body will oversee compliance with environmental law by Welsh bodies, meaning it will become more important for Local Authorities to be able to prove environmental improvement and positive impact on biodiversity. Buying organic certified produce is an evidence based way of guaranteeing and quantifying biodiversity gain.



¹⁸ Legislation.gov.uk (2016) Environment (Wales) Act 2016

¹⁹ Audit Wales (2025) The nature emergency has not been a high enough priority

²⁰ Welsh Government (2024) Securing a Sustainable Future Environmental Principles, Governance and Biodiversity targets



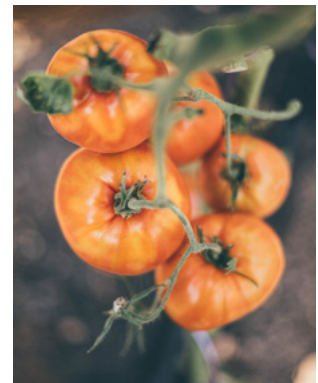
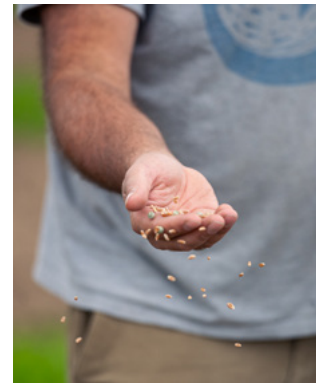


The decline and resurgence of Welsh Horticulture

Horticulture has been named as a key area of development for agriculture by the Welsh Government. A [Written statement](#)¹ by the Deputy First Minister and Cabinet Secretary for Climate Change and Rural Affairs, and the Cabinet Secretary for Economy, Energy and Planning says that *“Our ultimate goal is to foster a larger, vibrant horticulture sector through a balanced approach that integrates planning with other supportive initiatives, driving sustainable growth and innovation in the industry.”*

The First Minister of Wales [noted in the Senedd](#)²¹ in December of 2024 that *“**Welsh Veg in Schools** we should be very proud of across six Local Authorities in Wales. The joy of it is that it links up the local agricultural communities and growers locally. Things are improving but there is a long way to go.”*

In January of 2023 the Courgette Report⁴ showed that the hectares growing veg and salad in the open in Wales was at an all time low. Since, and perhaps because of Welsh Government support for initiatives like Welsh Veg in Schools, Farming Connect Horticulture and others, as well as Horticulture Development Grants - this trend shows signs of reversing with a 20% increase over the last two years. Although starting from a lower level and having seen a modest increase, this trend is notably different from the UK in general which continues to see a decline in land area to field veg, a 10% decline from 2021-2023.

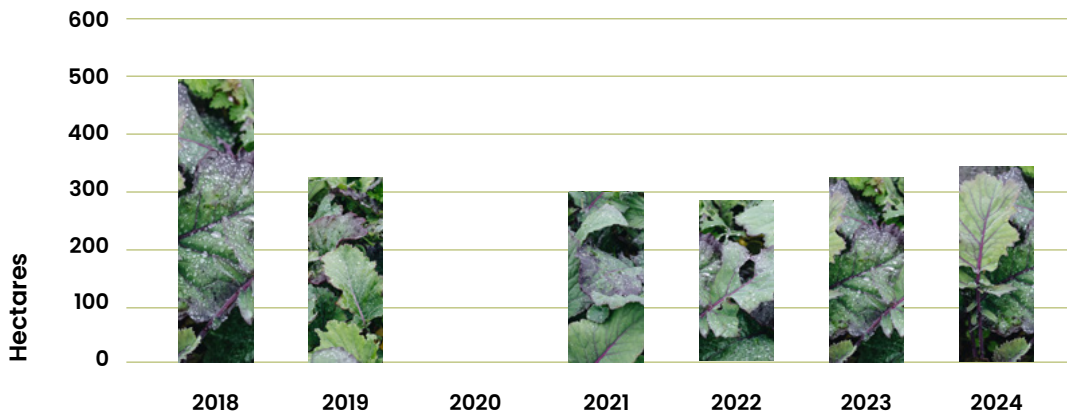


²¹ Senedd.tv (December 3rd 2024) Eluned Morgan First Minister in Plenary



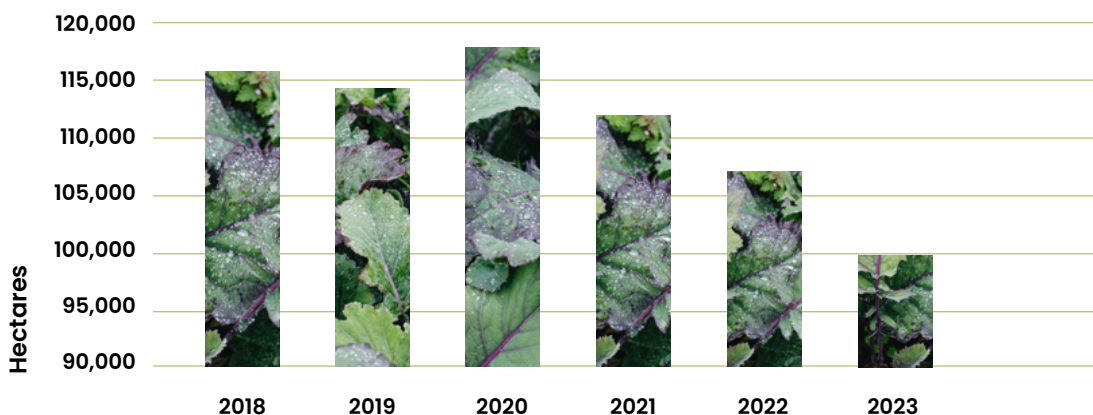
Land area to veg Wales 2024²² in hectares

Year	2018	2019	2020	2021	2022	2023	2024
Hectares	499	325	n/a	298	288	319	344



Land area to veg in the UK [Defra Horticulture statistics 2023 updated 2024](#)

Year	2018	2019	2020	2021	2022	2023	2024
Hectares	115,938	114,513	118,131	112,220	107,155	100,067	n/a



²² Welsh Government (2024) Survey of Agriculture and Horticulture





The number of fruit and veg producers in Wales has also increased dramatically, by **146%** over the last four years, from **204 in 2020**²³ to **502 in 2024**²⁴.

Further work by Welsh Government to support Welsh Horticulture through the Wales Horticulture Alliance group and the Wales Horticulture planning working group to address planning policy barriers set out in the report on [Barriers to Small Scale Horticulture Development in Wales](#)²⁵ could well help the sector grow in the future. There is also a real opportunity for the Sustainable Farming Scheme, through the Optional and Collaborative layers, to support the development of horticulture further and build resilience.

Professor Tim Lang in his [2025 report](#)²⁶ for the National Preparedness committee 'Just in Case: 7 steps to narrow the UK civil food resilience gap' has a chapter dedicated to horticulture, supply chains, Sustainable Food Partnerships and civil society. It highlights as good practice in building food resilience 'Lessons for resilience from the decline and renaissance of horticulture in Wales.' One of the aspects it highlights is the great collaborative work going on in Wales around horticulture.



²³ Tyfu Cymru (2020) Welsh Fruit and Veg Production – Baseline Study

²⁴ Farming Connect Horticulture Lantra according to database 2024, direct communication

²⁵ Food and Drink Wales (2024) Barriers to small scale horticulture development in Wales

²⁶ Tim Lang (2025) Just in Case Report: narrowing the civil food resilience gap



STRUCTURE OF WELSH VEG IN SCHOOLS

Welsh Veg in Schools is co-ordinated by Food Sense Wales in partnership with growers, Castell Howell (the wholesaler) and Farming Connect Horticulture (Lantra). It works closely with Local Authorities and Sustainable Food Partnerships to develop a supply of veg that works for all. It is based on developing relationships across the supply chain and scaling local supply and demand simultaneously.

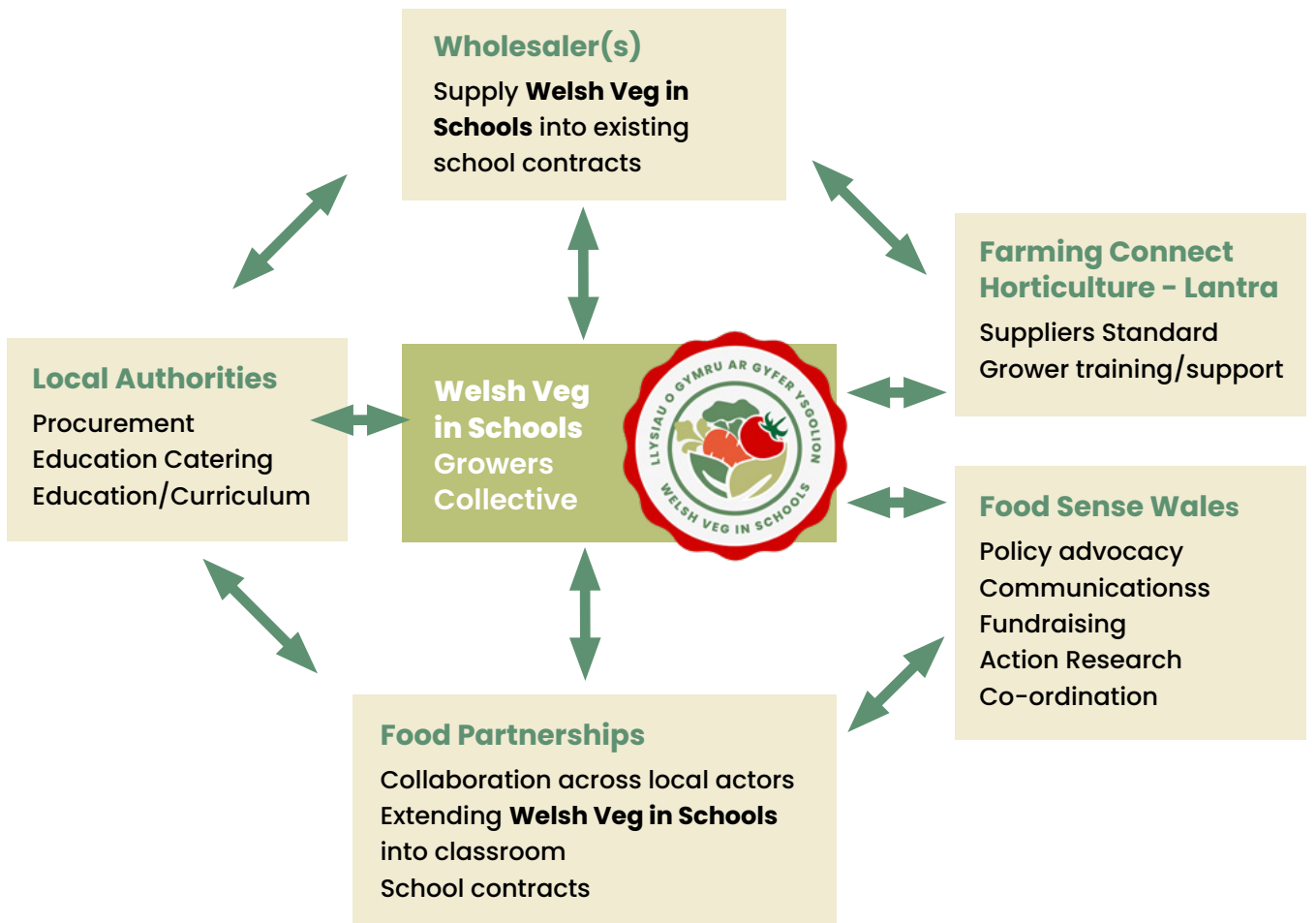
At its heart is the belief that risk should be shared across the supply chain. Local growers and their needs are at the core, and as one grower said,

'I feel championed by Welsh Veg in Schools.'

A Local Authority catering manager also highlighted

'It's good to have a personal connection to the growers as they are the hardest working part of the project. They need recognition and play a massive part. It's good for caterers and Local Authorities to see the faces of the people on the front line.'





Growers meet on a three-weekly basis and a steering group of key stakeholders, including growers, meets monthly.



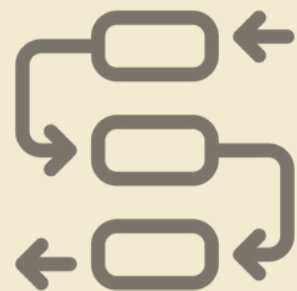


WHAT ARE THE PRACTICAL STEPS WE NEED TO TAKE TO MAKE THIS HAPPEN?

To make this happen, we need an enabling policy context in Wales and collaboration across the supply chain with the farmers and growers at its heart.

Get the process right: a recipe for a success

- Start small
- Get the right people in the room together and start building relationships
- Make sure everyone is agreed that sharing risk across the supply chain is key and in practice this means agreeing to pay growers a fair price
- Align planning timelines of caterers with the growing season
- Grow what procurers want to buy and move forwards from there to support them to procure what can be grown profitably
- Research and evaluate as you go and continually feed in learning





THE BENEFITS OF LOCAL ORGANIC SUPPLY

The benefits of increasing sustainable, local organic production of veg in Wales at the same time as displacing imported and often frozen produce with unknown sustainability credentials, normally served to children in Wales, are significant and quantifiable.

Why organic and not just local?

Locally grown food whilst always investing in local supply systems and farmers, doesn't always lead to positive environmental and health benefits.



A lower carbon footprint compared with non-organic

Production that uses imported artificial fertilisers and synthetic pesticides has a high energy demand and therefore high carbon footprint. In the broccoli case study that follows, England industrially produced fresh, compared to Welsh organic fresh, has a three times higher carbon footprint, mainly due to fossil fuel derived fertilisers, particularly ammonium nitrate, which leads to significant N₂O emissions.

Higher biodiversity levels and lower pesticide residues

Production with pesticides also **often reduces biodiversity**²⁷ in the surrounding area due to **non targeted use** and it has the potential to pollute rivers.

²⁷ Rhymes, J., Stockdale, E., Napier, B., Williamson, J., Morton, D., Dearlove, E., Staley, J., Young, H., Thomson, A., Evans, C. (2023) The future of UK vegetable production – Technical Report



Pesticide residues

There are also often pesticide residues on veg from conventional types of production systems. According to a recent [review of Pesticides impacts on human health and the environment](#)²⁸ acute and chronic health effects from artificial pesticides and dietary exposure are serious public health concerns, especially in developing countries. They outline that pesticides produce different types of toxicity, for instance, neurotoxicity, mutagenicity, carcinogenicity, teratogenicity, and endocrine disruption.

According to a 2020 [WHO and United Nations Environment Programme report](#)²⁹, worldwide, three million people are poisoned and 200,000 die due to exposure to pesticides, mostly in developing countries. Reducing pesticide use in production both here in the UK and overseas is therefore likely to be beneficial both to the environment and human health.

Looking at broccoli as an example, the most recent [2025 Pesticide Residues in Food report](#)³⁰ by Defra found 10 different pesticide residues in the 33 samples tested (although none were above the Maximum Residue Level deemed unsafe for consumers by Defra):

Acetamiprid, azoxystrobin, chlorate, clopyralid, difenoconazole, Fosetyl-Al, Fosetyl-Al, fluopicolide, metalaxyl, propamocarb and Spirotetramat.

All of the frozen broccoli samples, from the UK and EU, contained pesticide residues, no residues were found in the one UK fresh sample tested but just under half of the EU fresh samples contained residues.

Replacing frozen broccoli with fresh Welsh organic is likely to reduce exposure of farmers to pesticides and reduce ingestion of pesticide residues by consumers.



²⁸ Md Faruque Ahmad, Fakhruddin Ali Ahmad, Abdulrahman A. Alsayegh, Md. Zeyauallah, Abdullah M. AlShahrani, Khursheed Muzammil, Abdullah Ali Saati, Shadma Wahab, Ehab Y. Elbendary, Nahla Kambal, Mohamed H. Abdelrahman, Sohail Hussain (2024) Pesticides impacts on human health and the environment with their mechanisms of action and possible countermeasures, Heliyon, Volume 10, Issue 7.

²⁹ W. Boedeker, M. Watts, P. Clausing, E. Marquez (2020) The global distribution of acute unintentional pesticide poisoning: estimations based on a systematic review. BMC Publ. Health, 20 (1) (2020), pp. 1-19.

³⁰ Defra (2025) Pesticide Residues in Food



Checking production methods and outcomes

If we want local production to also enhance the environment in Wales, there needs to be some sort of check of production methods or environmental outcomes achieved on farms. Currently a pragmatic way to do this is through organic certification, another way might be to do a comprehensive on farm sustainability audit like the [Global Farm Metric](#)³¹.

[Organic farming](#)³² works to a set of standards, which must legally comply with EU regulation, to ensure the health of soils, ecosystems, animals and people are sustained. In practice for veg production this means no artificial fertilisers, no pesticides (key drivers of biodiversity loss) and no genetically modified inputs.

The benefit of requiring producers to go through organic certification is that, without having to spend time collecting sustainability metrics, certain sustainability benefits are well researched and documented and can be attributed to organic produce. [Cool Food Pro](#)³³ is a carbon savings calculator tool designed for the catering sector to calculate environmental impact. It has been used here to calculate the carbon saving made when local organic produce replaces worldwide and European non-organic:

Quantifying the benefits of Welsh organic veg

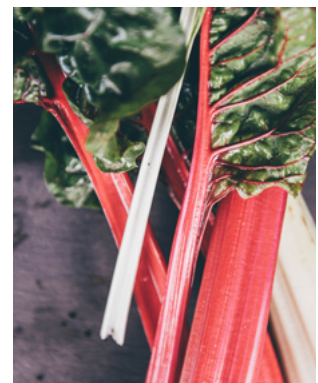
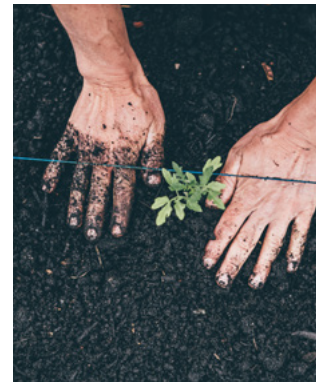
It is estimated that the 14 tonnes of organic veg produced for **Welsh Veg in Schools** in 2024, which supplemented non-organic produce from overseas, achieved the following:

1. Carbon

Saved at least 3 tonnes of CO₂ e.

This may be more if you factor in the fresh veg which replaced frozen (generating high levels of carbon due to the energy required for freezing and transportation of frozen food), like broccoli and carrots, as highlighted by by the broccoli case study that follows. This indicated that Wales organic broccoli is likely to have a 66–83% lower total carbon compared to usual supply.

Carbon saving does not amount to Net Zero and more could be done to decarbonise supply chains and horticultural production like complimentary suggestions proposed by [Clo Carbon Cymru](#)³⁴.



³¹ The Global Farm Metric (Accessed 2025)

³² Soil Association (Accessed 2025) What is organic?

³³ Cool Food Pro Calculator (Accessed 2025)

³⁴ Clo Carbon Cymru (2024) Carbon Dioxide Removal An Equitable Pathway for CDR in Wales



The case of frozen versus fresh organic broccoli

As part of the family of Backing Local Firms funded projects BIC innovation worked with Welsh Veg in Schools by organising a life cycle assessment (LCA) study by Swansea University to compare the carbon footprints of organically produced broccoli in Wales, UK, with those from larger-scale commercial production routes. It found that Wales organic broccoli expects 66–83% lower total carbon compared to best-case and worst-case scenarios.



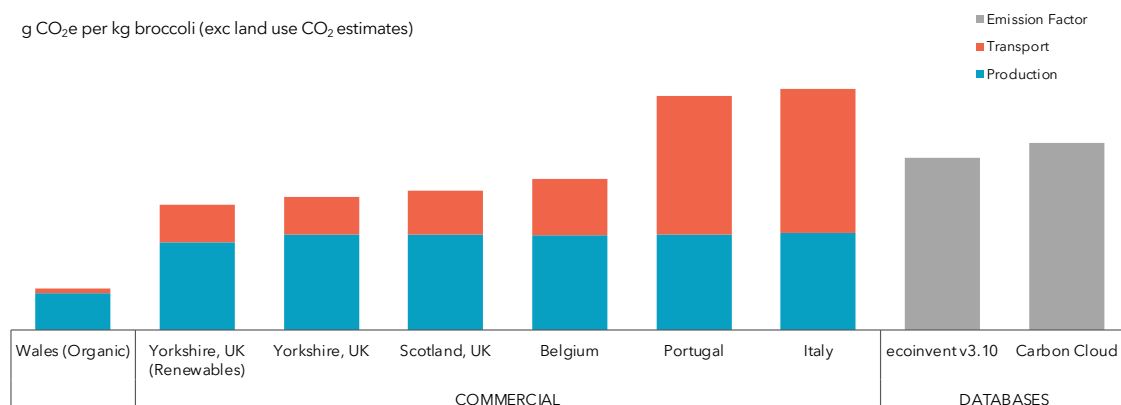
Results – core scenarios

Wales organic broccoli expects 66–83% lower total carbon compared to best-case and worst-case scenarios (56–75% inc. land use CO₂ estimates).

Transport impacts are 87–97% lower.

Production impacts are +57% lower carbon compared to industrial broccoli.

g CO₂e per kg broccoli (exc land use CO₂ estimates)



This provided preliminary carbon footprint insights and is a guide for future improvements in climate change practices related to broccoli production. It employs numerous estimates and assumptions, lacks a critical review, and does not include comprehensive reporting. The findings are not intended for large-scale decision-making but as an initial step towards more comprehensive assessments.





2. Biodiversity

Increased biodiversity by 35% (as measured by birdlife in fields)

3. No pesticide residues

Had no synthetic pesticides residues on veg eaten by children

4. Resilience

Invested £34,333 in Welsh production to build supply capacity going forwards.

Average Income for growers per tonne	£ 2,452.39
Average income for growers per hectare	£ 44,143.00



Eight production businesses were supported in Wales to expand production and links were made across the supply chain to build relationships for the future.

'... that's £34,000 that stayed in Wales'

Wholesaler

According to the New Economic Foundation's [Farmer Focussed routes](#)³⁵ to markets evaluation, using evidence from Growing Communities, a slightly different model with mainly direct sales and not sales into schools,



for every £1 spent on produce, £3.70 was gained in social, environmental and economic benefit.

Assuming this multiplier as an indication for Welsh Veg in Schools impact, £34,333 would provide an estimated £127,034 of gain. This is a rough indication and more analysis is needed. The Welsh Food Index tool may be of use in future to test local economic gain.

£34,333 = an estimated £127,034 social, economic and environmental benefit



³⁵ NEF (2020) Farmer Focussed routes to markets evaluation



5. More jobs on farms

Number of jobs in Wales supported directly on farms from 14 tonnes of Welsh produce (see technical report)=

**1.2 FTE (Full Time Equivalent) total jobs /
0.08 FTE jobs per tonne**

(varies with mix of veg grown/purchased)

1.5 FTE per hectare (assume average of 18 t/ha).

This is lower than the 3.2 figure used in our [previous modelling](#)⁴, it is based on data from Welsh veg in Schools to date and probably more realistically reflects the mix of horticulture production we are looking at Wales for market garden and field scale supply into procurement. The average FTE farm labour per hectare in Wales (total agricultural land 1,775,205 divided by total labour 49,538) is 0.03 so 1.5 is still over fifty times more labour required than average for agriculture in Wales.



6. Increasing farming income in Wales

In general farmers have low incomes. Although often having capital, which can't be sold if you want to continue to farm, a farmer in Wales has an average annual income of around £19,847 (from [Farm Business Income](#)³⁶ data - see technical report). The median net income in Wales is around £29,097 so comparatively speaking farmers have a low income, even more so when hours worked are factored in (often at least double of the average working week).

Farmers earn around 73% of the median net income, and although this doesn't necessarily put farmers into the relative poverty bracket (60% of the median household income) it's not far off. Increasing incomes of farmers through diversification into veg production has the potential to increase farm income overall at the same time as increasing jobs on farms and supporting the other benefits of sustainable local production and supply.

To be clear though, veg production businesses often have low net incomes too because labour costs are high and infrastructure and set-up costs are high (e.g. for a 1.2 hectare market garden operation the set-up costs are estimated to be [£75,120-£152,600](#)³⁷).

³⁶ Welsh Government (2025) Farm incomes: April 2023 to March 2024

³⁷ New Landworkers' Alliance (2020) Entrants to agroecological farming





However with the right support, adding horticulture to a farm business has the potential to significantly increase farm income and employment.

Incomes across the food sector are generally low and [data from 2023](#)³⁸ shows that 25.8% of households with a food sector worker experienced food insecurity. All food sector workers, including farmers and growers, would benefit from receiving the Living Wage Foundations UK Real Living Wage (currently £12.60).



Nutritious fresh local produce

Castell Howell arranged for three samples of carrots to be tested nutritionally, two from growers involved and one from their usual supply chain and the results provide an indication of nutritional content (See Appendix 2). This was by no means a comprehensive study and results should be treated with caution but both samples of Welsh grown organic carrots had higher levels of potassium, which supports healthy blood pressure and muscle function, and one Welsh sample had notably higher levels of magnesium which contributes to bone health and energy production. It would be useful to do more comprehensive nutritional content monitoring and it is recommended that this should be planned for the next growing season. It is costly but it would be worth having the data going forwards.

³⁸ The Food Foundation (2023) New data shows UK essential workers face devastating food insecurity levels



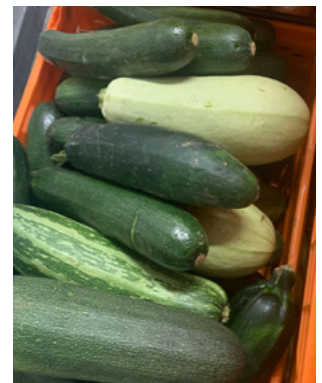


THE COST BENEFIT SUMMARY

Organic veg is not always more expensive

Out of twelve organic vegetables supplied in 2024, compared to the prices across four different Local Authorities were paying through different wholesalers, three were **consistently cheaper: courgettes, chard and kale (and sometimes leeks)**. These are however not veg that are often bought for schools. Adding more of these to school menus as a replacement for other veg, perhaps in sauce based meals, would deliver the benefits that come with supporting local organic farming, without increasing cost.

One quarter of Welsh organic veg is consistently cheaper than prices Local Authorities usually pay, but schools don't usually buy those types of veg.



Variation in prices across Local Authorities and wholesalers

When you look across what different Local Authorities usually pay for veg from different wholesalers and compare that to the organic prices there is great variation. This is partly due to margins that have to be put on by the wholesaler which are influenced by size of deliveries and distribution of schools. Three wholesalers had Local Authority prices that were on average 12-29% cheaper than the organic price paid to growers for comparable veg.

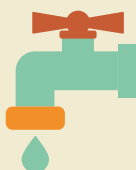





Organic veg at a 25% discount

Local Authorities paid in total £25,665.72 for organic veg through **Welsh Veg in Schools** in 2024, which cost the wholesaler £34,333.41 in reality (33% more). **Welsh Veg in Schools** paid the wholesaler 'the gap' of £8,667.70. The wholesaler didn't add an extra mark-up on the cost of the organic veg. Effectively Local Authorities received the organic veg at a 25% discount.

The extra £8,667.70 enabled:

- **14 tonnes** of veg to be purchased from **8** Welsh organic producers giving them an income of **£34,333**
- An estimated **£127,034** of social, economic and environmental benefit to Wales
- Greater resilience of supply
- **3 tonnes** saving of CO₂e equivalent
- **35%** increase in biodiversity
- **1.2 FTE jobs** on farms
- Less reliance on imports from climate vulnerable countries



This at the same time as providing organic produce to children, grown in Wales and strengthening their connections with where their food comes from.

This 33% extra for organic veg represents the extra cost in 2024 but this may change with time if imported veg prices increase, for instance due to climate change and political changes/instability as was seen during the cost of living crisis peak in 2023. The costs of organic production in Wales may also decrease with potentially greater investment in infrastructure and scale, although a main aspect of organic production involves labour which enables the environmental and biodiversity gains, and this is unlikely to change significantly. Assessing the gap in price will be ongoing.



To illustrate the impact of the price gap it is helpful to consider a series of scenarios, based on the evidence we have collected to date. How much might it cost to increase the amount of organic veg in primary school meals and what benefits would it bring?

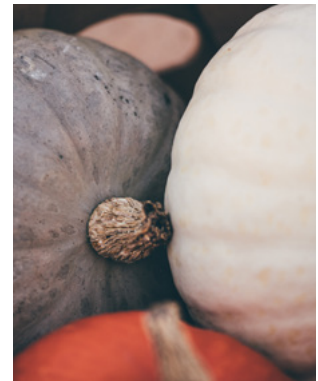
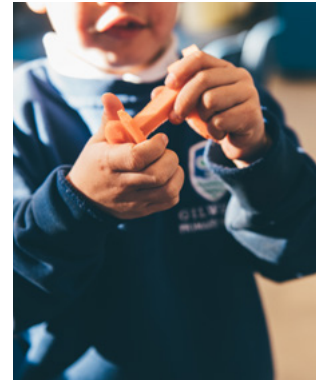
Scenario 1 – 3.3p extra per meal

At present, the Welsh Government provides Local Authorities with £3.20 per pupil to fulfill the Universal Primary Free School meal commitment. Of the 31.5m meals estimated to be served per year to primary school children, around 23.2m of these would be funded at the Welsh Government £3.20 rate and the rest funded through the Local Authority who set an internal rate which varies, but is estimated to be on average £2.45 per pupil³⁹. This means that on average the budget available for primary school childrens meals in Wales is £3.00.

Around 76% of the cost a meal is spent on covering overheads and approximately **24% on the food for the meal**⁴⁰ meaning that, if we take £3.00 as the amount of money per meal, in reality around 72p per meal is spent on food. According to Local Authorities involved in Welsh Veg in Schools around 10p per meal is spent on veg or 14% of the cost of the food. This 10p per meal is providing the current nutritional guideline amount of one portion of veg per primary school meal, with the size of the portion varying from 42–70g, and with some Local Authorities serving up to two portions per meal and paying more.

Increasing the 10p by 33% (the extra cost of Welsh organic veg) would effectively put 3.3p onto the cost of the veg and on to the meal. So, if a Local Authority paid 3.3p per meal more, around 1% more, they would be able to afford to support the purchase of local organic veg.

The Healthy Eating in Schools (Nutritional Standards and Requirements) Regulations 2013 that govern the food and drink that children and young people can choose from in primary and secondary school are currently being reviewed. The proposed changes may require Local Authorities to serve two portions of veg per meal as standard, rather than one in primary schools. If so, Local Authorities will likely be doubling the spend on veg to around 20p per meal and in which case the extra cost of the organic local veg would be 6.6p per meal.

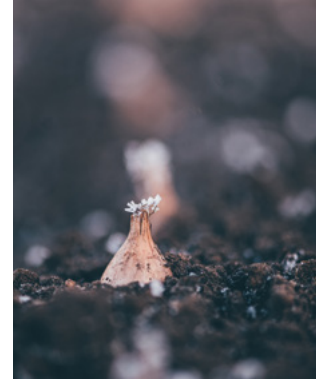


³⁹ Welsh Government personal communication 2025

⁴⁰ Wales Centre for Public Policy (2023) Understanding the cost of universal primary free school meals



However the reality is that Welsh veg will not be available for the whole year and some veg will likely need to be bought in. The Welsh growing season is not year round, and without ways to extend the season like processing and freezing (which will hopefully become more possible as volumes increase), July to December and possibly through to March is the main window of supply (34 weeks). Part of that time schools are on holiday (10 weeks), though there are Food and Fun programmes which serve meals in the summer holidays albeit to lower numbers of children, meaning that supply is mainly possible for only half the year. The implication is that if the increase on meal price was 6.6p it would only need to be for half the year, or to spread the cost across the whole year it would be half of 6.6p for the full year = 3.3p per meal.



Comparison

£3.00 per meal means

- No support for Welsh veg production
- No building capacity for future supply
- No resilience from having stronger local supply chains
- No support for Welsh jobs on farms
- No increase in farm incomes in Wales
- No carbon reduction
- No biodiversity gain
- Potential pesticide residues on veg and run-off in country of origin
- Reliance on imports from climate vulnerable countries



£3.033 per meal (3.3p extra) means

- Support for Welsh production (around £2,500 per tonne) and increased capacity and resilience to supply into the future
- More jobs on Welsh farms (0.08 FTE per tonne)
- Increased farm income average across Wales
- Increased resilience to supply in future
- Carbon saving in the supply chain (0.25 Kg CO₂ e per kg depending on veg purchased)
- 35% increase in birdlife in fields
- No synthetic pesticide residues
- Less reliance on imports from climate vulnerable countries



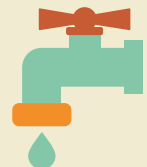


Scenario 2 – Local Authority serving 10,000 meals a day

If a Local Authority would like to support the purchase of local organic and sustainable veg and the benefits it brings to Wales then they could consider putting an extra 3.3p per meal into the pot towards sustainable Welsh produce.

For a local Authority that serves 10,000 meals a day for a year, paying for two portions of veg to be Welsh organic for half the year, would equate to paying an extra £65,000 from a £5.85 million budget for meals annually (1% of their overall budget). In turn this would provide:

- **106 tonnes** purchased providing **£260,000** direct to Welsh producers with a multiplier of 3.7 to give an estimated **£962,000** in social, economic environmental benefit
- Increased capacity to supply into the future and increased average farm income
- More resilience in supply chain
- **8.7 FTE jobs** on Welsh farms
- **26.6 tonnes** CO₂ e Carbon Saving
- **35% increase** in birdlife in fields
- No pesticide residues
- Less reliance on imports from climate vulnerable countries

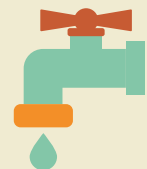




Scenario 3 – 50% of schools veg requirement as local and organic

We think that Wales could be producing 50% of schools veg requirements. If Local Authorities and Welsh Government worked together to increase the primary school meals budget by 1%, by adding just 3.3p to the cost provided for a school meal, sustainable Welsh organic veg production would be incentivised. For 170,000 meals per day per year this would cost only another £1.1m per year on top of the average £99.5 million spent on average by Local Authorities (1%) but would incentivise the following benefits to Wales annually:

- **1802 tonnes** purchased providing **£4.42 million** direct to Welsh producers with a multiplier of 3.7 to give an estimated **£16.4 million** in social, economic and environmental benefit Increased capacity to supply and increased average farm income in Wales
- More resilience in the supply chain
- **149 FTE jobs** on Welsh farms
- **452 tonnes** CO₂e Carbon Saving
- **35% increase** in birdlife in fields
- No pesticide residues
- Less reliance on imports from climate vulnerable countries



The reality is it will take a while to get to the point where the production base and infrastructure are sufficient to be able to supply 50% of requirements. A shorter term more realistic goal would be to go for 25% of supply.

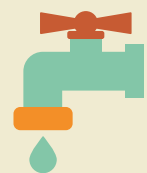
Scenario 4 – 25% of local organic veg by 2030

25% of organic Welsh supply would mean 1.7p per meal extra. However if you kept the 3.3p target until 50% is reached, the surplus 1.7p could go towards infrastructure development to make it possible to supply 50% after 2030.

If every primary school child who eats school meals has two portions of veg per meal (120g) and on average a quarter of that is Welsh organic, this would bring:

25% of Veg Welsh organic: Cost benefits

- **901 tonnes** purchased providing **£2.21 million** direct to Welsh producers with a multiplier of 3.7 to give an estimated **£8.2 million** in social, economic environmental benefit
- Increased capacity to supply and increased average farm income in Wales
- More resilience in the supply chain
- **74.3 FTE jobs** on Welsh farms
- **50 hectares** of veg
- **225.9 tonnes** CO₂e Carbon Saving
- **35% increase** in birdlife in fields
- No pesticide residues or run off
- Less reliance on imports from climate vulnerable countries



This could all be facilitated by adding an extra 1.7p per meal to the current average meal budget. Overall this would cost £552,500 on top of a £99.5 million average budget (0.5% extra). BUT we need to invest in infrastructure so we suggest that the 3.3p remains, even in the 25% scenario, which would provide in the region of £550,000 a year over the next 5 years to invest back into the supply chain. This could be the key factor enabling scale up and creating the resilient horticulture supply chain we are striving for.





Fair pricing

Growers for **Welsh Veg in Schools** in 2024 received the average wholesale price for organic veg for the previous year (based on average Soil Association wholesale prices). This represents a good price for growers as it includes a mark-up that would normally go to the wholesaler. However, given all the other hurdles faced by growers supplying **Welsh Veg in Schools**, (like implementing the Small Grower Supplier Standard, organic certification, and adjusting to a new supply with new infrastructure), the prices were only just high enough, compared to direct to consumer prices, to incentivise involvement.

When the supply chain is stronger and more developed and growers are in a more secure position to supply, it is suggested that prices move towards average organic grower prices and not wholesale price. This would mean that the wholesalers involved could start to put a mark-up on the organic produce, which they haven't done so far during the pilot phase, though they have benefitted from the social value being generated from the local produce in terms of delivering the social value element of contracts with Local Authorities. Another possibility



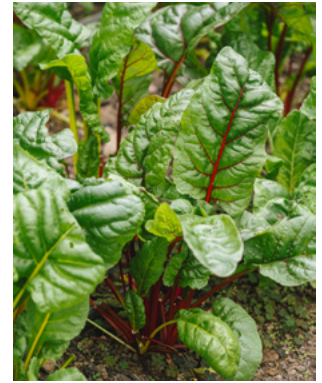
is that **Welsh Veg in Schools**, over time, becomes its own type of wholesaler and the entity is funded through the margin that would otherwise be going to another wholesaler.

'I'd like to think that when Welsh Veg in Schools has grown you could have your own open framework. It's not just locally grown organic. It's the education piece too.'

Local Authority procurement expert

It is recommended that over time the percentage discount currently being given to Local Authorities should be reduced in tandem with Welsh Government/Local Authorities upping the budgets very slightly, by 1% more (3.3p). This would provide the benefits highlighted and in effect would seal sustainable supply chain investment into the system, rather than it being added in by a project.

Other ways to make efficiencies include incorporating seasonal veg into menus that grow well in Wales and are more affordable than usual supply, like courgettes, kale and chard. Supply chain developments like storage, processing and freezing. The work of Carmarthenshire County Council and Bwyd Sir Gâr on the Future Generations Menu is exploring good practice on the development of seasonal and sustainable menus:





Bwyd Sir Gâr Food's Future Generations Menu⁴¹

Carmarthenshire County Council has launched a pioneering initiative to redesign school lunch menus using local produce, aiming to promote health and wellbeing, sustainability, social value and education. The Future Generations School Menu Project seeks to align public sector catering with both local and national policies, including environmental sustainability, rural economic growth, and net-zero targets.

The council has commissioned local not for profit Cegin Y Bobl to work with Primary schools across Carmarthenshire in co-creating the new menus. Catering staff, food producers and growers, teachers, parents, and children are joining chefs and educators from Cegin Y Bobl to develop meals that reflect these core values. It builds on the strong foundations of the Future Generations Sustainability Framework, which enables Catering and Procurement Staff to analyse and score ingredients and products, combined with the data and intelligence on what can be grown sustainably and at scale here in Wales by **Welsh Veg in Schools**.

The project will also produce a **comprehensive recipe file, available as an open-source resource for other Local Authorities in Wales**. This will provide a blueprint for schools across the country, helping them integrate sustainable food practices and support local economies while achieving positive environmental and social outcomes.

Carmarthenshire County Council's Cabinet Member for Cabinet Member for Rural Affairs, Planning and Community Cohesion, Cllr Carys Jones , said:

"This innovative project not only supports the health and wellbeing of our young people but also encourages sustainable practices and strengthens our local economy. It's an important step in making Carmarthenshire a leader in responsible public sector catering."

By re-designing the menu this way, when complete, we'll be able to model the demand for Welsh organic veg, if and when other Local Authorities implement the Future Generations Menu in Primary Schools across Wales.

The initiative is funded by the Welsh Government through the Backing Local Firms and Innovation Funds and is part of Carmarthenshire County Council and Bwyd Sir Gâr Food's broader commitment to local, sustainable and healthy food.

⁴¹ Bwyd Sir Gar (Accessed 2025) Future Generations Menu





VISION

25% of veg in schools Welsh organic by 2030

3.3p extra on the cost of a school meal taking it up to £3.033 on average, could provide nearly 50% of the 2 a day veg requirement for primary school meals in Wales, from organic growers in Wales, bringing the following enormous social and environmental gains. It will however take time and investment to build the infrastructure for supply and so it is recommended that instead an interim aim is set for 25% of veg from Wales by 2030, meaning only 1.7p extra per meal is needed in the short term. The other 1.7p (£552,500 per year) should be put towards building infrastructure to build towards 50% supply post 2030.





Achieving the vision - 25% by 2030

Adding 3.3p per meal per day to the price paid by Local Authorities and Welsh Government would allow for **2 portions of local organic veg** to be included seasonally and would incentivise the following benefits:



901 tonnes purchased would provide **£2.21 million** direct to Welsh producers with a multiplier of 3.7 to give an estimated **£8.2 million** in social, economic and environmental benefit



£552,500

investment in infrastructure




Increased capacity to supply and increased average farm income in Wales

More resilience in the supply chain

74.3 FTE jobs  on Welsh farms

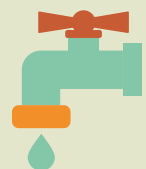
50 hectares of organic veg

35% increase in birdlife in fields 



226 tonnes CO₂e saving

Reduced reliance on imports from countries at high risk of water scarcity





CONCLUSION

Welsh Veg in Schools is continuing its mission with twelve Local Authorities involved in 2025 and aims to get more Local Authorities on board and work with more growers and wholesalers. The project continues to learn and build on these findings to innovate and develop procurement that enhances the well-being of people in Wales. With the right planning and significant investment in infrastructure, around 25% of all veg in schools across Wales could be Welsh organic by 2030 providing all the benefits outlined.



These are our recommendations to make that vision a reality:

Growers, convenors and wholesalers

- **Welsh Veg in Schools** sets up as an entity which supports growers, develops communication and systems, and links growers to the procurement market to create a Sustainable Welsh Veg landscape
- **Welsh Veg in Schools** continues to develop systems and investigates and researches farming, harvest, storage, packaging and logistics, and best practice for fresh produce
- **Welsh Veg in Schools** works with more wholesalers
- **Welsh Veg in Schools** models the infrastructure needed for the scaling up that's required and the investment needed to support it as soon as possible



Government and Local Authorities

- Welsh Government and Local Authorities look to add around 3p to primary school meal budgets (1% more than now) from 2026 for Welsh organic veg, and infrastructure development, because of the social, environmental and resilience benefits it brings to Wales
- Welsh Government supports **Welsh Veg in Schools** to continue to develop and innovate through the Foundational Economy and Integrated Natural Resources Scheme
- Welsh Government supports growers through the Sustainable Farming Scheme Optional and Collaborative layers
- Welsh Government continues to support the work of Farming Connect Horticulture to provide wrap around support and training to growers as well as horticulture infrastructure grants
- Welsh Government uses **Welsh Veg in Schools** as an exemplar case study of how procurement can enhance the well-being of the people of Wales in line with the Social Partnership and Public Procurement (Wales) Act 2023
- Local Authority kitchen waste disposal costs are looked at again to assess whether they are disincentivizing the use of fresh produce in kitchens and incentivising the use of pre-prepared foods



Local Authorities, schools and children as well as convenors

- Every rural Local Authority or region aims to have a demonstration horticulture farm which hosts a machinery ring, and perhaps other veg processing and storage facilities, that are maintained and available for the growers of that region
- Every child in Wales has the opportunity to learn about veg in school, has the opportunity to grow veg, prepare veg, try different veg and 'play' with veg. Schools should be supported to develop curricula and access resources accordingly through appropriate staff training (for example [Nutrition Skills for Life](#)⁴²) and the resources to implement
- Put children at the heart of increasing veg consumption. Build on the work and assets of [Veg Power](#) and [The Food Hour](#) and others to engage with children to understand their preferences; help with menu design, and encourage tasting new foods, in order to drive up consumption and reduce waste
- Every child in Wales should have the chance to visit a veg farm and meet a grower once during their primary school education and every school should have a growing space or access to one
- All school catering staff should be given the opportunity to be supported to develop veg skills and be empowered to 'get creative' with veg



⁴² NHS Wales (Accessed 2025) Nutrition Skills for Life



THANKS

A big thanks to **Welsh Veg in Schools** funders and all those involved in making **Welsh Veg in Schools** happen. The success of the project is down to fantastic collaboration across the food system and beyond.

To learn more see: [The Story of Welsh Veg In Schools](#)

Appendices are available [here](#) and calculations that form the basis of analysis in this document can be obtained by emailing a request to foodsensewales@wales.nhs.uk



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