



Courgette Pilot

January 2023

Agroecological Welsh Veg for Primary Schools in Wales

Action Research Evaluation by Dr Amber Wheeler
on behalf of Food Sense Wales

*Changing the food system ...
one courgette at a time*

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Summary

Key Stats



1 commitment to get Welsh veg onto children's plates

1 Food Partnership



1 Producer

1 Wholesaler 



29 Cardiff Primary schools 

29 schools provided with courgette activities

6 schools involving children in cooking with courgettes

7 schools doing 'Courgette Art'

90p a kg or **£900** a tonne

– the sustainable supply chain investment needed to make this happen

(the price difference between agroecologically produced courgettes and imported (56% more))

3 

weeks **Food and Fun** summer programme



Nearly **1 tonne** of courgettes through the supply chain

Nearly

1500 children



Summary

Key Findings

1. Building relationships between people in the supply chain is key
2. The distribution and storage network is already in place to supply schools with vegetables through wholesalers
3. Sympathetic wholesalers are able to de-risk the procurement process for producers
4. Producers benefit from guaranteed market and in those conditions can quickly up scale production
5. Wholesalers benefit by increased capacity to supply local produce
6. A quality assurance scheme for producers is key for minimising risk for the wholesaler
7. Supporting already stretched caterers and kitchen staff is key
8. More can be done to develop pre-prepared veg meals in bulk for schools that do not have kitchens
9. Engaging children and catering teams in the story of the veg is a key component
10. More farm visits would help
11. Welsh agroecological veg supply to schools is possible and beneficial





But

- Agroecological veg costs more than other and imported veg and if we are to invest in sustainable supply chains there is a cost. In this case (kindly paid for by the wholesaler) it was:

90p a kg or £900 a tonne

- This was the cost of investing in agroecological supply chain (the difference between £2.50, the UK average organic wholesale price¹ of courgette compared to the cheapest available wholesale price £1.60 = Plus 56%)

So

- School meals represent an opportunity for secure market for agroecological veg producers and could be used as a key mechanism for investment in vegetable supply chains in Wales.
- This would have the knock-on effect of developing a regionalised and resilient network of food producers able to supply veg into the heart of their communities.

To do this

- It will take a **sustainable supply chain investment scheme** that specifically targets the gap between cheapest available veg and sustainably produced Welsh veg².

¹ In this case the Soil Association wholesale price.

² This is a scheme that could be replicated in other sectors e.g. Sustainable Welsh beef and lamb supply into schools.

Some advantages are

1. It utilises the current infrastructure so there are no set up costs
2. It does not create perverse incentives to produce veg that has no market
3. It invests specifically in sustainable agroecological production and all the benefits it brings
4. It creates a clear audit trail for the investment with specific tonnages of veg to school children a measurable metric
5. It sets and drives standards up for supply into other markets





Next steps:

Pilot 2: from 1 to 10 tonnes

A scaled-up pilot with one or two additional Food Partnerships, more producers, more variety of produce, more schools and children and more engagement with them, including farm visits.



1 commitment to get Welsh veg onto children's plates



2 or 3 Sustainable Food Partnerships

More producers and potentially in different areas



1 or more wholesaler

10 tonnes of different varieties of veg

8 weeks of term time



100 Primary schools. **10,000** children

More co-working with catering staff

Involve children in recipe design

Farm visits

Veg activities linked to Veg Power and food education



Ultimate vision



Every primary school meal contains **2 portions** of agroecologically produced Welsh Veg



5331 tonnes secure market for veg is generated

100

businesses supported employing nearly

10000

people

£15 million sales for agroecological Welsh producers



Double the area of field veg produced in Wales (to 0.04% of total farmland)

Cawl onto school menus

Putting cawl or Welsh soup onto school menus every week or bi-weekly could be an element of the next pilot of the sustainable supply chain investment scheme. Agroecological Welsh lamb/beef and veg could be supplied into schools to make a vegetarian and a non-vegetarian Welsh soup. This could be done alongside a raft of education and cultural activities and farm visits that help build up engagement and stimulate consumption.

This sustainable soup could not only nourish the nation and build up an appetite for future healthy food but it could build the local economy at the same time as enhancing the environment.

A note on process – keys to success

Sustainable Food Partnerships – it is important to build relationships across the supply chain

Start small and work from there – find out what works and then scale up

Share the risk across the supply chain

Pragmatic approach and action research – be flexible and learn throughout

Background and Policy Context

Welsh public sector expenditure on food and catering amounts to £84.8 million per year (1). This is less than 1% of the £23 billion annual turnover of the overall Welsh food and drink supply chain (2). However, its importance lies not in its monetary value but in its potential to seed change.

In 2023 the Social Partnership and Public Procurement Bill (3) is likely to become law in Wales. This imposes a socially responsible procurement duty on public bodies to enhance the well-being of the people of Wales, in effect to generate 'values for money' not just 'value for money' (4).

Public food procurement can act as a catalyst for change. It can set the standards, create secure markets all year round, enable good quality jobs, help build infrastructure for developing new markets and thereby create a snowball effect – not just to catalyse production, but to drive standards to form the foundation for the transition to a more just and equitable food system.

Welsh Government is committed to improving the health of the nation (5) and, as part of the Co-operation Agreement with Plaid Cymru, is rolling out free school meals to all primary school children in Wales by 2024. This provides a fantastic opportunity to provide nutritious meals to primary school children across the nation at the same time

as potentially investing in sustainable Welsh production and supply chains.

This is at a time when the new Sustainable Farming Scheme (6) is also in development and Welsh Government recognises that food production is vital for the nation and that Welsh farmers should be world leaders in sustainable farming. It confirms that we need farmers to be working on farming systems that look after nature, tackle climate change and produce healthy food.

Welsh primary school age children need to be eating more veg for health, around 2 more portions per day³. If 2 portions of veg were served as standard in Welsh primary schools, as recommended by Peas Please (7), alongside other activities to increase consumption, and they were eaten, this action alone would help meet that target.

We grow only about ¼ of a portion of fruit and veg per head of population in Wales on 0.1% of available farm land (8) so land availability isn't the issue. It would only take 2% of land in Wales to grow 5 a day for everyone in Wales (9)⁴.

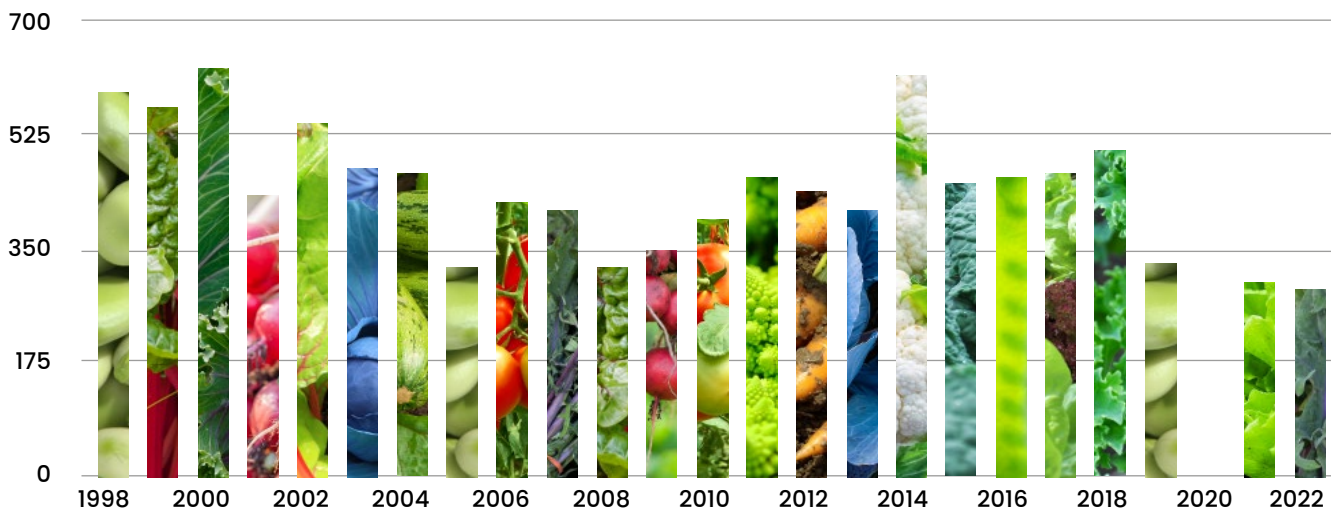
Horticulture is recognised as a key priority area for growth in Wales (10) and yet, according to the most recent Government Statistics (11), we are producing veg on less land⁴ than at any time in the last 20 years⁵.

³ Primary school children in Wales eat on average 1.5 portions of veg a day (7). The most up to date recommendations (14) recommend 3.5 portions of veg (and 3.5 of fruit making 7 a day).

⁴ Land is the best proxy for production at the moment as tonnage data is not routinely collected.

⁵ Veg is grown on 288 hectares out of 1,813,405 hectares of farmland in Wales (11), that's only 0.02% of land on a food that should make up at least 20% of our diets by weight.

Hectares of vegetables and salad grown in the open in Wales from Welsh Government Survey of Agriculture and Horticulture 2022



Welsh Government have been proactive and have addressed many barriers to increasing horticultural production and consumption. Examples include funding Tyfu Cymru, Horticulture Wales, putting in place a Horticulture Development Scheme and Horticulture Start-up Grants, funding Resilient Green Spaces and funding the Knowing to Grow project as well as Veg Power activities in primary schools. However, there is still more to be done.

Plenty has been written about and talked about the potential of the public plate to support and expand local fruit and veg production and supply chains (7). But, in reality and particularly in relation to fruit and veg, very little Welsh produce appears on menus in schools. Only 6% of fruit and veg purchased by the public sector in Wales is grown in Wales (1).

This frustration and a desire to just get on with it and try something out, combined with Castell Howell’s Peas Please pledge to help drive up veg consumption, led a group of supply chain stakeholders under the Food Cardiff banner and with the support of Food Sense Wales, to meet and plan a veg into schools pilot.

It was already a desired action in Food Cardiff’s Good Food Strategy 2021-2024 under the goal for ‘An environmentally sustainable Cardiff’ that ‘By 2024, pilot an environmentally sustainable food procurement initiative to increase local supply in at least one public sector body (for example in Food and Fun).’⁶



⁶ Creating Healthy and Sustainable Food Procurement Systems is also one of the 10 key actions in the Move More Eat Well plan, which is co-ordinated by Cardiff & Vale University Health Board and adopted by the Cardiff Public Services Board and the Vale of Glamorgan Public Services Board. In 2017 Cardiff City Council also made a Peas Please pledge to offer 2 portions of vegetables in school meals, which is reflected in Cardiff Council’s Food Strategy.

What happened?

In April 2022, [Food Sense Wales \(FSW\)](#) met with [Castell Howell](#), a Wales based food wholesaler, who had been a [Peas Please](#) pledger for many years, and a small scale agroecological veg producer called [Blas Gwent Veg](#) who had connections to the [Food Cardiff Partnership](#) and FSW through the policy work of the [Landworkers' Alliance](#).

They talked about what it would take in practice to get Welsh veg from agroecological producers onto Welsh school children's plates and into their tummies and decided on courgettes as a start and committed to a pilot. The aim was to tease out the challenges of getting veg through the system and consumed.

This led to more members of the Food Cardiff Partnership being brought in to explore what could be done to get veg into schools in Cardiff.

Why courgettes?

The decision to go with production of courgettes was a pragmatic one based on it being April when the pilot was initiated and the producer starting on a new bare growing site. Courgettes is a crop which can grow easily in Wales and is available in plenty during the summer.

The summer holiday [Food and Fun](#) programme was chosen because this provided the time for the crop to grow and an opportunity to trial veg going into schools on a smaller scale, to 29 schools in Cardiff taking part in the programme over a 3-week period. This represented enough scale to make the pilot feasible as well as worthwhile.



Courgettes wasn't necessarily the ideal choice in terms of children's familiarity but it represented a change in tactic towards orientating meals to what can be grown and is available in season in Wales.

At the initial April meeting, the producer was advised they shouldn't buy seeds yet as plans weren't confirmed. However, they knew that if they didn't buy seeds, then and there, that the courgettes would not be ready in time so they risked the £70 price of seed and bought and sowed them. Luckily the second meeting with a broader group of stakeholders from the Food Cardiff Partnership confirmed the pilot would go ahead in Cardiff schools and the risk paid off. If the producer had not taken the risk then the courgettes would not have been ready in time for the Food and Fun programme. This burden of risk falling on the producer alone was something that stakeholders in the pilot were keen to explore alternatives to.



Why agroecological production?

Agroecology is the use of principles in farming practices that ensure a balance between plants, animals, people and their environment. Agroecological farming practices aim to work with wildlife, mitigate climate change and give power to local growers and communities to create systems best suited to their needs (12). Its objectives are consistent with a Sustainable Farming Future in Wales.

The Landworkers' Alliance, Sustainable Food Places, Food Sense Wales along with other members of Food Policy Alliance Cymru, including WWF Cymru, advocate agroecological farming as a way forward for sustainable food and farming in Wales. This is why agroecological farm produce was considered for the pilot.

Agroecological Objectives (12)

Encourage biodiversity

Decrease agrochemical use

Adapt and mitigate to climate change

Build soil health

Promote sustainable waste management

Increase accessibility and affordability of food

Integrate into the community

Increase the quantity and quality of jobs

Enhance Economic Resilience



Why agroecological producers don't currently supply into public services

There are three key factors that mean that Welsh small scale agroecological producers do not in general supply into public services through procurement: price, scale and risk.

Historically, procurement contracts driven by cheapness mean that Welsh producers, and especially small scale, don't receive the right price point to make it worthwhile. The price point does not then incentivise scaling up, which is necessary to be able to fulfil procurement contracts, meaning that the whole sector is stuck in a chicken and egg situation where they can't supply because they don't

produce enough and they don't produce enough so they don't access markets that would help them scale up(9). Compounding this is also the added layer of risk around the seasonality of Welsh production and taking on the year round supply necessary for public procurement as well as the complicated process of bidding for contracts from local authorities.

It has been recognised that food wholesalers, with their broad supply streams and distribution networks and their ability to fulfil year round local authority food procurement contracts could act as a mechanism for small scale growers supplying into procurement by mitigating some of the risks outlined(9). This pilot puts this theory to the test for veg.

The Stakeholders involved

Food Sense Wales overseeing the pilot

Food Cardiff partnership convening the stakeholders

Peas Please – funding the research and including Veg Advocates

Blas Gwent Veg– Small scale agroecological production of the veg

Castell Howell – food wholesaler paying for the veg, distributing the veg, prepping and helping to serve in schools as part of the pilot

Authentic Foods – Food processor and caterer for pre-prepared meals.

Tyfu Cymru – working on veg quality assurance

Cardiff Council Education Catering – liaising and organising with the schools and Food and Fun co-ordinators

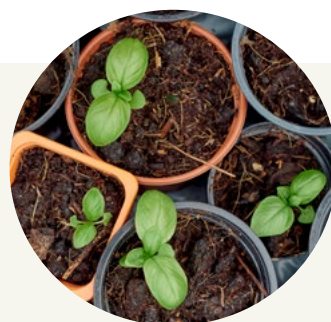
Cardiff and Vale UHB Public Health Dietitians – Providing nutritional advice and co-ordinating the Food and Fun programme activities

Catering and Food and Fun Staff across 30 schools – prepping and serving courgettes and doing activities

Children across 29 schools – eating the courgettes and providing feedback

Veg Advocate – supporting the development of the pilot

Sustain – funding co-ordination time through the Food for the Planet campaign



Timeline



APRIL

Food Sense Wales, Castell Howell and Blas Gwent Veg meet and commit to a pilot. Courgette seeds are purchased and sown.



MAY

Wider Food partnership meets to plan. Courgette plants potted up.



JUNE

Courgette plants planted out. Quality assurance process developed.



JULY

First Courgettes harvested, producer drives them to pick up point to meet Castell Howell lorry. Weekly meet ups between producer and lorry drivers on way back to depot.

AUGUST

Food and Fun 3 weeks. Courgettes delivered whole to schools for Food and Fun activities. Children partake in multiple cooking and food art activities with courgettes.

Courgettes added to dishes served in 2 schools with Castell Howell chef and Authentic Curry chefs (and Edward Morgan from Castell Howell).



SEPTEMBER

Gathering and collating of information.

OCTOBER

Final meeting of stakeholders and discussion of next steps.



NOVEMBER/DECEMBER

Write up of evaluation.



How it went and key challenges

Blas Gwent Veg sowed courgette seeds in April and planted out the plants in June. Meanwhile Castell Howell and Blas Gwent received guidance through Tyfu Cymru to develop a quality assurance system.

The first courgettes were harvested and delivered in July (on the first day of the Royal Welsh Show). The producer drove to an agreed meeting point with a Castell Howell lorry that was on its return from a delivery and heading back to the depot where the courgettes were stored in cold storage. This system was repeated weekly, sometimes more efficiently than others, with learnings in terms of the need for effective communication in order to minimise the time the producer had to spend waiting for the delivery lorry.

Castell Howell guaranteed to buy all of the courgettes that Blas Gwent grew and although some courgettes were sold through the local market, 95% were sold through

wholesale. This had the added benefit of the producer not having to spend time marketing their produce.

“I didn’t have to think about marketing my produce. I could just get on with the business of growing.” Producer

976kg, nearly 1 tonne of courgettes were supplied in total, amounting to sales for the producer of nearly £2,500, a good source of income for a horticulture start-up. Courgettes that did not go through the schools (700kg) were sold to Castell Howell customers under the generic courgette category.

“The best thing was knowing that the wholesaler was on my side” Producer

Blas Gwent were starting on a new growing site in 2022 and were not sure of price structuring and in April they agreed they should sell courgettes to Castell Howell for 90p a kg. By July it was clear that this price was well below wholesale market value with Castell Howell buying in non-organic imported courgettes at £1.60 and the average wholesale organic⁷ price as benchmarked by Soil Association being £2.50.

Organic and agroecologically produced fruit and veg is generally more expensive than other fruit and veg because the price not only includes the cost of production itself but also a range of other factors such as environmental enhancement and rural development by generating additional farm employment and assuring a fair and sufficient income to producers (13).

Castell Howell were insistent that they would not allow Blas Gwent to undersell themselves and agreed to pay the average organic wholesale price⁸ for all the courgettes supplied. This was on the understanding that Blas Gwent were in conversion to organic. This sharing of risk between the wholesaler and the producer was essential to building trust and ensuring the success of the pilot.

At the beginning of the Food and Fun programme in August all 29 Cardiff schools taking part received a delivery of 5-7kg whole courgettes from Castell Howell. These courgettes were used by the Food and Fun Co-ordinators to engage children in cookery and activities.

“No matter what veg we put in it’s no good if it doesn’t get eaten.” Food and Fun Co-ordinator

Throughout, the Food and Fun team were clear that recipes used had to be nutritionally compliant as well as being appealing to the children. Many recipes were disregarded e.g. courgette risotto as potentially unappealing to the children and chocolate courgette cake and fried courgette frittata as not nutritionally compliant. Courgette muffins and courgette bread were made by the children in the schools with other children using spiralisers to make ‘courgette art’. These were popular. The activities were fundamental to engaging children with the new veg in order to familiarise and promote them as options.



⁷ Organic production is a type of agroecological food and farming system. Organic farmers aim to produce high-quality food, using methods that benefit our whole food system, from people to planet, plant health to animal welfare. Organic certification schemes ensure that farmers are adhering to organic standards.

⁸ In this case the wholesale Soil Association price.

This pilot happened in 2022 at a time when school catering across Wales was facing great pressure. Covid was still circulating and causing illness and there was shortage of catering staff in general across hospitality meaning that a number of the school kitchens chronically short staffed and some had no catering staff at all. The free school meal commitment was also in the process of being rolled out – to begin in September – and much preparatory work was having to be done at a local authority and catering team level. This meant that capacity of catering teams to engage with this pilot was very limited.

Castell Howell stepped in and offered the services of their development chef and washing up skills of the Corporate Social Responsibility Manager in one school. They also arranged for Authentic Curries to attend another school. The main courgette dishes cooked for the children were **courgette and cheese bake, courgette curry and ratatouille**. These dishes were in addition to the normal menu, in order to ensure that no child went hungry because of not liking courgettes. The dishes were eaten by many children but engagement with the staff and caterers was key to encouraging consumption as well as seeing other children eating the dishes (see Appendix for details). It takes time to develop new tastes and preferences and engagement with children has to be built into any programme trying to encourage consumption.

“The courgette dishes today and yesterday were a lot more popular with children when they went up for second servings. They’d seen their friends eating it so wanted to have a go themselves.” Chef



Multi-portion meals are trays of pre-prepared food that can be re-heated with portable re-heating facilities, they are useful for schools with no kitchen facilities. More had been hoped to be achieved in new recipe development and the preparation of veg filled multi-portion meals. Where Welsh veg is simply replacing imported veg obviously nutritional compliance of the original recipe is maintained but new recipe development takes more time and is something that could be considered in the future. Involving children in the meal and menu design would be recommended.

“We achieved everything we set out to do except the multi-portion meals” Wholesaler

It had also been hoped that children might be able to visit the farm to see the courgettes growing. This was not possible during this pilot due to the horticultural enterprise being in the early stages of set-up with limited visitor facilities. There were also time pressures. To maximise engagement with the children it would be good to integrate farm visits in future.

Key learnings

Relationships, engagement and collaboration are critical

“The best thing was having all the people who could make this happen in one place, working together” Wholesaler

This pilot was possible because of the relationships that existed between all the relevant stakeholders and is a testament to the work of the Cardiff Food Partnership across the years in helping to build these relationships. Building relationships back into the food system is a necessary first step in the process of trying to engage in change for greater sustainability.

In this case the producer, Blas Gwent, was able to quickly upscale and comply with quality assurance which was developed by Tyfu Cymru. The wholesaler, Castell Howell, was able to take that product, store it, distribute it to schools and help to prepare dishes. The Cardiff Council catering and Food and Fun team were able to assess nutritional compliance and engage with children on veg and the Food Partnership and Food Sense Wales were able to convene the planning meetings and arrange for the evaluation so that key lessons could be learnt and communicated more widely.

Make use of the infrastructure

“It couldn't have been easier really” Wholesaler

Wholesalers who already have contracts to supply food into local authority catering have the infrastructure in place to collect, store, pay for and redistribute veg. Schools are not able to accommodate multiple deliveries and so tagging onto existing delivery slots works well. Wales is fortunate to have Wales based wholesalers. **In order to sell and distribute Welsh veg all wholesalers need is the supply and the ability to pay extra for the produce.**

Guarantee market and price and take the risk out

“The best thing was knowing the buyer was on my side” Producer

The commitment from the wholesaler to buy all the produce at a fixed price was key here. It gave the producer the confidence to plant the crop. The producer went from having a bare field site to growing a tonne of courgettes for around £2500. With a guaranteed market and price, upscaling was directly incentivised. **Effectively the wholesaler took the risk out of production and by so doing enabled the expansion of production and directly increased their capacity to supply local produce.**

Because the wholesaler could buy from a diversity of sources they were able to fulfil their procurement contract responsibilities for continuous fruit and veg supply without risk, as even if local product wasn't available they could ensure supply. This took the risk of supplying into public procurement contracts away from the producer.

Ensure quality assurance

When a wholesaler takes on a local authority contract they also take on the role of quality assurance. It is absolutely essential that they can guarantee the quality and safety of the food they source and as such a quality assurance scheme for producers is essential. In this case courgettes were considered low risk as they would be cooked. During this pilot a quality assurance scheme was developed that fulfilled the wholesalers commitment to quality and in so doing mitigated risk. More can be done to develop this system. It is important that it is light touch enough for it to work but also rigorous enough for it to be safe. Tyfu Cymru have offered to continue to help develop this in the future as a useful strand of work in supporting the development of commercial horticulture in Wales.

Engage with school kitchens and catering staff

School kitchens and caterers are under pressure and need all the help they can get in order to be able to support children to eat more veg. More support is needed and more can be done to develop veg filled meals for schools.

Engage with children

Food and Fun works because it provides food and it engages children with a variety of activities. This engagement and interaction with children is absolutely essential to encouraging them to try new veg. There is no point in more Welsh veg being grown if it is wasted. Engaging children in the story of their veg helps stimulate consumption and is a key component. Integrating farm visits is likely to be effective⁷. Working with Food and Fun, curriculum and programmes that are already engaging children with veg, such as Veg Power is recommended in future as well as measurement of veg wasted.



Conclusion

This pilot showed that Welsh agroecological veg supply into schools is possible. However, agroecological veg costs more than other and imported veg and if we are to invest in a sustainable supply chain there is a cost. In this case, kindly paid for by the wholesaler, it was 90p a kg.

90p a kg - the cost of investing in sustainable supply chain

The development of this supply chain was made possible by the wholesaler Castell Howell, being willing to buy all the courgettes that Blas Gwent Veg grew at an agreed price – the average organic wholesale price for courgettes of £2.50 per kg rather than their normal purchase price of courgettes from the Netherlands or similar of £1.60. Castell Howell subsidised the pilot by paying the 90p difference in price per kg. This amounted to around £900 over the course of the pilot. This 56% increase in the price of product was the price of investing in the local agroecological supply chain and needs to be covered if we want Welsh Production to be supported by public procurement.

Effectively the pilot created **a sustainable supply chain investment scheme** that covered the cost difference between the cheapest product and a Welsh sustainably produced product and in so doing made it possible for small scale veg producers to supply into primary school procurement through a wholesaler.



A sustainable supply chain investment scheme could support vegetable farmers who could not benefit from historic and proposed area-based farm support schemes. Welsh vegetable farms haven't benefitted much from farming subsidies in the past⁹ because they were generally only given to farms over 5 hectares. The Welsh Government's newly proposed Sustainable Farming Scheme has dedicated horticulture support and a lower threshold of 3 hectares but many small scale vegetable farms still won't be eligible. Furthermore, because the Sustainable Farming Scheme will still be primarily based on the hectares managed; even those vegetable farmers that do qualify will in most cases receive negligible sums.

By specifically supporting sustainable production on the basis of output sold to schools and other public bodies, rather than land area, a sustainable supply chain investment fund offers a straightforward way to support Welsh edible horticulture.

⁹ e.g. through the Basic Payment Scheme under the Common Agriculture Policy.



School meals represent an opportunity for a secure market for agroecological veg producers and could be used as a key mechanism for investment in vegetable supply chains in Wales. It is crucial however that in order to optimise this opportunity that revisions to **the Healthy Eating in Schools (Nutritional Standards and Requirements) (Wales) Regulations 2013 are aligned with produce that can be grown sustainably in Wales**. This would have the knock on effect of developing a regionalised and resilient

network of food producers able to supply veg into the heart of their communities whilst delivering on Government's local procurement and Net Zero commitments. To do this it would take a **sustainable supply chain investment scheme** that specifically targets the gap between cheapest available veg and sustainably produced Welsh veg¹⁰.

Some advantages are:

1. It utilises the current infrastructure so there are no set up costs
2. It does not create perverse incentives to produce veg that has no market
3. It invests specifically in sustainable agroecological production and all the benefits it brings
4. It creates a clear audit trail for the investment with specific tonnages of veg to school children a measurable metric
5. It sets and drives standards up for supply into other markets

¹⁰ A sustainable supply chain investment scheme could also be applied across other sectors e.g. beef and lamb which also could benefit more from public procurement markets if the cost differential were bridged.



Next steps

There is an opportunity to build on this pilot to see how a bigger and better sustainable supply chain investment scheme could work. Trialing more varieties of veg into more primary schools at different times of year from more producers with more activities linked to veg power and growers is recommended.



Next time

Tomato

Garlic

Onion

Leek

Cabbage

Cauliflower

Brussels Sprout

Broccoli

Kale

Chard

Spinach

Celery

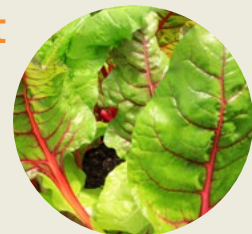
Beetroot

Runner Bean

Squash

and of course

Courgette





Pilot 2: from 1 to 10 tonnes Scaled up pilot

Pilot 2 could involve another Food Partnership or two, more producers, more variety of produce, more schools and children and more engagement with them, including farm visits.



1 commitment to get Welsh veg onto children's plates



2 or 3 Sustainable Food Partnerships

More producers and potentially in different areas



1 or more wholesaler

10 tonnes of different varieties of veg



8 weeks of term time

100 Primary schools. **10,000** children

More co-working with catering staff

Involve children in recipe design

Farm visits

Veg activities linked to Veg Power and food education





A vision

If Welsh Government committed to every primary school meal containing 2 portions next school year then they would have to supply 5331 tonnes of veg into schools. If this was all from agroecologically produced Welsh veg then this would generate a guaranteed market for agroecological producers in Wales of around £15m.

This would involve doubling the area growing field veg in Wales and would support nearly 100 businesses employing nearly 1000 people. This would have the knock on effect of developing a regionalised and resilient network of food producers able to supply veg into the heart of their communities.

A vision – the stats

Tonnes needed for all 266,000 primary school children to eat 2 portions of veg for 1 meal every day of school year	5331	tonnes
Average yield 18 tonnes per ha to give total number of hectares required to produce all primary school veg	296	hectares
Current area in Wales growing field veg ¹¹	288	hectares
Number of 3 ha small-scale growers supported	99	New horticulture businesses
Number of jobs created at 3.2 jobs per hectare as per agroecological veg production average ¹²	948	growers
Estimated amount of financial output ¹³	£14,809,667	Extra financial output from veg supplied into schools

¹¹ 18 tonnes per hectare lowest yield estimate to be conservative from <https://landworkersalliance.org.uk/wp-content/uploads/2018/10/matterofscale.pdf>

¹² Workers per hectare estimate from <https://landworkersalliance.org.uk/wp-content/uploads/2018/10/matterofscale.pdf>

¹³ Financial output from 1 hectare horticulture from <https://landworkersalliance.org.uk/wp-content/uploads/2021/05/New-entrants-costs-website.pdf> based on 3 ha (9acre) horticulture farm = £50,000 per ha



Cawl onto school menus

Putting cawl or Welsh soup onto school menus every week or bi-weekly could be an element of the next pilot of the sustainable supply chain investment scheme. Agroecological Welsh lamb/beef and veg could be supplied into schools to make a vegetarian and a non-vegetarian Welsh soup. This could be done alongside a raft of education and cultural activities and farm visits that help build up engagement and stimulate consumption.

This sustainable soup could not only nourish the nation and build up an appetite for future healthy food but it could build the local economy at the same time as enhancing the environment.

A huge thank you to all stakeholders and children involved with this pilot project.

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Background information

Blas Gwent

Blas Gwent is a vegetable farm between Cardiff and Newport focused on developing regenerative farming methods, and supporting the next generation of professional farmers.

Castell Howell

Castell Howell Foods have grown to become Wales' leading independent food service wholesaler, servicing the length and breadth of Wales, the border counties and the South West of England.

Food Cardiff

Food Cardiff believes that the food we eat has a huge impact on life in Cardiff – not just on people's health, but on communities and businesses, farmers and food producers, and the environment too. Good food creates strong, healthy, resilient communities.

Cardiff Council & Cardiff & Vale University Health Board are both founding members of Food Cardiff and previously worked through the Food Cardiff partnership to develop Food and Fun in 2015.

Food and Fun

Food and Fun is a school-based education programme providing food and nutrition education, physical activity, enrichment sessions and healthy meals to children in areas of social deprivation during the school summer holidays in Wales.

It was developed and piloted in 2015 by Cardiff Council, Cardiff & Vale Health Board, Sport Cardiff, and Food Cardiff. In 2020, it was paused due to COVID-19 restrictions and funding was re-allocated to meet growing Free School Meal needs due to COVID-19 and a Summer Holidays Activity Programme for vulnerable children and young people was delivered. Since 2021, Food and Fun has been 100% funded by the Welsh

Government with a commitment to expand the programme to support the recovery from the broader impacts of the pandemic, particularly in areas of social deprivation.

Food Sense Wales

Founded in 2018, Food Sense Wales was established to drive forward a cross-sector approach to the food system in Wales. Food Sense Wales works with communities, organisations, policymakers and Government across Wales to create a food and farming system that is good for people and good for the planet. It aims to influence and impact on how food is produced and consumed in Wales, ensuring that sustainable food, farming and fisheries are at the heart of a just, connected and prosperous food system.

Peas Please

Peas Please is a UK-wide initiative that has a very clear mission: to make it easier for everyone in the UK to eat more veg. Food Sense Wales leads on the Peas Please work in Wales and brings together farmers, retailers, and restaurant chains, caterers, processors and government departments with a common goal of making it easier for everyone to eat veg. Other UK project partners involved in this initiative are The Food Foundation, Nourish Scotland, Food NI and Belfast Food Network.

Tyfu Cymru

Tyfu Cymru delivers industry specific support and training to build the capacity and capability of the Welsh horticulture sector. The project works with supply chain partners to prepare growers and producer owned horticulture companies to adapt to environmental and economic challenges and position them to capitalise on market opportunities for business development and growth.



Appendix 1 Insights from schools

Visit to Pentrebane Primary School – 02/08/2022

We visited Pentrebane Primary School at lunchtime on the 2nd August. At the time, the school didn't have the kitchen facilities to cook from scratch, so portable ovens were used to heat multi-portion pre-prepared meals. These were supplied by Authentic Curries Company via Castell Howell. Authentic Curry Company staff were on hand to help serve and trial a new courgette-based ratatouille recipe.

The lunch menu in full was:

Mac and cheese
Ratatouille
Bean & vegetable casserole
Bolognese pasta
Plus salad, fruit and yoghurt.

Observations on Serving:

Most children opted for the Mac and Cheese as their first choice and Bolognese pasta as their second. The mac and cheese was first dish on the line, which might have made a

difference. However, it was quite clear the children were very excited about the mac and cheese generally.

The Food and Fun co-ordinator then started encouraging the children to try a bit of ratatouille and explained what it is ("lovely vegetables in a nice tomato sauce") which definitely helped children go for it. About 50% opted for the ratatouille when encouraged, compared to almost 0% when they were just asked what they wanted.

Discussions with children:

Do you know what's in the ratatouille?

We asked approximately 10 children who had the ratatouille did they know what was in it. Some had a vague idea but most just said "no"

"some vegetables with tomato sauce"

"cucumber, tomatoes"



How does the ratatouille taste?

Most children gave fairly short comments about the ratatouille, however they were all positive:

“nice”

“okay”

“good”

There was only one negative comment from a child who didn't have the ratatouille:

“they asked me if I wanted that but it looks disgusting”

Those who had ratatouille on their plate looked like they were enjoying it and had different ways of eating it. For example one child mixed the ratatouille into their Bolognese pasta, others ate it on its own and others alongside the other food.

Where do you think the courgettes come from?

Most children didn't know how far the courgettes had travelled. I spoke to a group of

6 children and asked them to guess how far the courgettes had come from. The guesses ranged from 5000 – 8500 miles away. When I said it was less than 20 they were surprised but didn't show much excitement.

How do courgettes grow? Do they grow in a tree, in a bush, underground, or another way?

The following is a conversation between the group of 6 children when I asked how courgettes grow:

“I think they are a vegetable so they must grow in the ground”

“yeah like carrots you pull them out of the ground”

“we grow radishes and we pull them out of the ground like this [gestures pulling a radish out of the ground]”

“I like growing blackcurrants and redcurrants”

Does it taste different when the veg is local?

The children didn't seem to think there was a difference in taste when the veg was local. However, the ratatouille that they were consuming when interviewed wasn't using the Cardiff courgettes as they were finishing off previous stock.

"same"

"doesn't make a difference"

"not sure"

Food waste:

There was little plate waste from the children – slightly less than one domestic food caddy. There was a mix of waste (see picture) and very little ratatouille.

Children and staff could both opt for second helpings and were served by kitchen staff, so seemed to get the right portions.

However there was ~12 multi-portion packs of food leftover which would go to waste as it wasn't eaten and couldn't be used elsewhere. There was a slightly higher proportion of ratatouille here.

Staff member:

"What I don't want to happen is 20 children going hungry if they're at the back of the line and we run out, so always better to have too much"

Paul Trotman – Founder and MD of Authentic Curry Co was in the school and helping serve. He commented:

"Things like ratatouille are a much harder sell than the pasta, but once you get the veg on the plate they enjoy it. It's getting over that initial hurdle."

"For our factory everything has to be traceable, so it's great that the farm can sell it to Castell Howell to come to us, to go out to schools. I'm a big advocate for keeping things within Wales rather than going outside then coming back."

"We're not expecting any challenges prepping the courgettes from the farm, it'll be the same process as if they'd come from elsewhere"





Visit to Howardian Primary School – 03/08/2022

We visited Howardian Primary School at lunchtime on the 3rd August. This was the second day in a row where lunch had been cooked by Castell Howell and included freshly prepared courgette dishes from Blas Gwent. It was a roast dinner themed lunch with meat, potatoes, carrots and peas, stuffing, gravy and a broccoli and courgette cheese bake.

Observations on serving:

Children tended to go for a bit of everything and seemed particularly willing to try new things and eat vegetables. Stewart from Castell Howell commented “the courgette dishes today and yesterday were a lot more popular with children when they went up for second servings. They’d seen their friends eating it so wanted to have a go themselves”. They also said that the courgette bake seemed more popular with the meat-eaters as a side dish than it was with the vegetarians.

Discussions with children:

Taste

Feedback on the curry was mixed, but most children saying they didn’t like it said it was because it was too spicy, rather than not liking courgettes. Most of the children we spoke to said they’d never had courgette curry before.

Child: *“we’ve had normal curry and courgette curry in the summer club”*

Interviewer: *“which one was better”*

Child: *“the courgette one was better than the normal one”*

Quite a few children said they didn’t like courgettes at all, however they did still eat their courgettes in the bake.

Castell Howell reported really positive feedback with lots of children coming up to the counter to tell them they really liked the food. They said one boy said the curry was the best he’d ever tasted.

Where/how they are grown

We asked a group of children how far away the courgettes had come from. Answers include "UK" "London" and "2-10 miles". When we mentioned children yesterday guessed 5000 – 8000 miles away they responded:

"Why would [food] come from 8000 miles away, that's not even a real number"

We explained that some food does come from very far away sometimes and asked them what they thought:

"We should grow our own food"

We asked the group if they had grown any food before. One child said that "my [dad – I think but couldn't quite hear] has a farm and grows veg. I've been there maybe 290 times and have gone on the tractor" another said "my uncle has a tractor and I sat on his lap in it"

We asked a different group how they thought courgettes were grown. Most didn't know, though one child said:

"I think they're grown in a bush because they are like cucumbers"

The school had a small vegetable patch outside and chickens. In the vegetable patch there was a cucumber and courgette plant growing.

Food waste:

There was slightly more plate waste than Pentreban Primary (about 2 domestic waste caddies), but much less waste from the serving station. The veg (carrots and peas) and broccoli and courgette waste made up most of the serving station waste, but very small amounts. The plate waste was a mix of everything.



Prep

The food was prepped by Castell Howell chefs rather than kitchen staff, who were positive about the time taken to prep.

"It was just a case of chopping 6 courgettes for the bake. The broccoli was frozen so you just chop the courgettes and mix with the broccoli and cheese sauce and bake. It takes about 5 minutes to chop the broccoli"



