



FEEDING OUR FUTURE

An in**VEG**tigation into UK school food 2021

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Introduction

COVID-19 acted as a salient reminder that schools are not merely places where children go to learn. Rather, they also provide children with a space to socialise and a reliable source of food (for some) every day.

Peas Please is a partnership project working across all four UK nations to get everyone eating more veg. School children are a particular focus for us given the concerning low levels of vegetable consumption in this age group, with school food providing a real opportunity to support improved nutrition and veg intake among kids. This report takes a candid look at the UK's school food system, picking out examples of good practice from across the four nations, identifying opportunities for positive change, and making recommendations for policy and decision makers.

The report is accompanied by four **State of the Nation sub-reports** which provide more detail about school food provision in each of the individual nations.



A full summary of our recommendations for policy makers can be found at the back of this report.

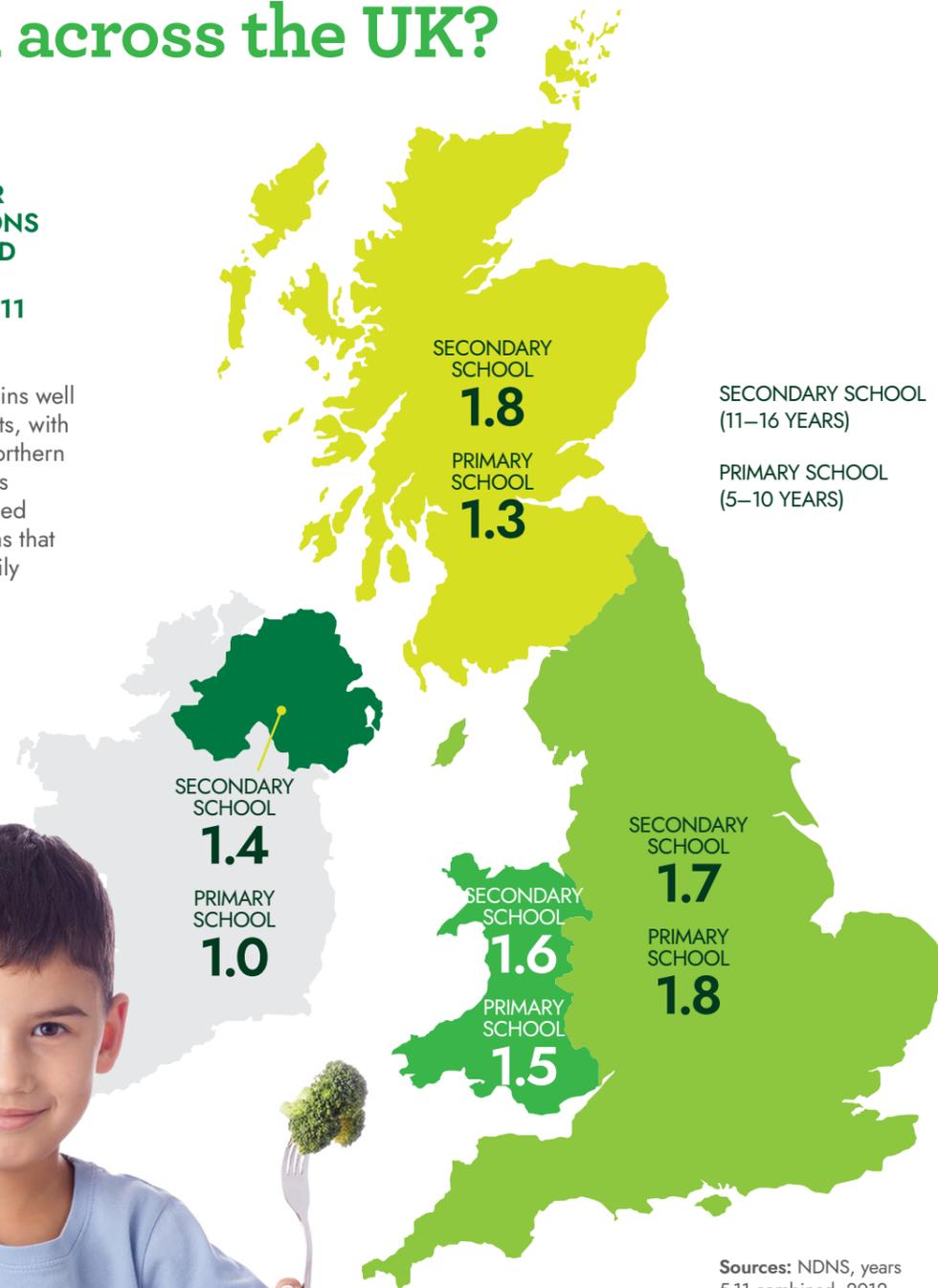


STATE OF THE NATION.

What's the current situation across the UK?

FIGURE 1
THE AVERAGE NUMBER OF VEGETABLE PORTIONS EATEN BY REGION¹ AND AGE GROUP BETWEEN 2012–2019 (YEARS 5–11 OF THE NDNS)

Across the devolved nations, vegetable consumption remains well below recommended amounts, with vegetable intake lowest in Northern Ireland. This suggests schools may well provide much needed opportunities for interventions that aim to increase children's daily intake of veg.



Sources: NDNS, years 5-11 combined, 2012-2019. Waves were combined to increase sample sizes.

¹It is worth noting that the sample sizes for children in Scotland and Wales are smaller than for England and Northern Ireland.

FIGURE 2

STATE OF THE NATION – COMPARISONS IN SCHOOL FOOD PROVISION*

	England	Scotland	Wales	Northern Ireland
Number of schools	24,360	2,500	1,480	1,134**
Pupil population	8.89 million	702,197	469,176	344,900**
Number of daily meals provided	3.1 million	350,000	Not known	162,600**
Percentage eligible for FSM (Primary/Secondary)	21.6%/18.9%	37.4%***/~15%	20%/18%	28.5%/37.1%
Take-up of FSM (Primary/Secondary)	86%/79%	~81%/72.8%	77.4%/77.4%	77.1%/72.2%
Take-up of paid-for school meals (Primary/Secondary)	34%/32%	Not known	Not known	29%**
Universal Free School Meals	Reception, Year 1 & Year 2 (Gov UK, 2021a)	Primary 1 - 3 Primary 1 - 7 as of August 2022.	No.	No.
Vegetable provision as per school food standards	Schools should offer one or more portions to pupils at lunch every day (School Food Plan, 2014).	At least two portions of 40g (primary)/80g (secondary) as part of school meal. Portions of vegetables must be made available when other food is served (Gov UK, 2020b).	At least one portion of vegetables or salad must be provided each day (primary). At least two portions of vegetables or salad must be provided each day (secondary) (Gov UK, 2013). (Vegetables exclude potatoes.)	At least two portions of vegetables or salad must be available per child throughout the lunch service. Pies, casseroles, stews and other composite main course dishes must contain 40g of vegetables per serving, in addition to two separate portions of vegetables or salad (DENI, 2020).
Provision of a School Fruit and Vegetable Scheme	Children aged 5 to 7 attending state-funded primary schools in England receive one portion of fruit or vegetable each school day.	There is a scheme providing free breakfast in selected councils, but this includes fruit rather than veg.	No such scheme.	No such scheme.

* Measurement of some metrics reported in the table above vary slightly across the nations.

** This figure includes nursery schools

*** The figure for FSM eligibility across Scottish primary schools includes UFSM provided to P1–P3. Universal Provision is excluded in England from FSM figures. The take-up of FSMs in Scotland is an estimate, for further details see the technical report.

Sources: England (School Food Plan, 2013; Gov UK, 2020a, 2021b); Scotland (Government, 2019; Mckendrick *et al.*, 2019); Wales (Welsh Government, 2020c); Northern Ireland (DENI, 2021; McClure and McNally, 2021)

For further information on the figures used in this table please refer to the sources cited above. Further information on the devolved nations can be found in our technical reports on The Food Foundation website.

School food – why is it so important?

School food and meal programmes have a long history in the UK. They were initially started to alleviate food insecurity among children by providing them with at least one reliable meal every day. Since then their focus has shifted from food provision to food quality, healthfulness and supply chain sustainability (Oostindjer *et al.*, 2017; Food For Life, 2021a). School food and meal programmes are important for improving public health and nutrition; they are able to reach children and young people across the socio-economic spectrum at scale and for a sustained period of time, during what is not only a critical window for nutrition and optimal growth but also a time in which food preferences and habits with potential life-long implications for health and development are shaped (Oostindjer *et al.*, 2017). Early-life experiences of different tastes have a role in promoting healthy eating in future life (Scaglioni *et al.*, 2018). With 94% of all children across Britain attending state schools, school meals have a significant impact on public health and nutrition (ICS, 2021).

Now that so many children and teenagers are living with obesity and overweight, the need for school food to provide nutritious and well-balanced meals is as important as ever (Children’s Right2Food, 2021). British children eat an increasingly large proportion of ‘ultra-processed’ foods with some estimates that these now contribute over 60% of their calorie intake (Monteiro *et al.*, 2019; NIHR, 2021)². Diets high in ultra-processed foods (which are often low in fruit and veg) are increasingly associated with an elevated risk of obesity, overweight and other diet-related health conditions in later life (Elizabeth *et al.*, 2020). Alongside this, cases of anorexia nervosa are on the rise among pre-teens and given that some 66% of children aged under 18 report feeling negatively or very negatively about their body image “most of the time”, there is clearly more work to be done to ensure that schools are focused on health as much as weight. Food poverty is an important reason why many children eat badly (Petkova *et al.*, 2019; UK Parliament, 2021). 1.7 million children are eligible for Free

“ School food and meal programmes are important for improving public health and nutrition; they are able to reach children and young people across the socioeconomic spectrum at scale and for a sustained period of time.”

School Meals (FSM) in England alone in 2021, and an estimated 2.5 million children experienced food insecurity in the six months up until July 2021 (The Food Foundation, 2021c). Access to nutritious foods can be a challenge for many: calorie for calorie, less healthy food is on average three times cheaper than healthier food, such as vegetables (The Food Foundation, 2021c), and 3% of children live in households that cannot afford to buy fresh fruit and vegetables every day – around 400,000 children across the UK (Peas Please, 2020).

In light of the above, the outlook for children and young peoples’ vegetable consumption in the UK is bleak. Almost one third (29%) of children aged 5–10 years eat less than one portion of veg a day. Consumption isn’t much higher among teenagers either – with 23% of 11–16-year-olds eating less than one portion of veg a day (Figures 5). With the majority of children attending school for up to eight hours a day the opportunities to increase vegetable consumption through school food are significant.



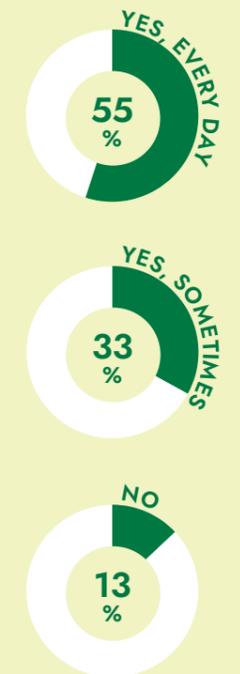
OUR VEG CONSUMPTION SNAPSHOT SURVEY



Peas Please ran a school food questionnaire with the *Children’s Right2Food* campaign between May and July 2021 to better understand food and veg provision in UK schools. The survey was hosted on the *End Child Food Poverty* website, with 325 families and children from across the devolved nations responding³, 46% of whom receive Free School Meals. Although the sample is small and not representative, it provides valuable insights on the veg being served up in children’s schools. We found that:

- Encouragingly, over half (55%) of respondents said their school offered vegetables every day. However, given that school food standards recommend at least one portion a day (two in Scotland and NI), it is concerning that a third of respondents said their schools only ‘sometimes’ offer veg, with 13% offering no veg at all.
- More families reported that their schools offered fruit than veg, with 65% saying fruit was available every day. This is perhaps unsurprising given fruit’s popularity and convenience as a snack but demonstrates that there are opportunities to give greater focus to veg.

FIGURE 3
DOES YOUR SCHOOL OFFER VEGETABLES?



² The widely used NOVA classification system groups foods based on their degree of processing, with group 4 comprised of foods and ingredients defined as ultra-processed – for example sweet, fatty or salty packaged snack products or highly processed dishes.

³ 66% of respondents were based in England, 19% in Scotland, 4% in Northern Ireland and 2% in Wales.

VEG CONSUMPTION ACROSS THE UK BY AGE GROUP

The Peas Please partnership has been tracking consumption of vegetables using *National Diet and Nutrition Survey* (NDNS) data since launch. Children’s veg intake has remained fairly static over the past decade with consumption remaining low. Despite many younger children going through periods of picky eating as a normal part of development, it is concerning to see that low vegetable consumption persists into adolescence. Just 6% of secondary school children are currently meeting the Government’s recommended daily intake of vegetables in the Eatwell Guide (3.5 portions) (Peas Please, 2021b).



THE AVERAGE NUMBER OF VEG PORTIONS EATEN PER DAY BY AGE ACROSS THE UK

FIGURE 4

	2008–2012	2012–2016	2016–2019
Secondary school age (11–16 years)	1.7	1.6	1.7
Primary school age (5–10 years)	1.8	1.6	1.8

THE PROPORTION (%) OF CHILDREN EATING LESS THAN ONE PORTION OF VEG A DAY

FIGURE 5

	2008–2012	2012–2016	2016–2019
Secondary school age (11–16 years)	25%	26%	23%
Primary school age (5–10 years)	25%	33%	29%

THE PROPORTION (%) OF CHILDREN EATING LESS THAN 3.5 PORTIONS OF VEG A DAY, AS RECOMMENDED BY THE EATWELL GUIDE

FIGURE 6

	2008–2012	2012–2016	2016–2019
Secondary school age (11–16 years)	95%	96%	94%
Primary school age (5–10 years)	90%	94%	89%

Sources: NDNS, years 1–4, 2008–2012; years 5–8, 2012–2016; years 9–11, 2016–2019

*All averages are means and are weighted to adjust for differences in sample selection and non-response. For our calculations we have used a portion size of 50g for primary school-aged children. This is the mid-point value of the 40–60g recommended for children aged 4–10 years old in the School Food Plan.



We have referred to ‘school meals’ and ‘school food’ throughout the report, which include all food served within the school environment whatever the time of day. Where we are being specific we mention the type of meal.

1. MAKING A MEAL OF LEARNING AND WELLBEING

Each stage of the school day provides opportunities for food to support health, nutrition, behaviour and educational attainment. Not eating well not only impairs physical health and development, but behavioural, emotional and academic challenges as well as truancy are

more common among hungry children (Dimbleby and Vincent, 2013; Forsey, 2017). Vegetables play a vital role in providing nutritional balance to any meal, ensuring school food not only fills children up but also supports healthy diets.

MEAL

WHAT’S ON OFFER?

Breakfast

Providing children with breakfast is crucial in ensuring they have a good start that provides them with enough energy to undertake the mental and physical demands of the school day. Children who regularly eat breakfast tend to have better nutritional profiles than children who habitually skip breakfast (Defeyter, Harvey-Golding and Forsey, 2020). They are more likely to meet daily recommendations for fruit and vegetables and less likely to consume less healthy snack foods (Utter *et al.*, 2007).

School breakfast provision can lead to children eating significantly higher amounts of healthy food items at breakfast time than they would at home (Murphy *et al.*, 2010).

While there are limitations to many studies looking at the impact of breakfast consumption, research suggests that breakfast interventions in schools can positively impact on attention and memory cognitive ability and overall academic performance (Wesnes, Pincock and Scholey, 2012; Adolphus, Lawton and Dye, 2013; Adolphus *et al.*, 2016).

Snacking vs sit-down meals

Snacking behaviour – particularly among secondary students – can impact on the uptake of school lunch options and consumption of vegetables. Snacking students are more likely to skip meals, while regular meal patterns are associated with healthier food choices (Calvert, Dempsey and Povey, 2020).

Limiting the availability of more processed, energy-dense snacks and providing vegetables as part of a healthy snack, for instance with dips or as smoothies, is one way of increasing vegetable intake throughout the day while not impacting on school lunch uptake. Research undertaken in London showed that 60% of break-time snack options do not comply with school food standards and feature energy-dense items such as pizza, burgers, toasted sandwiches, sausage rolls, chicken nuggets, cookies and pastries (Guy’s & St Thomas’ Charity, 2020).

As many school children spend lunchtimes engaged in extra-curricular activities, or are just keen to get outside the building, the amount of time available for lunch can be squeezed, leading to children skipping lunch or grabbing ready-to-go items.

There is a strong case to be made for schools to focus on provision of veg, fruit, and healthier snacks and drinks during break times, for example mid-morning and early afternoon. Research in the Netherlands has shown that the free distribution of vegetables in schools increases consumption both overall and as a snack (Reinaerts *et al.*, 2008).

School Lunch

The 2013 School Food Plan for England discussed the hidden benefits of food culture, where simply sitting down to meals with friends and teachers can help children to cement relationships and develop social skills (Dimbleby and Vincent, 2013). This should be encouraged, with evidence suggesting that **eating meals with others can lead to increased consumption of vegetables** (Christian *et al.*, 2013). On the whole school meals provide more nutritious options than packed lunches. In England less than 2% of children’s packed lunches meet all eight of the food-based standards for school meals, but an estimated half of children are currently taking a packed lunch to school (Evans *et al.*, 2020).

NUTRITIOUS MEALS FOR EVERYONE?

There is clearly a strong case to be made for providing all children with a nutritious meal while at school in addition to ensuring that those from low income families can easily access school food and do so with dignity and without stigma. The current income threshold for Free School Meals (FSM) is very low, with nearly half of food insecure families with children in England and Wales not qualifying for FSMs (CPAG, 2019; Dimpleby, 2021). Children who have No Recourse to Public Funds (NRPF) or are undocumented are also ineligible for FSMs, regardless of how little their family earns. Although temporary provision was granted to some NRPF children in England and encouraged in Wales through Welsh Government guidance during the pandemic, no long-term commitments have been provided, and Scotland’s commitment to extend Universal Infant FSM provision to NRPF children from 2021 and 2022 remains limited to primary-school-aged children (Welsh Government, 2020b). Moreover, even those children eligible for the scheme frequently miss out. Parents have to know about the scheme and apply for it, with the result being that around 11% of children entitled to FSMs are not registered for them according to a 2013 estimate by the Department of Education (Dimpleby, 2021).

The case for FSMs across the board has been made many times in recent years but in June this year a Swedish study proved there are long-term benefits that reach far beyond school years. The study tracked the progress of those receiving Universal Free School Meals (UFSM) between 1959 and 1969 to the present day. They found that students were not only healthier but that they were more likely to attend university and increase their lifetime income by 3%. Unsurprisingly, those from poorer backgrounds were found

“ **Universal school meal provision can make a real difference because if there was a commitment to making those meals ... really nutritious, really hitting these guidelines and getting the kids to eat all these vegetables and stuff day in, day out ... if they’re doing it every single day and that is the standard and that’s what they get used to, it’ll become a habit over time.** ” PARENT

to benefit most overall (Lund University, 2021). (See our case study on SHEP for an example of an initiative targeting children from low income families.)

SETTING THE STANDARD

However, beyond making sure children can access school food, what about the quality of the food? School food provision in the UK largely consists of hot cooked lunch options with starter and/or dessert on a three- or four-week menu cycle. Especially in secondary schools this is complemented by ‘grab-and-go’ options, such as sandwiches and pizza, catering to young peoples’ preference for takeaway choices (Ensaff *et al.*, 2015). While different across the four nations, the introduction of school food standards for the nutritional content of school meals has been an important step towards setting a baseline amount of vegetables served in school lunches.

MIND THE BEANS!

Pulses can be classified as both protein and vegetable. Baked beans are often served as a vegetable side dish, for instance with a baked potato. Their use as vegetable is limited across all regulations: for example, in Scotland, baked beans can only count as one portion of vegetables, if several options are on offer (Scottish Government, 2014b). In England, the school food standards advise not to serve baked beans more than once a week and to choose low-sugar and low-salt varieties (Gov UK, 2020b).



In practice, however, school food standards are often poorly implemented with a lack of monitoring and accountability meaning that the onus very much falls on individual schools and caterers to decide what should be on menus. Good practice can be seen in Scotland where Education Scotland’s Health and Nutrition Inspectors routinely carry out inspections and ensure that school food standards, as set out in their 2020 regulations on school food and drink, are being complied with (Scottish

Government, 2021). Additionally in Northern Ireland, the Department of Education is responsible for monitoring the nation’s wider Food in Schools policy, of which nutritional standards are a key element (DENI, 2013).

In 2019 Food for Life estimated that at least 60% of secondary schools in England are failing to comply with school food standards (Food For Life, 2020). And a recent survey of 60 schools in London found that while 73% of school lunch menus reviewed were theoretically compliant with school food standards, the food children were actually eating tended to be dominated by oven-ready, less healthy options. As a result, it is likely that children are over consuming fat, salt and sugar but falling short when it comes to vegetables and fibre at lunchtimes, with obvious ramifications for nutrition (Guy’s & St Thomas’ Charity, 2020).

“ **The problem with school meals has been partly the stigma thing, about who gets them and who doesn’t. But also, they’re not really all that great. They’re super cheap. Maybe just putting a bit more funding into that and making them that bit better could really have a massive all-around sort of effect. And again, not put it all on parents who are already overburdened, especially single parents, to sort of come up with all the answers here.** ”

PARENT DISCUSSING VALUE OF SCHOOL MEALS IN HELPING CHILDREN TO ACHIEVE 5-A-DAY

A ‘WHOLE SCHOOL’ APPROACH

While this report is focused on the provision of vegetables in schools, the importance of incorporating food into all aspects of the school day and the curriculum cannot be overstated. As in many Nordic nations and Japan, a ‘whole school’ approach ensures that food is seen as part and parcel of school education. In Scotland the 2008 ‘Schools (Health Promotion and Nutrition) (Scotland) Act’ made promoting health in schools a statutory duty. This was further strengthened in 2014 with the Better Eating Better Learning guidance on improving school food and food education. While there is still much more to do, this at least enshrines the commitment to improving the wellbeing of our children and young people into law (Scottish Government, 2014a). England’s recent National Food Strategy endorses such an approach which is an encouraging sign and something that all nations should adopt.

RECOMMENDATIONS:

- Implement Universal Free School Meals across the UK to ensure all school children are entitled to school food and remove much of the stigma and access issues many children with low household income currently encounter when accessing Free School Meals. As a stepping-stone to this, Free School Meals should be extended to all children living in poverty across the four nations.
- Ensure all four UK nations commit to recommending at least two portions of veg in every meal, given the significant benefits more vegetables have for both health and the environment.
- Nations should undertake independent school meal reviews to actively investigate and invest in opportunities to support schools in their delivery of quality school meals, including holiday food provision schemes, which adhere to good school food standards.



2. PROCUREMENT: PUTTING OUR MONEY WHERE THEIR MOUTHS ARE

THE POWER OF PUBLIC PROCUREMENT – FROM ‘VALUE FOR MONEY’ TO ‘VALUES FOR MONEY’

Public sector bodies spend an estimated £2.4 billion on procuring food and catering services annually, with around £1 billion of this going towards the cost of food and ingredients (Parliament UK, 2021). This represents a huge opportunity for schools, hospitals, prisons and other institutional settings to use this budget to support public health and serve more veg. With the proposed introduction of Universal Free School Meals to primary-age children in Scotland from 2022, and with other nations weighing up their options, attention must be paid to ensuring that existing school food budgets are not simply spread more thinly, which would likely jeopardise food quality.

IMPROVING STANDARDS TO SERVE GOOD FOOD

There is scope to improve and tighten compliance with procurement standards and put renewed focus on vegetables. For example, England’s Government Buying Standards (GBS) currently only apply to central Government, hospital food for patients, prisons and the armed forces. Local governments, schools and care homes need not follow the standards although schools ought to comply with school food regulation and guidance (Dimbleby, 2021). The GBS currently recommend only one portion of veg as part of meals, a recommendation which did not change even after a consultation in 2019 that aimed to update the nutrition standards in the GBS. That said, the increased focus on fibre was encouraging, with an updated recommendation that main meals containing beans or pulses as a main source of protein are made available at least once a week, with beans and pulses (up to 80g) counting as one portion of veg (DHSC, 2021). As noted in England’s recent National Food Strategy there is currently a loophole in the GBS that allows lower quality food to be supplied where necessary in order to avoid a “significant increase in costs” (Dimbleby, 2021). There is therefore a need to refocus the weighting system to make sure that nutrition, welfare and environmental standards are assigned more importance in tendering decisions.

The Scottish Government and local authorities laid the foundations for a focus on procurement which prioritises local suppliers and considers the social, economic and environmental dimensions of sustainability with *Catering for Change* (Scottish

Government, 2011). Published in 2011 and currently being revised, this guidance also highlights how to use procurement legislation to specify fresh and seasonal produce, address quality and nutrition, buy food which will help to meet the Scottish Dietary Goals and consider how food has been produced and processed. Similarly, the 2021 *Wales Procurement Policy Statement* puts the Well-being of Future Generations (Wales) Act 2015 at the heart of all procurement decisions and progressive policy priorities such as decarbonisation, social value, community benefits, fair work, the circular economy and the foundational economy (Welsh Government, 2021).

SHAKING UP PROCUREMENT PRACTICES

School food procurement is often centralised in the hands of several large catering companies, limiting competition and innovation in the sector. **Complicated procurement processes pose barriers for smaller suppliers to be able to bid for school catering contracts and to compete on price.**

Dynamic Purchasing Systems (DPS) are one potential way of changing the status quo to allow smaller businesses to supply schools and provide institutions with more choice. Unlike more traditional procurement methods, DPS means that a wide range of suppliers, regardless of size, are allowed flexible access to a contract at any stage of its duration providing they meet the standards set by contracting authorities. For instance, the Soil Association provides an example of a seasonal carrot grower who under DPS would be able to sell their produce when available and not be penalised when they run out (Soil Association, 2020).

A recent paper to Scottish Government on UFSM argued that public food should reflect the best of public values and as such school meals should be seen as an “investment”



rather than a “cost” (APSE, 2021). For example, the concept of Community Wealth Building (CWB), where public purchasing is used to invest in local economies, is helping to shorten supply chains, create and secure jobs, and strengthen local communities (CLES, 2020). The application of CWB when procuring school food is one way of ensuring that money spent stays in the local area, supports local food producers, and provides positive economic benefits for the places where the school are sited. There are many local authorities in the UK which are now adopting a CWB approach and according to East Ayrshire, the first CWB council in Scotland, not only has it helped them improve the quality of school meals but buying fresh local produce has also generated a positive impact on local businesses and significantly reduced their carbon footprint (Soil Association Scotland, 2020).

ACCREDITATION

Accreditation of catering services and the food served in schools is currently voluntary, with a number of organisations providing a variety of training and accreditation schemes. Many schools use the online professional standards and training developed by the Local Authority Caterers’ Association or partake in the Soil Association’s Food for Life certification scheme. However, these require investment from schools and are optional, so in no way universal.

Requiring all schools to be part of a standard accreditation scheme could have hugely beneficial impacts on the sourcing and provision of school food (**see the Food for Life case study on page 14**). As a minimum, for example, schools could be required to account for how school food funds have been spent, fully comply with the school food standards for nutrition and procurement standards and ensure their catering staff are adequately trained to deliver quality meals.

TOWARDS NET ZERO

As well as action from schools and Government, there is also an opportunity for those providing school food to up their game when it comes to the standard of food they serve and source. **With many caterers having committed to ambitious net zero and sustainability targets, changing menus so that they contain more veg, fewer ultra-processed options, and less and better meat is an obvious focus area for reducing the environmental impact of their supply chains.** Vegetables and pulses have

RECOMMENDATIONS:

- Strengthen and revise procurement standards so that taxpayer money is spent on sourcing healthy and sustainable food. These standards should be made mandatory for schools.
- Refocus procurement weighting systems to make sure that nutrition, welfare and environmental standards are assigned more importance than cost alone in tendering decisions.
- Further fund and expand properly evaluated pilots into Dynamic Purchasing Systems to encourage schools to purchase more fruit and vegetables from smaller and/or more local suppliers. If the 2022 pilot currently being run by Bath and North East Somerset Council is deemed a success this should be more widely rolled out.
- Adopt a Community Wealth Building approach to procurement to ensure that public funds stay within a locality and that local food producers are supported.
- Adopt a ‘whole school’ approach to school food and education and require all schools to work with accreditation schemes to improve both school food and education.
- Ensure thorough monitoring and implementation of school food standards, including training of staff and setting of clear performance indicators.

much lower greenhouse gas emissions per kilogram of produce than meat and dairy foods even when emissions from transportation are taken into account (Clune, Crossin and Verghese, 2017; Poore and Nemecek, 2018; Ritchie, 2020). If all public caterers moved to having even one meat-free day a week, this could reduce meat consumption by 9,000 tonnes a year potentially saving over 200,000 tonnes of greenhouse gas emissions (Public Sector Catering, 2020). There are already some great examples of action in this arena, with eight school caterers committing to increase the amount of veg they serve as part of their commitment to Peas Please. Furthermore, procuring in a way that favours seasonal and locally sourced food produced in a way that promotes positive environmental and social benefits would ensure that public procurement plays its part in helping to achieve the UK’s climate change commitments (**see our case study by Sustain on page 20**).



CASE STUDY

SOIL ASSOCIATION
LOCAL AND SEASONAL VEGETABLES WITH FOOD FOR LIFE
SCOTLAND



Food for Life Scotland is a Scottish Government funded programme which works with local authorities across Scotland to improve the quality of school meals through the certification scheme Food for Life Served Here (FFLSH). FFLSH rewards caterers who serve freshly prepared, sustainable and local food. Currently 17 of the 32 local authorities in Scotland hold the FFLSH award and are demonstrating best practice in promoting the enjoyment of locally sourced and seasonal vegetables and as such are encouraging children to make healthier food choices. **Students in Food for Life schools are twice as likely to eat 5-a-day and a third less likely to eat no fruit and vegetables than students in comparison schools** (Jones *et al.*, 2015).

MAKING THE BEST OF LOCAL PRODUCE

Food for Life Scotland promotes local sourcing where possible and FFLSH encourages seasonality. Much of this work centres on vegetables given the ready availability of great locally grown produce in much of Scotland.

Highland Council who hold the Bronze FFLSH award for their primary school meals meet the standards on seasonality and provenance by serving seasonal vegetables every day on the side of their main meals. By not stipulating what the side vegetable will be the caterers are able to work closely with their local supplier, Swansons, to make best use of the vegetables available at different times of year and expose the students to a broader range of produce. By highlighting seasonality on the menu and displaying a provenance map illustrating where their produce has come from, Highland Council caterers are helping to normalise the idea of eating fresh Scottish vegetables every day.

North Ayrshire Council who are Gold FFLSH award holders source salad leaves and vegetables for the schools on Arran from a local community supported agriculture project, Woodside Farm. The farm also collects food waste from the school to use as compost, completing the circular model. The children know the vegetables have come from just down the road and

there are plans to arrange school visits to the farm at a future point when it is safe to do so.

EMPOWERING SCHOOL COOKS AND CATERING STAFF

Food for Life Scotland provide free seasonality training sessions for catering staff. The aim of these sessions is to use seasonal vegetables to engage and inspire school cooks who are often undervalued and the unsung heroes of school food. The training involves cooking and eating seasonal vegetables together and discussing the themes of the FFLSH award. These interactive sessions ensure cooks in FFLSH schools understand and appreciate the importance of good local produce and have the confidence to discuss this with students in their schools.

Food for Life's support of school cooks and advocacy for cooking from scratch with vegetables allows caterers to utilise their skills.

Novena Miller, from West Lothian described her experience of working with Food for Life: ***"When I started as a cook all those years ago, we were actually preparing all fresh vegetables, fresh fruit, meat was all prepared, there were very little processed foods. Over the years these things have changed and as a society we are becoming more and more dependent on processed foods. After being involved...with Food for Life it actually gave you a bit of motivation and made you rethink, to actually ask what was I trained to do? I was actually trained to produce good high quality food."***



PHOTO COURTESY OF JASON TAYLOR

3. IN THE DINING HALL

PHOTO COURTESY OF FOOD FOR LIFE SCOTLAND



9%
buy lunch on the way to school or visit a local shop/ takeaway*

4%
SKIP LUNCH*

82%
of those who eat in the school canteen less than four times a week have a packed lunch instead*

Setting standards for the procurement and serving of vegetables is a crucial step towards increasing veg consumption in schools. But getting vegetables onto the plate is just one part of solving the problem: food-based standards do not automatically lead to students consuming adequate portions of fruit and vegetables at lunchtime (Upton, Upton and Taylor, 2012). In South London secondary schools, where 73% of schools serve meals compliant with school food standards, vegetables are often the main item left on the plate or they go straight in the bin (Guy's & St Thomas' Charity, 2020).

STUDENTS ARE A TOUGH CROWD

The food choices of children and young people are shaped not only by taste preferences but also by peer dynamics, food habits at home, the wider school food environment and social media (Baldwin, Freeman and Kelly, 2018; Addis S and Murphy S, 2019; Calvert, Dempsey and Povey, 2020). As a 'healthy choice', vegetables often become "victims in

"there's no healthy options at all, unless it's school dinners, and nobody wants to stay inside for school dinners."

STUDENT, SECONDARY SCHOOL
(YOUNG FOOD AMBASSADOR)

a battle of wills", not only between children and their parents, but also in the school food context (Veg Power, 2019). The introduction of the 'Healthy Eating in Schools' regulations in Wales in 2013, for instance, was met with resistance as students perceived the guidelines to be "too healthy" and "overpowering" (Addis S and Murphy S, 2019). Younger children may be reluctant to try foods which they are not familiar with while older children may not choose them as a way of demonstrating autonomy (Belot, James and Nolen, 2016). Peer dynamics are particularly important among adolescents, and often the less healthy options are the socially acceptable choice (Calvert, Dempsey and Povey, 2020).

VEG VISIBILITY AND CHOICE COMPETITION IN THE SCHOOL FOOD ENVIRONMENT

School canteens are often time-pressured environments where decision-making on what food to eat happens quickly. **The 'choice architecture' – the way meal options are promoted and presented – has a significant impact on students' food choices and willingness to consume vegetables.** The way vegetables are prepared and presented matters as much as the way in which meals are served and the combination of options on offer. Prominently positioning and promoting vegetables and vegetable-based meals in the school canteen can increase their uptake (Ensaff *et al.*, 2015). Research among secondary students in England has shown that young people perceive less healthy choices to be more visible, prominent and accessible than healthier options (Calvert, Dempsey and Povey, 2020).

*Data from a 2021 Food Foundation UK YouGov poll, for those children who eat from the canteen less than four times per week

“The school lunches do not look good in my daughter’s school. Children have to take the veg themselves, and if the veg are plated, they seem not to be tasty.”

PARENT AND PEAS PLEASE VEG ADVOCATE

Serving vegetables alongside less healthy options which are high in fat, salt or sugar means children and young people are likely to choose the latter at the expense of vegetable consumption (Guy’s & St Thomas’ Charity, 2020). Making a choice between starter, soup or dessert will see most students choose the dessert. Organising the school meal into separate courses and serving dessert after the main course, even incorporating veg into dessert recipes, can

“I think they probably do get too many bread products and it would be nice if they could be a little more creative with some of their snacks, maybe get some more veggies in there”

just down to the caterers – it’s also about providing an environment and opportunities in the dining hall for children and young people to experience and engage with different types of veg.

The fact that vegetables are the meal component most often rejected by students points to the importance of incorporating them into dishes which students commonly enjoy, such as soups, sauces, stews and pies. A salad bar allows students to pick and choose the fresh vegetables they like and smoothies have been found to be a way of increasing the consumption of dark green vegetables among young children (Micha *et al.*, 2018; Guy’s & St Thomas’ Charity, 2020).

IMPROVEMENT IS POSSIBLE

Interventions in schools that specifically focus on increasing fruit and veg consumption show modest but consistently positive outcomes. A 2008 review found that 70% of initiatives promoting fruit and veg in schools were

further increase the consumption of vegetables, as does removing the choice between one or the other (Zellner and Cobuzzi, 2016; Obesity Action Scotland, 2020). Length of lunch breaks determines how long children have to obtain and eat their lunch, with shorter sittings not always giving children enough time to complete a meal (Bergman *et al.*, 2004; Zandian *et al.*, 2012). Moreover, research suggests **shorter lunch breaks can also result in poorer dietary choices, with easier to eat items such as ‘mac ‘n’ cheese’ being chosen as opposed to healthier meals with separate components, such as vegetables** (Townsend, 2014).

Encouraging children to eat veg in the dining hall through ‘choice architecture’ relies on the skills and dedication of catering teams to make innovative, visible choices, such as making vegetable-based recipes appealing and tasty (Upton, Upton and Taylor, 2012). Catering teams also need to understand and see the benefits of dedicating time to fostering healthy lunchtime behaviours and promoting vegetables; keeping a salad bar well stocked and tidy during busy lunch hours for instance, requires staff capacity (Guy’s & St Thomas’ Charity, 2020). However, this isn’t

effective not just in increasing intake, but also in helping to change habits in the long-term (Sa and Lock, 2008). However, the evidence suggests that improvements in intake following fruit and veg school interventions are often higher for fruit than for veg, with a 2018 review of 91 studies in high income countries finding that targeting fruit and veg in schools increased average consumption by 0.28 servings a day, with a smaller impact on veg (0.04 servings) than for fruit (Evans *et al.*, 2012; Micha *et al.*, 2018).

It’s possible that we simply need better designed and more ‘whole school’ approaches in order to see larger uplifts in veg intake at school. For instance, a systematic review of European school trials concluded that multicomponent interventions that both increased the availability and accessibility of fruit and veg in schools and included nutrition education initiatives such as taste testing and cooking classes, were much more effective than either type of intervention on their own (Cauwenberghe *et al.*, 2010). The Soil Association’s ‘Food for Life’ scheme illustrates the potential of such an approach well: the scheme works with schools to change food culture, encouraging children to participate in enrichment activities and certifying



LUNCH-BOXING CLEVER

About half of the UK’s primary school students bring a packed lunch to school (Evans *et al.*, 2020). Despite the significant contribution of packed lunches to children and young people’s dietary intakes, consistent evidence suggests that packed lunches are of poorer nutritional quality than school-made lunches (Stevens *et al.*, 2013). **Compared to school meals, packed lunches contain, on average, higher levels of sugary foods and drink, savoury snacks high in fat and salt, and lower levels of fibre, protein, vegetables and water.** Two large cross-sectional surveys undertaken in the UK found that between 2006 and 2016 very few improvements were seen in the nutritional content of school lunch boxes. Vegetables were found to be the least common foods included in packed lunches, with only 1 in 5 providing any veg or salad and just 10% containing vegetables outside of sandwich fillings, the most common being cucumber, tomatoes, lettuce and carrots (Evans *et al.*, 2020).

With less than 2% of food and soft drink advertising spend going towards promoting vegetables, it is perhaps no surprise that veg does not feature prominently in lunch boxes (Veg Power, 2019). Items which are marketed as

schools whose menus meet a range of health, welfare and environmental criteria. In England the scheme criteria recommend two portions of veg are served with every meal.

Right across the UK there are excellent examples of good practice that highlight how school food could be delivered. For example, East Ayrshire schools hold a Gold FFLSH award, providing high quality organic food sourced as locally as possible. Menus are developed annually with parents and school catering staff and designed to limit the amount of red and red processed meat, increase fruit and veg, and reduce the intake of fat, sugar and salt. Menus rotate every three weeks with designated meat-free days and all students can pre-order their meals either at the start of the day (primary) or via an online ordering portal (secondary). The shift towards a more ‘customer’ focused approach, including alternative queuing and payment systems, has led to greater uptake in school meals (East Ayrshire Council, 2020). **(For examples of how some organisations are working to change school food for the better, see our Autograph Education and TastEd case studies on pages 22 and 23.)**

In West Wales, Carmarthenshire County Council together with local organisations (Carmarthenshire Public Service Board and Carmarthenshire Food Network and Local Business) are working on an experimental project with two schools, in rural and town settings, to update school menus to better reflect their important societal role and impacts. The aim is to design new dishes that make healthier foods more accessible by increasing and diversifying the veg offer, reflecting seasonality and sourcing food locally. One of the schools is placing these menu changes within a ‘whole school’ approach to learning about food and the food system. They are building an outdoor area to support the teaching of different subjects, including growing and cooking.

Wherever possible children should be involved in the development of school food provision – from menu development to how the dining hall looks. Furthermore, combining educational components, parental and peer engagement can all impact on students’ dietary behaviour and consumption of vegetables (Jones *et al.*, 2012; Chaudhary, Sudzina and Mikkelsen, 2020).



Reeby shows off her lunch box. Her mum uses the labelled sections to help give Reeby the right portions of fruit, veg, protein, grains and dairy.

► ‘lunch box’ compatible (crisps, cheese straws, sweets and sugary drinks) may appear to be the convenient choice for parents, albeit a less healthy one. Furthermore, the preparation of healthy packed lunches requires both time and money, which many families on lower incomes cannot afford. Many parents face further challenges given that healthy foods including fresh vegetables are often unavailable in the shops in their vicinity or beyond their budget (Lasko-Skinner, 2020). Alongside that, vegetables can be seen as a ‘risky’ purchase for those on tight budgets,

as children might reject them and both the money and food end up being wasted (Veg Power, 2019).

Moving away from the reliance on packed lunches and towards increasing student uptake of nutritious school meals is the most promising way of increasing children’s vegetable consumption while taking the pressure off parents. Nevertheless, engagement on healthy lunch box contents with parents is crucial to close the quality gap between school lunches and packed lunches.



“The packed lunch provided by the catering company may mean up to five times a week having ham (processed meat), bag of crisps, fruit juice, cake/biscuit – how balanced is it?” PARENT

EAT YOUR GREENS?

As part of our small school food questionnaire (see Box 1 on page 7), we also asked survey respondents whether they actually ate the veg they were served at school. The results were illuminating. **Just over a quarter of respondents (26%) said they didn’t eat veg when they had their lunch at school – a concerningly high number.** When we asked why this group didn’t eat veg for lunch at school, almost 40% said because it wasn’t appealing to them, followed by a third who said they simply hated veg, and 30% who said the veg offered wasn’t the type they liked.

Changing children and teenagers’ attitudes towards veg is therefore crucial, with plenty of opportunities for school and caterers to up their game when it comes to serving tasty and appealing veg. The veg offered was said to be poor quality by 18%, with a further 5% saying it was overcooked – both things that could be remedied were a new focus placed on procurement standards and investment in catering skills.

FIGURE 7
DO YOU EAT VEG WHEN YOU HAVE LUNCH AT SCHOOL?

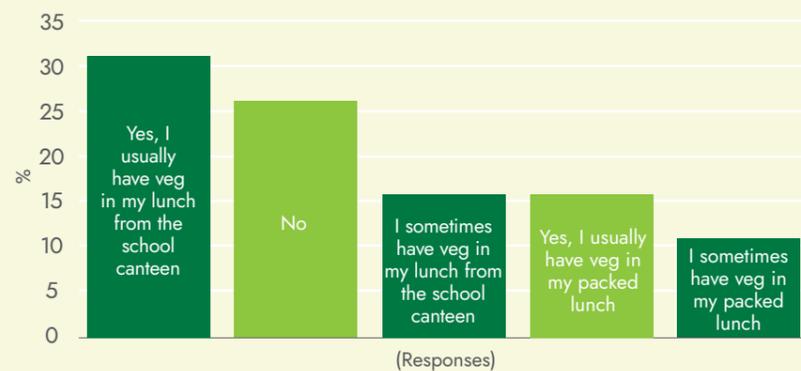


FIGURE 8
IF YOU DON’T EAT VEG FOR LUNCH AT SCHOOL, TELL US WHY NOT?



RECOMMENDATIONS:

- Build food into all aspects of school life, both in the classroom and in the dining hall, so that meals times are not just seen as an inconvenient break between lessons.
- Ensure adequate time for children to eat within a comfortable and welcoming dining environment.
- Involve children, young people, parents and catering staff in developing school food provision to instil ownership and normalise healthier choices. Design and test school food menus and better eating environments for schools with input from young people that align with school food standards. Adopting a more ‘customer’ focus to delivery will also increase uptake of school food.
- Incentivise and support caterers to prepare, promote, and serve tasty and appealing vegetables and vegetable-based dishes in the school canteen through skills training and professional development.
- Limit break-time snack options to more healthy options, such as vegetable dips and smoothies, to increase both vegetable consumption and lunch uptake.
- Actively encourage parents to include vegetables in packed lunches.
- Expand and adequately fund the provision of schemes to provide free and high-quality fruit and veg in schools. Review England’s School Fruit and Veg scheme and identify further opportunities for improvement.



THE VEG ADVOCATE VIEW FROM THE GROUND

There are 180 Peas Please ‘Veg Advocates’ across the UK. Veg Advocates are food activists working in their communities to challenge the food system, supporting Peas Please in the national cause of improving diets through changing food environments. During the last 6 months we asked our Veg Advocate parents

to encourage their children to keep school food diaries, the results of which have informed some of this report. Here are some pictures of school food drawn by their children from during this time, which do not show much veg on the plate.





CASE STUDY

SUSTAIN

EAT WELL TO LEARN WELL, THE IMPORTANCE OF FRUIT AND VEGETABLES IN SCHOOLS



Veg Cities is a campaign of Sustainable Food Places, led by food and farming charity Sustain in partnership with the wider Peas Please initiative.

The importance of school food for academic attainment and healthier diets, particularly for disadvantaged students, has received a much needed boost over the last year and a half, thanks to campaigning by the End Child Food Poverty coalition of civil society organisations, spearheaded by Marcus Rashford. A less well-known school food intervention is the School Fruit and Vegetable Scheme, which offers 2.3 million children aged 5 to 7 attending state-funded primary schools in England one portion of fruit or vegetable each school day. The scheme has shown clear benefits. Government evaluations in 2004, 2006, 2008 and 2010 concluded that it increased consumption, encouraged children to try new fruit



and vegetables that they might not have tried otherwise, and increased knowledge about healthy eating, particularly among children from deprived areas. For some children, it's the only portion of fruit or vegetable they will have all day.

Despite all its benefits, the scheme is some way off when it comes to

The scheme needs to be changed to integrate other interventions to support consumption and should be extended to cover older children

tackling historical low levels of fruit and vegetable consumption. For a start, it only reaches children in Key Stage 1 in England. There is no comparable scheme in Wales or Northern Ireland, although in Scotland some local authorities fund fruit in schools. It also fails to link up with wider environmental or economic development objectives – only 30–40% of the produce is British. The scheme needs to be changed to integrate other interventions to support consumption and should be extended to cover older children in order to deliver long-lasting impact and sustained levels of fruit and vegetable consumption. Sustain have always advocated for a bigger and better fruit and vegetable scheme so it reaches more children and increases the proportion of British seasonal fruit and vegetables used and support the National Food Strategy's recent recommendations to expand and develop the scheme.



CASE STUDY

TastEd

"I TRIED THE RADISH AND IT WAS SUPER SPICY...BUT I SURVIVED!"

Many children cannot name basic fruits and vegetables, never mind enjoy eating them. "I've never felt an onion before", said one five year-old child in a recent TastEd lesson. A child who has never tasted a fresh tomato might believe that he or she doesn't like them. But not every child gets the chance to taste fresh vegetables and fruits at home. TastEd – based on the tried and tested SAPERE method from France and Scandinavia – is simple sensory food education lessons aimed at giving all children the opportunity to try and enjoy vegetables, using all five senses.

TastEd provides fun and practical food education lessons for primary school teachers, although lessons have been delivered by caterers, sports coordinators and SEN teachers too. Children at Washingborough Academy in Lincolnshire listened to the sound of eating tomatoes and discovered they sounded "like a squidgy silence". These sensory activities build familiarity and confidence around trying vegetables.

Feedback from teachers suggests the empowering atmosphere of TastEd lessons enables children to get past their resistance to trying vegetables – even children on the autistic spectrum who have previously found trying new foods very hard. At Prendergast Primary in London, one Reception child who loudly stated before a TastEd lesson that he hated cauliflower, surprised himself by enjoying raw, boiled and roasted cauliflower!



TastEd's golden rules of "no one has to try" and "no one has to like" frees children from the pressure of eating things they may be scared of. Children feel proud of themselves for trying new foods with any of their senses (even licking counts). One Year 2 boy who tried a radish

for the first time shouted to his friends, "I tried the radish and it was super spicy ... But I survived!"

Our long-term aim is for TastEd to become a basic part of every child's education in the UK, just as it is in Finland. Our scheme of work, including online teacher training and over 100 lesson plans covering early years to Year 6 – aligned with the English primary curriculum on cooking and nutrition – is now fully funded for all schools. **Find out more at** www.tasteeducation.com





CASE STUDY

AUTOGRAPH EDUCATION, MITIE
WHAT CAN SCHOOL CATERERS DO TO HELP BOOST VEG CONSUMPTION IN THE DINING HALL?



An example of the salad bars on offer in Autograph's primary schools.



For over 15 years Autograph Education have been serving up creative meals to primary and secondary schools, colleges and academies across the country, focusing on just how impactful a nutritious lunch can be for children's learning and development. They joined the Peas Please initiative back in 2017 with a pledge to increase vegetable consumption for 30% of their school meals portfolio. Since their initial pledge, Autograph have successfully expanded this initiative so that they now serve two portions of veg with every meal in all of their primary schools. Not only that, but they have dramatically increased the amount of veg they serve, winning the Peas Please Veg-o-meter prize in 2020 for the highest proportional increase in the number of veg portions they served compared to the year before of all Peas Please pledgers.

To do this, Autograph Education take a wide-ranging approach to increasing veg consumption. As well as a focus on menu development and sourcing, they also work to get kids interacting with veg so that it's seen as an appealing option. Autograph launched a range of inspiring initiatives to boost consumption, including:

- Providing a selection of different veg as part of meals, balancing between the veg that are the children's favourites as well as providing a variety of seasonal vegetables.
- Offering a minimum of six varieties of vegetables and salads each week, and introducing salad bars into school canteens to encourage greater diversity of veg on offer.

- Restricting the use of frozen vegetables to green beans, peas and sweetcorn to promote fresh seasonal produce.
- Adding extra vegetables to composite dishes such as a Carrot and Courgette Cake, and Chocolate and Beetroot Brownies – and including their homemade Tomato Base Sauce (made from a combination of six different fresh vegetables) in many dishes.
- Many of their vegetarian dishes include pulses such as cannellini beans, chickpeas, kidney beans and lentils, which count towards 5-a-day.
- Introducing a carrot symbol on all primary and nursery menus to show where dishes contain an extra ½ portion of veg (in addition to the 2 portions included).
- Launching a Meat Free Monday to encourage children to eat more vegetables.



CASE STUDY

SCHOOL HOLIDAY ENRICHMENT PROGRAMME

The Welsh Government's School Holiday Enrichment Programme (SHEP), known to pupils and parents as '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. In 2019, approximately 94,000 nutritious meals (breakfast and lunch) were served by education catering staff (Peas Please, 2021a).

SHEP Menu Principles ensure a minimum of two separate portions

SHEP 2021 provided lunches to approximately 8,000 children for at least 12 days of the summer holidays, a potential 96,000 lunchtime servings of two vegetables per child.

of vegetables and/or salad are served with every lunch meal, going beyond the current term time lunch requirements in primary schools (Peas Please, 2021a). Staff receive Nutrition Skills for Life: Level 2 Community Food and Nutrition Skills training, among others and deliver six nutrition sessions (WLGA, 2021). Children are encouraged to try new foods and take up school meals, rather than bring packed lunches.



Evaluation has found children's dietary attitudes changing:

- 93% of children agreed they understood "more about looking after myself with healthy food and exercise".
- 84% thought they would "Keep trying new foods or eating a wider variety of foods".
- 79% thought they would "Make healthier food choices" after SHEP is finished.
- 76% thought they would "Eat school meals at lunchtime more often" after SHEP is finished (Data Cymru, 2019).

SHEP 2021 provided lunches to approximately 8,000 children for at least 12 days of the summer holidays, a potential 96,000 lunchtime servings of two vegetables per child. Families are invited to lunch at least once per week in each scheme, depending on local Covid risk assessment, adding to the total number of vegetable portions consumed.

In Cardiff, where family meals within SHEP could not take place, food bags containing all the ingredients needed to make a healthy family meal with a step by step recipe card and links to a practical, easy to follow 'how to' video were provided. This encouraged families to prepare, cook and eat together, a fun activity while providing a family meal full of vegetables. The recipes provided were inclusive in that the ingredients were ambient, so could be stored safely, as well as being culturally suitable for all. Additionally, no additional ingredients needed to be purchased in order to take part in the activity. The recipes were also suitable for those with limited

In total more than 5,000 family food bags were delivered to families across Cardiff alone, providing more than 20,000 meals and 72,500 portions of veg

equipment and on budget so could be made at little cost. The feedback from SHEP staff and coordinators has been overwhelming, with families sharing their inspirational photographs and videos on social media.

In total more than 5,000 family food bags were delivered to families across Cardiff alone, providing more than 20,000 meals and 72,500 portions of veg.

4. SCHOOL GROWING SCHEMES

Gardening and growing schemes in schools are widely reported to have positive impacts on children’s wellbeing, healthier eating and attitudes towards food. It can be an engaging, hands-on method of educating children about nutrition, health, and fruit and vegetables. Yet, evidence on the impacts of school gardening on fruit and veg consumption directly is mixed.

HARVESTING THE BENEFITS OF GROWING?

In the UK, there are several programmes available for schools to take part in. One such is the Royal Horticulture Society (RHS) Campaign for School Gardening programme which was launched in 2007. This offers a range of activities taking into consideration what space schools have available to use, thus allowing schools in urban areas which may not have gardens to still be involved. The programme aims to encourage schools to get involved in growing fruit and vegetables, to enhance curriculum activities, and to educate children in the values of gardening, such as “healthy living” and “sustainability of the natural world” (RHS, 2021). **By 2010, 11,500 primary schools in the UK had implemented the RHS gardening programme with teachers reporting improvements in the children’s confidence, social interactions, knowledge and attitude towards food** (Passy, Morris and Reed, 2010). (See our ISS case study on page 26 for examples of how businesses are also encouraging school growing schemes.)



PHOTO COURTESY OF ISS

In Northern Ireland the Sow, Grow, Munch project encourages children to grow fruit and vegetables and explore where food comes from while promoting healthy eating. It not only aims to raise awareness among young people and teaching staff at schools on the importance of food and healthy eating but also showcases the opportunities for future careers in the food industry (Jilly Dougan, 2016). In Scotland the Food for Thought initiative

“ We offer veg every day. In fact we have a wee veg garden where the kids grow and harvest the veg and I cook it for lunch. The kids have a good knowledge of FARM TO FORK and understand the importance of homegrown food and our carbon footprint. I find they tend to eat it if they have sown the seeds and nurtured the produce and actually dug it up themself”

COOK AT SHISKINE PRIMARY SCHOOL, ISLE OF ARRAN (FFL GOLD)

which provides grow your own vegetables packs often also funds growing in schools (SCVO, 2021). The Food for Life multi-setting programme is another scheme available which aims to make healthy, taste and sustainable meals the norm for everyone by working in nurseries, schools, hospitals and carer homes (Food For Life, 2021b). The programme engages with people of all ages to grow food, cook and have a positive connection with produce.

As we know, the benefits of growing go far beyond the simple harvesting of veg. Alongside physical health there can be additional benefits for mental health. GROW, a new multi-setting initiative founded by George Lamb that aspires to become part of the national curriculum by 2030, aims to connect students in secondary schools with nature and provide them with the skills to improve their wellbeing via activities such as farming, mindfulness and meditation (GROW, 2021).



PHOTO COURTESY OF ISS

GROWING AS PART OF THE SCHOOL DAY

The health-promoting school approach recommended by the World Health Organization suggests that school gardens be incorporated into the nutrition curriculum, as little evidence has been found indicating school gardening in isolation alone can improve children’s fruit and vegetable consumption (Christian *et al.*, 2014; WHO, 2021). However, there is better evidence to suggest that **multicomponent interventions that include school gardening alongside other activities can impact on diet**. For example, a 2009 study reported an increase in vegetable intake when children received nutrition education that included gardening (Parmer *et al.*, 2009). A recent study in the USA also found a significant increase in vegetable consumption with a longer-term intervention, in this case nine months, which consisted of school gardening, nutrition and cooking lessons led by teachers and parents (Davis *et al.*, 2021). It builds the case for the benefits and success of school growing programmes that are integrated into the wider curriculum and supported by motivated adults.

A common theme among the literature was the impact of having teachers, parents and volunteers involved in the gardening programs. The teacher’s willingness and

interest in the importance of school gardening can impact children’s consumption of fruit and vegetables (Christian *et al.*, 2014; Ohly *et al.*, 2016). In addition, parents who are actively involved in school initiatives promoting fruit and veg, including school gardening, saw higher consumption of vegetables (Ransley *et al.*, 2010).

RECOMMENDATIONS:

- Bring school gardening and growing into the wider school curriculum to maximise opportunities for learning, from nutrition education to practical growing and food preparation skills, involving teachers and parents in growing projects wherever possible.
- Increase funding for school growing schemes and expand these further into urban areas where space may not be readily available.



CASE STUDY

ISS
FEEDING HUNGRY MINDS



As well as serving up school lunches, caterers ISS offer schools a programme of 'food education' activities, designed to both showcase the great quality ingredients on their menus and encourage children to eat more fruits and vegetables. These range from gardening days and farm visits to nutrition assemblies, cookery clubs and much more.

Recently ISS held 'Green Fingers – the Big Grow' in partnership with Innocent Drinks, a two-week campaign which celebrated growing, cooking and eating fresh fruit and veg. It championed plant-based dishes and promoted the environmental benefits of veg-packed diets. Vegan-friendly tasters and guest dishes popped up in

dining halls and online gardening and cooking sessions were delivered by nutritionists, chefs and gardening experts to around 2,000 pupils across the country.

"It was great to see the children getting their hands mucky in compost (a first for many of them), being able to learn about where our foods come from (they were super surprised at how small the seeds were) and to be able to unleash some creativity in designing their own garden. They can't wait to (literally) see the fruits of their labour. The kids loved it as did the adults."

"The children really enjoyed yesterday's session. They were really excited about designing their own gardens and they loved getting their hands dirty when planting their spinach, beetroot, radish and pea seeds."

TV gardener, Chris Collins, supported with the virtual gardening sessions. A long-standing partner with ISS, Chris has hosted several gardening days and assemblies with the caterers over the past ten years. Together with charity School Food Matters, they have run gardening grant schemes and parent, teacher and pupil gardening sessions, established to engage the whole school community with the joys of 'growing your own'. Many schools have enhanced their school gardens and green spaces as part of the schemes, using the grant money to introduce new plants, raised beds, gardening equipment and even greenhouses!

Elsewhere at ISS, work continues to get more children eating veg. The caterers have increased the number of vegetarian and vegan dishes available on all their menus. Cucumber and pepper crudit  snacks in queues help keep conversations around eating tasty veg going and a new 'Feed Your Eco!' plant-based concept in secondary schools offers older students more ways to get their '5-a-day' during school hours.

Find out more at www.feedinghungryminds.co.uk



5. FOOD WASTE

HOW MUCH FOOD IS WASTED IN SCHOOLS?

Very little data exists around the amount of food wasted in schools, and most of what we do have comes from primary schools. There hasn't been a comprehensive study into school food waste since WRAP's 2011 report which concluded that "food waste was a major component of waste from schools, estimated to account for almost half of the waste, by weight, from primary schools in England and almost a third of waste, by weight, from secondary schools in England" (WRAP, 2011). This was supported by a 2017 study by Brighton and Hove Food Partnership suggesting that this equated to 25–30kg of food per year per primary school pupil being thrown away (Sutton, 2017).

The most recent study into the prevalence and causes of food waste in schools was undertaken in early 2020 in Scotland and was commissioned by Zero Waste Scotland (see our Zero Waste Scotland case study on page 29).

The focus again was on primary schools and findings suggested that plate waste was a far bigger issue for total food waste than kitchen or preparation waste, particularly in larger schools, where 69% of food waste came from children's plates. Project Bind's Eat Smart study of nine schools in Newcastle upon Tyne in 2018/19 suggested an average waste of 400–450g per pupil per week, equivalent to up to nine child-sized portions of veg (50g) (BIND, 2019).

WHY IS FOOD WASTED?

Of the food wasted in the Zero Waste Scotland study, around 33% was fruit and vegetables, with the majority of food wasted (55%) being starchy carbohydrates such as breads, rice, cereals and potatoes. In many cases it was observed that these starchy foods made up substantially more of a meal than recommended in the Eatwell Guide, which could account for the higher waste (NHS, 2019).

This report suggested that some of the key reasons for food wasted at those primary schools they studied were:

- Liquid spillages on food trays were common resulting in unpalatable, soggy food that was left untouched, particularly with younger children.
- Many younger age groups appeared to have difficulty cutting food or required help in eating but there was often a lack of adult supervision in the dining hall due to pressures on teaching and support staff.
- Where dessert was served at the same time as other food this would often lead to the main course not being touched or only partially finished.



At secondary schools in the London boroughs of Lambeth and Southwark where students are given a choice over what food they eat, it was found that most selected not to have the vegetables on offer, therefore creating food waste in the kitchens. However, when they were served it automatically, around 80% ended up in the bin (Guy's & St Thomas' Charity, 2020). A 'one size fits all' approach to school food can often inadvertently contribute to food waste.

Portion sizes are often the same for children of different ages which can result in food being discarded.

Often overlooked are children who suffer from complex eating needs and who for various reasons might not suit the standardised approach to school meals.

This often leads to an increase in food waste, especially food they don't recognise or which is presented in an unappealing way, e.g. certain foods touching on a plate or hot/cold combinations. It is also important to ensure there are adult role models who are also eating (and enjoying) the same food in the same place. Anecdotal evidence from Zero Waste Scotland suggests that often teachers don't eat with their students because they perceive the food to be too expensive or unhealthy.

While here we have been talking about 'plate waste' within schools, in 2018 it was estimated that 1.1 million tonnes of food were wasted in the UK hospitality and food service sector, 70% of which was intended to be consumed by people. This shows there are undoubtedly opportunities

► for school food providers/caterers to reduce the amount of food wasted before it even gets to the dining hall. However, caterers bear the financial risk for food they serve, and some may therefore lack the incentive to remove convenient, profitable and energy-dense options from the menu in favour of vegetables which may end up being wasted.

MEASURING SUCCESS

The importance of measuring food waste, both in the dining halls and in kitchens, cannot be overstated. **The reasons for reducing food waste are multiple – dietary, financial, environmental and moral – but for these drivers to be really effective we need to be able to measure the problem. Pre-pandemic this realisation was gaining momentum, with many schools using dedicated systems to track their food waste. However, the upheavals caused by multiple lockdowns kiboshed many operators’ plans to introduce such systems** (FootPrint, 2021). Some studies have suggested that encouraging children to get involved with reducing food waste can also help. For example, engaging students to weigh food waste in the dining hall as part of a project can not only act as a powerful intervention to reduce plate waste but the resulting data can be incorporated into a wide variety of learnings in the classroom.



TAKING A FOOD SYSTEMS APPROACH TO WASTE

More qualitative and quantitative data are required to better understand the issues, but what is clear is that food waste is the end product of the wider school food system and therefore can't be looked at in isolation. In Scotland free school meals for all primary-aged children will be introduced 2022. It is widely speculated that this could lead to an increase in food waste unless a 'whole school' approach is taken where it is matched with equally progressive interventions in the dining hall, kitchens and even classrooms to encourage children to engage with and eat more veg.

RETHINKING WASTE

Rather than seeing food waste as inevitable, some schools are rethinking how they approach the issue. For example, at St Bridget's Primary School in Kilbirnie, pupils with clean plates are photographed and praised on the school Twitter page and in assemblies; every child who finishes their meal or packed lunch is crowned a Waste Warrior. Parents are also encouraged to do the same at home to instil the idea that food shouldn't be wasted anywhere.

Even more innovative is Cumnock Academy, 1 of 13 East Ayrshire schools where surplus food is portioned, packaged up and blast-chilled so pupils can take it home. Fresh sandwiches, salad and fruit are also free to take away and in one month alone in 2019, 1,500 portions of food were taken. With around 30% of UK children described as living in poverty and school food often being the best meal they will have that day, this initiative tackles more than just reducing food waste (End Child Poverty, 2021).



RECOMMENDATIONS:

- Ensure food is appetising for all, high quality, with diverse ingredients and appropriate portion sizes, reducing any undue emphasis on refined, starchy carbohydrates.
- Develop innovative ways to reduce food waste in the school environment including opportunities to positively engage students on the issue.
- Ensure food waste is measured both in dining halls and kitchens, engaging pupils in the process where possible.
- Allow adequate time for children to finish meals, which may help to reduce food waste.
- Recognise that food waste is the product of wider school system and catering issues.



CASE STUDY

ZERO WASTE SCOTLAND
PRIMARY SCHOOL LUNCH FOOD WASTE



In early 2020 Zero Waste Scotland conducted a four-week pilot study across seven primary schools in two Scottish local authorities to find out how much food waste was generated in these schools during lunchtime. The amount and types of food thrown away were measured, and in one school liquid waste like milk and yoghurts was also measured. In addition, a pilot study was used to assess the effectiveness of manual food waste measurement using the Zero Waste Scotland 'Waste Warriors' toolkit in half of the schools, compared against 'smart' monitoring software in the others. There was also a trial changing the lunch timing for different age groups with the initial hypothesis that the younger age group (P1–P3) may eat more if they had been out to play first (Zero Waste Scotland, 2021).

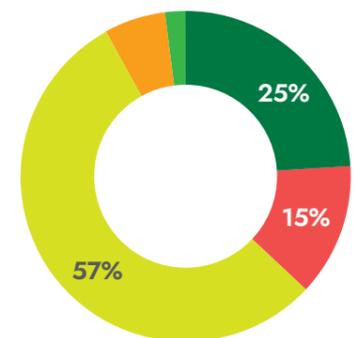
The results certainly gave lots of food for thought, as they didn't necessarily match expectations! While a longer measurement period would have given more robust results, the study showed that the 'smart' monitoring system used didn't provide any additional benefit over the manual 'Waste Warriors' toolkit and there wasn't a positive impact from changing the lunchtime order of the different age groups (Zero Waste Scotland, 2021). It was found that plate waste is the biggest issue, perhaps reflecting many schools' change to pre-ordering systems reducing kitchen and counter waste. It is clear that this is where the main

focus is required for future studies. Portion size, menu choices, the presentation of food, and adult supervision influenced the levels of food waste. The youngest age groups' plate waste was around 36% higher and milk waste 376% higher than for the oldest age group.

Portion size, menu choices, the presentation of food, and adult supervision influenced the levels of food waste.

Food waste doesn't just have an environmental impact, it also means lost nutrition for students; 145 litres of milk was wasted in one school, which represents the daily calcium requirement of 420 children. Vegetables (not including potatoes) were the second highest wasted food group, followed by fruit, with younger students again appearing to struggle to eat whole fruit, for example. As you might imagine, the non-fruit desserts were much more rarely wasted!

FIGURE 9
PERCENTAGE WASTE FROM DIFFERENT FOOD GROUPS, ZWS 2020 STUDY



- VEGETABLES
- FRUIT
- BREADS, CEREALS AND POTATOES
- MEAT, FISH AND ALTERNATIVES
- DESSERTS (EXC. FRUIT)



An example of a 'finished' tray showing dessert eaten and rest, including milk, going to waste. Also note the lack of any vegetables.



An example 'finished' tray showing uneaten food and spilt milk.

6. BEYOND THE SCHOOL GATES

While efforts to support students to make healthier choices in school canteens can lead to significant improvements, many students still choose to buy their meals and snacks at supermarkets, convenience stores, sandwich shops, bakeries or fast-food outlets. A study in Scotland showed that 63% of secondary students sometimes purchase food outside school during lunchtime (Scottish Government, 2014b). Research in London found that of those children given permission to leave the school grounds, 97% purchased food beyond the school gates (Sinclair *et al.*, 2008).

Young people choose to eat off-campus for a variety of reasons: some prefer the food on offer outside the school grounds, others simply enjoy the freedom to leave the school grounds for a change of scene and to spend time with friends. Peer conformity and easy access to perceived 'cheaper' food further lures them away from the dining halls (Scottish Government, 2014b; RSPH, 2019).

“ My son he’s 14 and his friends were taking the mick out of him because he’s never been to KFC. So they insisted they had to educate him because he didn’t know what he was missing out on My kids tend to go to Subway because they can add bits into it ... but the influence from friends and peers is, y’know, really strong. Because I know my daughter would previously go and all with veg and now she’ll just get cheese and ham because other people don’t [have veg] so yeah it’s difficult ” PARENT



ACCORDING TO A 2021 FOOD FOUNDATION UK YOUNG POLL...

34% OF YOUNG PEOPLE NEVER EAT IN SCHOOL CANTEENS

OF THOSE CHILDREN WHO DON'T REGULARLY EAT FROM THE CANTEEN

35% DON'T LIKE THE FOOD

20% DON'T THINK IT'S GOOD VALUE FOR MONEY

16% SAID IT WAS NOT AFFORDABLE

LESS HEALTHY CHOICES ARE ABUNDANT AROUND SCHOOLS

Food environments around schools have been described as “de-facto extensions of the school environment” but they are not subject to the same regulations often leading to a stark contrast between the nutritional quality available in schools versus what’s on offer beyond the school gates. Food outlets and shops within walking-distance from schools, or where leisure centres are attached to schools, often offer energy-dense, processed foods at affordable prices. **Items which are often not allowed to be sold in schools – crisps, confectionary, sugary drinks, and so on – are found aplenty in the shops and food outlets around schools** (RSPH, 2019). A study in Glasgow showed that students eating outside the school campus were most likely to choose options such as chips, sausage rolls, pizza, pot noodles, burgers, rolls or doner kebabs when eating outside of school. Of these, half exceeded energy recommendations, more than half exceeded the recommended levels of fat and saturated fat, and over a third exceeded recommended salt levels. None of their choices included vegetables (Scottish Government, 2014b).

“ Eighty percent of processed food sold in the UK is unhealthy. There is a sound commercial reason for this: less healthy food is more popular. The human appetite evolved ... to pounce on any food that is high in fat and sugar. ”

NATIONAL FOOD STRATEGY FOR ENGLAND, JULY 2021

Students at schools with fast-food outlets in the vicinity are more likely to eat at those shops than students at schools without such outlets in the vicinity (RSPH, 2019). In Glasgow, students have an average of 35 opportunities to purchase energy-dense food within a ten-minute walking radius from their school while those in London have access to an average of six fast-food outlets within a five-minute walk, rising to eight in some of the poorest neighbourhoods (Ellaway *et al.*, 2012). At the same time, children from more deprived backgrounds are more likely to leave the school grounds and purchase food outside the school gates at lunchtime (RSPH, 2019). In 2018, the Cardiff Council Policy and Planning department mapped food and drink outlets in Cardiff along with detail of childhood obesity rates and deprivation data

and plotted primary and secondary schools. The mapping work found an association between deprivation, school location, and hot food outlet density – with hot food outlets more likely (78%) to be located near schools in areas of deprivation or higher childhood obesity (WHIASU, 2021).

COUNTING THE COST OF LESS HEALTHY FOOD

Young people often do not have much of their own money but relish the autonomy to spend what they do have. Price is therefore a key factor in young peoples’ food choices. In Scotland, young people have an average of £2.82 per day to spend on lunch (Scottish Government, 2014b). The price difference between more healthy and less healthy foods particularly impacts students from lower income backgrounds and results in unequal access to healthy dietary choices.

“ My school, all the healthy food is far more expensive and even things like pasta is way more than what you’d get for, like, a sausage and egg bap. ”

STUDENT, SECONDARY SCHOOL (YOUNG FOOD AMBASSADOR)

At the same time, young people can feel bombarded by advertising for less healthy foods on bus stops, billboards, social media and TV (Feed Britain Better, 2020). A 2020 study found that most young people (90.8%) in the UK reported awareness of a least one marketing activity for foods high in salt, fat or sugar, but over half said they had seen more than 70 during the previous month. It also suggested that those with higher online engagement with food brands and content, particularly through online video, were more likely to consume less healthy foods and drinks (Baldwin, Freeman and Kelly, 2018). This isn’t simply by chance: major online platforms work to give preference to “less overt, longer-viewed advertisements”, getting around any media literacy children might have (United Nations, 1990). Brands understand that digital marketing not only amplifies traditional advertising techniques but also directly leads to increased sales (Murphy *et al.*, 2020).

Food outlets offer promotions or meal deals for less healthy foods while some promotions are specifically aimed at young people, for instance discounts on food items for those in school uniform (Crawford *et al.*, 2017; RSPH, 2019). This can all reinforce young peoples’ perception that less healthy choices are not only more affordable than

▶ healthy choices, but that they are being actively encouraged to choose them (Calvert, Dempsey and Povey, 2020; Feed Britain Better, 2020).

“**Definitely a lot of scope to use really good branding to get kids and their parents to eat more healthily.**” PARENT

The World Health Organization identifies all food marketing and advertising of less healthy food as detrimental to health (WHO, 2016). There is therefore a much greater role to be played by Government and food businesses alike in protecting children from such advertising, with an increasing urgency to include social media in regulations and policies designed to limit children’s exposure to less healthy food marketing.

Working with retailers and convenience stores to encourage the promotion of vegetable-based meals and other healthy foods can constitute one crucial step in improving the food environment. The Scottish Healthy Living Programme has been supporting convenience stores to promote healthier choices through point-of-sale materials and marketing support (see the HLP case study on page 34). At the same time, the Young Scot Reward Scheme encourages young people to make healthy choices in school canteens, which could be extended to the food environment around schools, while the recently launched SMASH app gives young people under 25 access to discounts on healthier foods (Scottish Government, 2014b; SMASH, 2021). The *Eat Them to Defeat Them* campaign shows that applying the creativity and power of the advertising industry to vegetables can make vegetables more appealing and encourage children to eat more in schools as well as at home (Veg Power, 2019) (see Veg Power case study on page 33).

ENJOY WHAT YOU EAT AND WHERE YOU EAT IT

The food environment beyond the school gate plays a crucial role in shaping young people’s food choices but poses significant challenges for vegetable consumption; actions and policies to encourage healthy choices must therefore reach beyond the school gate. The Healthy Weight Healthy Wales strategy pledges far-reaching changes over this decade in the food environment, including educational and community settings (Welsh Government, 2020a). Plans include restricting advertising and promotion of high

RECOMMENDATIONS:

- ▶ Invest in dining infrastructure to make the school lunch environment convenient and appealing.
- ▶ Invest in the catering profession to ensure that school meals are not only healthy and freshly prepared but also tastier and better value than the options beyond the school gate.
- ▶ Adopt a combination of stay-in school policies and lunchtime activities to encourage students to opt for a school meal.
- ▶ Invest in the establishment of alternative food outlets around campus.
- ▶ Implement the ban on advertising products high in fat, sugar or salt (HFSS) after 9pm and the restriction of paid-for HFSS advertising online at the end of 2022 across the UK as has been proposed.
- ▶ Encourage retailers in the school vicinity to position, advertise and label healthy choices including fruit and vegetables to be more visible and attractive to students. For example, as part of a meal deal – a side salad instead of chips.
- ▶ Promote the uptake of adverts for healthy choices like *Eat Them to Defeat Them* in food outlets around schools.

in fat, sugar or salt (HFSS) foods in and around schools, limiting the establishment of takeaways around schools and increasing promotion of healthier food and drink across a range of community settings.

However, there are many ways in which schools have been successful in keeping more students eating in school canteens. Making school food more appetising and of a higher quality, and ensuring that dining spaces are nicer to spend time in is crucial. Offering activities during lunch breaks and reward points for choosing school meals has also been seen to work. To cater for students’ desire for a change of scene or different meal options to what is on offer in the school canteen, some schools have set up alternative outlets on the school grounds or beyond the gates which serve food in line with school dietary regulations. Stay-in-school policies in tandem with lunchtime activities and incentive programmes appear to be a promising strategy (Scottish Government, 2014b). Encouraging students to stay on-site is no easy task, but ultimately, it’s about providing good quality, appetising food served well in a place where young people want to be.



CASE STUDY

VEG POWER
INSPIRING KIDS TO EAT MORE VEGETABLES



As part of the *Eat Them to Defeat Them* campaign which launched in 2019, Veg Power runs a successful schools’ programme which has grown year on year. Our campaign engages children on the subject of veg in a different way to traditional public health messaging using a counter-intuitive, fun and humorous idea to beat the vegetables by eating them. From extensive research with a range of experts and children, we identified that kids learn best about veg through play and fun. At all times the kids understand that *Eat Them to Defeat Them* is a ruse to get them to eat vegetables, they never actually think vegetables are evil! What we ultimately want is for kids to repeat the veg-eating behaviour so that it becomes a habit not a one off. In fact, on our school visits the kids are always very willing to engage and as we build a huge sense of fun, we see the resistance to trying veg melt away.

VEGPOWER

Our schools programme runs for six weeks, with a different veg featured each week. The school catering teams play a crucial role in bringing the campaign to life within schools – often with the support of local suppliers – by preparing veg in a variety of ways, decorating the dining rooms and supporting our mission. We also distribute branded packs containing a vegetable reward chart and sticker pack, alongside a puzzle book co-created and funded by Public Health England’s Change4Life campaign. This year we had an impressive 1,900 schools sign up which equates to around 500,000 kids. All of this was possible through generous support from Aldi, Asda, Birds Eye, Co-op, Lidl, Total Produce, Ocado, Sainsbury’s, Tesco and Waitrose, and of course our partners ITV, Channel 4 and Sky.

While our evaluation of the 2021 programme is currently ongoing,

we know from last year that 81% of school staff confirmed it was more popular than other healthy eating initiatives and 76% of kids in schools said the campaign made eating veg more fun. Of course, we were delighted with these results. In the future, we want to continue our work to increase veg consumption among children and continue to grow the schools programme so that we are reaching more schools and kids across the nation. We know the appetite is there as unfortunately we had to turn some schools down this year. We’re already planning *Eat Them to Defeat Them 4*, which is scheduled for Spring 2022, so watch this space!

In addition to all of this we’re keen to encourage all of the UK to eat more home grown seasonal veg as it has benefits for our health, planet and our economy. Later this year we’ll be running some creative initiatives to engage and inspire the British public, follow us on Twitter (@VegPowerUK) and Instagram (@vegpoweruk) to find out more.





CASE STUDY

SCOTLAND'S HEALTHY LIVING PROGRAMME
ENCOURAGING CHILDREN TO MAKE THE HEALTHIER CHOICE AT LUNCHTIME

Convenience retail stores have had a bad reputation over the years for their 'food to go' offering and in the majority often selling sausage or bacon rolls and hot dogs. Convenience retailers have reported that up to 75% of lunchtime trade comes from secondary school students.

Many convenience retailers feel a sense of responsibility in what they offer to children at lunchtime and although the sausage rolls, etc., are the products that drive sales, they are also eager to offer healthy choices. Many retailers have young families and know the importance of children having a healthy, balanced diet.

Funded by the Scottish Government, the Healthy Living Programme (HLP) created a range of merchandising aids in late 2020 that retailers could use to encourage consumers to opt for the healthier option. The aids needed to make the consumer stop and think about their choice of meal but also not make them feel guilty if they didn't make a healthier purchase (SGF, 2021).

HLP worked with six different stores in deprived areas of Scotland and supported them in changing their menus and using our tools to highlight these offerings. Different offerings that were trialled were:

- Vegetable Soup & Sandwich meal deal
- Free salad on all freshly made sandwiches
- Salad bars in food to go section
- Make your own salad boxes



HLP provided blackboards to promote the offerings, meal deal bags to allow the retailer to make healthier meal deals for the students to pick up, and shelf 'highlighters' that signposted the healthier option in sandwiches and other meal options.

On the six stores piloted, all saw a small rise of sales of healthier products with one store reporting 10% of their overall lunchtime sales were salad boxes. Due to restrictions

in place throughout early 2021, the pilot is still ongoing to allow for obtaining more precise data. Overall the study found that students in the senior stage of school were more willing to try the healthier option than primary-age children.

One learning the retailers have conveyed is that up-selling and education is key to promoting healthier options especially to children. If the question is asked when making their sandwiches "would you like salad?", 2 out of 5 children in the pilot said yes. Displays need to be bright and attract the children to the products and the food must be fresh and look appealing.



CONCLUSIONS: The need for an integrated 'whole school' approach

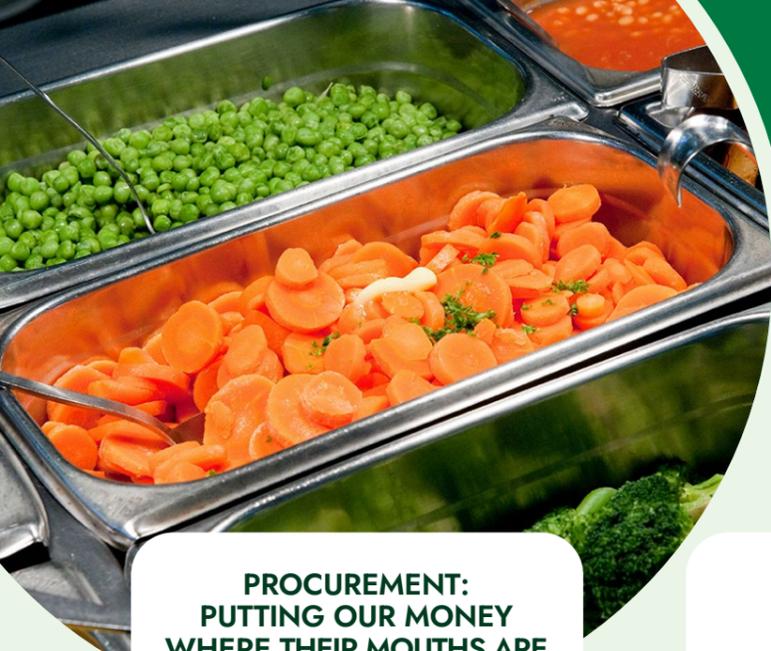
Increasing veg consumption in schools is about more than just getting veg on a plate; closing the gap between veg provision and veg consumption is a complex issue. When compared to school food systems in many of the Nordic nations and countries like Japan where school food is just another part of a student's education, much of the UK is lagging behind. Even in Scotland where it's been statutory to promote good health in schools since 2007 there's much more that could be done.

As schools return this September after a rollercoaster 18 months during the Covid-19 pandemic, what lessons have we learnt? There is an opportunity to change the way we do school food, starting with a unified approach where disparities between nations are eliminated and ensuring that receipt of good school food is a right, irrespective of where you live or how much your parents earn.

It was encouraging to see England's National Food Strategy advocating a 'whole school' approach' to food – where healthy food is reflected and reinforced in all aspects of school life – but for this to happen we need to recognise that there is not a silver bullet. How we do school food is just a microcosm of the food system as a whole; how we grow, buy, cook and serve food – and those people that make those things happen – all play hugely important and interconnected parts. At the end of the day, school food is more than just a meal – it is a reflection not only of how much we value the health and wellbeing of our children, but how much we value food in society. Public food must reflect the best of public values and that means it's about more than just veg.

But it's not rocket science. Getting children to eat more veg in schools is about creating healthy school food environments – appetising and tasty food, prepared with care, served in an appealing way in a place they want to eat it. At its heart, and to do it right, children and young people must be involved all along the way – after all, they'll be the ones who'll decide whether they want to eat it or not!





FEEDING OUR FUTURE

An in**VEG**tigation into UK school food 2021



Summary of recommendations

PROCUREMENT: PUTTING OUR MONEY WHERE THEIR MOUTHS ARE



- Revise procurement standards to ensure food is healthy and sustainably sourced with standards mandatory for schools.
- Ensure nutrition, welfare and environmental standards are assigned more importance in tendering decisions
- Fund and expand evaluated pilots into Dynamic Purchasing Systems.
- Adopt a Community Wealth Building approach to procurement.
- Adopt a 'whole school' approach and require schools to work with food accreditation schemes.
- Ensure effective monitoring and implementation of school food standards.

IN THE DINING HALL



- Integrate food into all aspects of school life.
- Ensure adequate time for meal breaks in a place students want to eat.
- Involve children, parents and staff in school food provision and adopt a 'customer' focused delivery.
- Support caterers with training and development to provide tasty and appealing veg and veg-based meals.
- Limit break-time snacks to more healthy options.
- Actively encourage parents to include vegetables in packed lunches.
- Review and look to fund schemes for free fruit and veg in schools.

SCHOOL GROWING SCHEMES



- Bring school gardening and growing into the wider school curriculum.
- Increase funding for growing schemes and expand further into urban areas.

FOOD WASTE



- Ensure food is appetising, with appropriate portion sizes and reduce any undue emphasis on refined carbohydrates.
- Develop innovative ways to engage with students and reduce food.
- Measure school food waste and involve pupils in the process where possible.
- Allow adequate time for children to finish meals.
- Recognise that food waste is the product of wider school system and catering issues.

BEYOND THE SCHOOL GATES



- Invest in dining infrastructure and ensure that where students eat is comfortable and a nice place to be.
- Invest in the catering profession to ensure the creation of appetising, healthy and good value school meals.
- Adopt measures to encourage students to stay in school over breaks and opt for a school meal.
- Invest in the establishment of alternative food outlets around campuses.
- Implement the proposed ban on advertising products high in fat, sugar or salt (HFSS) after the 9pm watershed and restrict paid-for HFSS advertising online at the end of 2022.
- Work with retailers to provide and promote healthier options.
- Promote healthy options and campaigns in schools.

MAKING A MEAL OF LEARNING AND WELLBEING

Implement Universal Free School Meals across the UK at the earliest opportunity, expanding Free School Meal eligibility to all children living in poverty as a first step.

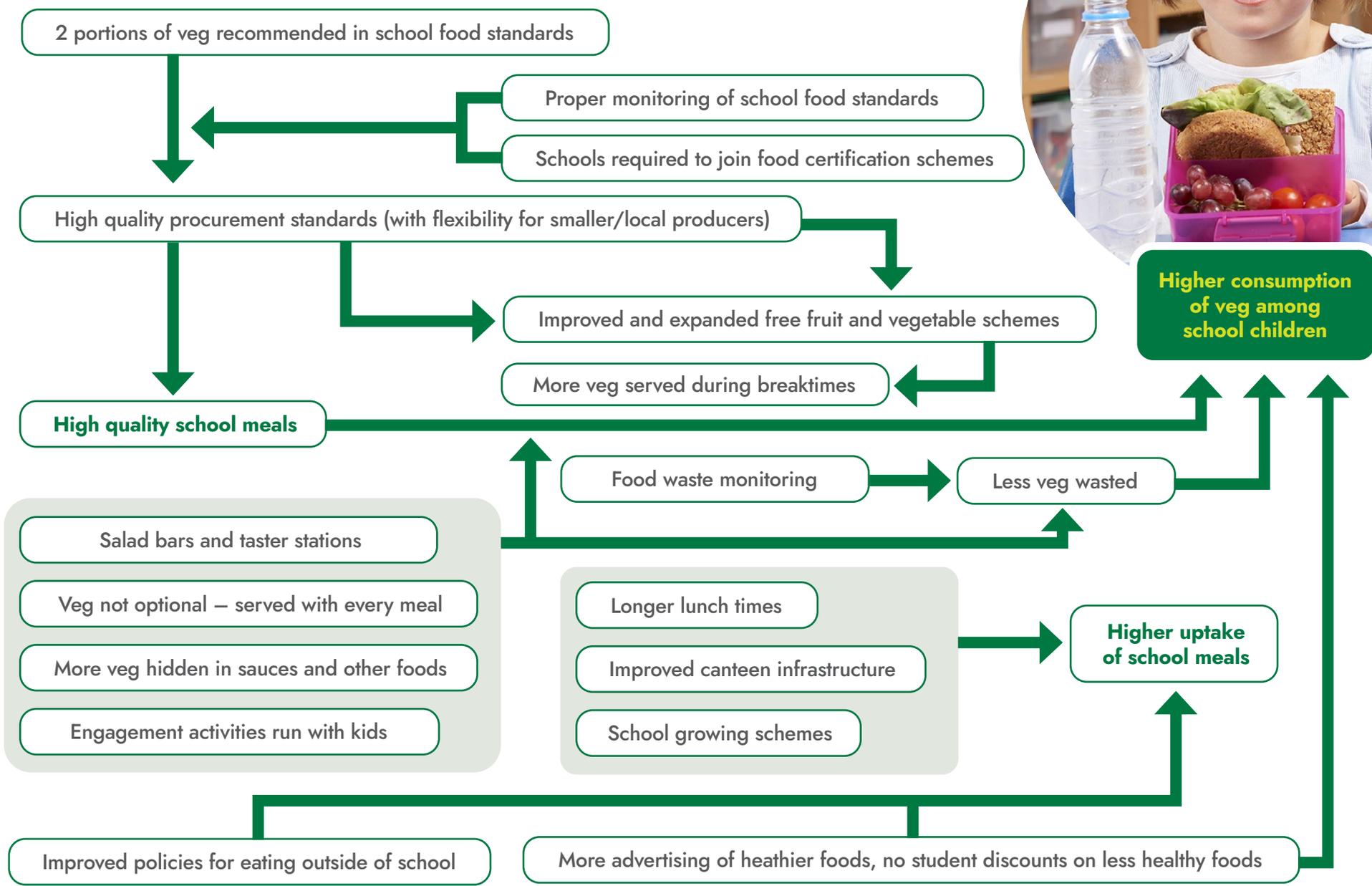
All school food standards should recommend at least two portions of veg in every meal.

Nations to undertake school food reviews and invest in opportunities to improve and implement school food standards in and out of term time.

THE VICIOUS VEG CYCLE OF **LOW CONSUMPTION** AMONG SCHOOL CHILDREN



THE VIRTUOUS VEG CYCLE TO INCREASE VEG CONSUMPTION AMONG SCHOOL CHILDREN



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