



10 KEY INSIGHTS ON **sustainable diets**

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Foreword



The landscape has evolved since our previous report, **Action on Sustainable Diets**, with the likes of regenerative agriculture and meat reduction or substitution rising in prominence.

Regenerative agriculture dominates sustainable diet discussions. At Nestlé, given the scale of our global footprint, we have a responsibility to reduce our impact on the environment and a clear role to help feed a growing international population.

Our promise is to go beyond ‘doing no harm’ to having a positive impact on food systems; supporting and regenerating the planet instead of exhausting it. We’ve already reduced our total greenhouse gas emissions by 4 million tonnes from their peak, while we continue to grow as an organisation. Plus, we’ve invested £960 million in regenerative agriculture across our supply chain to support our path to net zero.

Sustainable diets demand greater focus on plant-based eating, and we’ve continued to expand our plant-based portfolio. Our nutrition and development teams use the best available science to ensure our products are crafted with nutrition in mind to provide healthier alternatives. And with meat and dairy still the go-to for most consumers, we’re working with food operators, helping them to reimagine familiar favourites as plant-based alternatives, to deliver desirable and healthy options for consumers.

Sustainable diets are critical if we’re to avoid environmental crises. It’s important we understand what this means for us as an industry, for consumers and for the environment. Collaboration across the industry will be key. Working together, we can continue to evolve, aligning the needs of consumers with those of the planet – and safeguarding the world for ourselves and for future generations.

Katya Simmons
Managing director, Nestlé Professional UK&I

Top trends at your fingertips

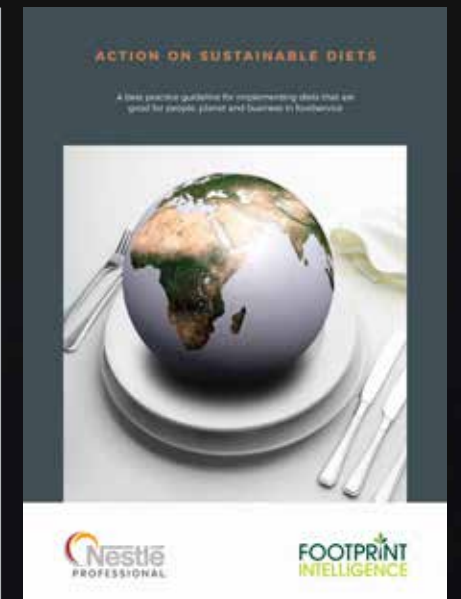
From plant-based Whoppers and Big Macs to meat-free nuggets and breaded fillets, hospitality and foodservice (HaFS) is evolving rapidly and sustainably. Terms such as 'regenerative agriculture' are increasingly common and there is rising investment in innovations such as cultured meat and insect farming.

Ingredient-related scope 3 carbon targets are being mapped out and strategized. And major foodservice operators are making bold commitments to increase the plant-based components of their menus.

For a hospitality or foodservice operator, the food destined for plates or takeaway packages is – almost without exception – the most impactful part of its environmental footprint.

This report – arranged into 10 key insights – highlights important trends in the sustainable diets space.

It is designed to be used in conjunction with the **Action on Sustainable Diets** framework to drive tangible action. The **Action on Sustainable Diets** framework provides a step-by-step how-to guide, and this report, **10 key insights on sustainable diets**, serves up business critical, up-to-date insight on trends, opportunities and areas in need of urgent action.



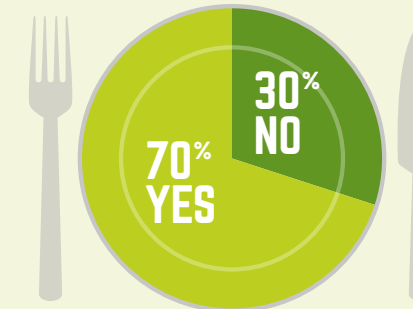


INSIGHT 1

Managing risk is essential in an era of crisis

Footprint consumer poll

Do you think changing our diets – to eat less meat and dairy, and more plant-based foods – is important to tackle the climate crisis?



What is a sustainable diet?

Agriculture accounts for more than a quarter (26%) of global greenhouse gas emissions¹. It uses 50% of habitable land² and 70% of global freshwater³. In the UK, food accounts for 35% of territorial emissions, with meat and dairy the worst offenders⁴.

This is why addressing the impacts of food is at the heart of tackling climate change, preventing water stress, and protecting our ecosystems and the creatures within them.

The concept of sustainable diets has evolved rapidly. Originally, chefs and HaFS teams linked it primarily to seasonality, local or domestic sourcing, provenance and ethics.

Working definitions are now, typically, much broader and more aligned with the UN Food and Agriculture Organization's (FOA) classification⁵.

In practice, insight from ongoing Footprint research indicates⁶ that sustainable diets tend to translate to low-waste dishes and menus that focus on

- plant-based offerings
- sensitive and fair sourcing
- ingredients produced using agroecological practices, designed to minimise greenhouse gas (GHG) emissions and other negative environmental and social impacts

And now, with the clock ticking on achieving tangible action to avert climate catastrophe, sustainable diets are key.

"In an era of crisis – climate, COVID, cost of living, conflict – you need to manage your risk," advises Zero Carbon Forum director Bob Gordon. And – with scope 3 GHG emissions dominated by purchased goods and services, particularly

food – adopting sustainable diet principles enables you to do this.

"Consider what a sustainable and resilient menu looks like to ensure you have a food offer you can continue to source and serve today and into the future," suggests Gordon. "Detecting risks will help you transition away from high-risk ingredients or identify that you need to work with suppliers of those products to improve their resilience and their sustainability."

Ask:

- What is your risk of short-term supply disruption?
- What is your risk of long-term supply disruption?
- What is your long-term risk from changing diets and changing expectations?
- What is your long-term risk from increasing regulations?

The answers will help you to design food offers that are resilient now and into the future.

In one secondary school setting, sales rocketed by up to 17% when Sodexo put traffic-light-style carbon labels on its low carbon school meals such as chickpea curries and white bean chillies⁷

The FOA defines sustainable diets as those "with low environmental impacts, which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources."



How do we know which ingredients to put on the plate?

No single resource spells out sustainable recipes for designing dishes, menus and food offers. However, the resources below can be very helpful: they quantify – in some cases visually – what a sustainable plate or dietary intake should include, and the appropriate proportions of various foods.

- The WWF’s Livewell analysis demonstrates how the UK diet needs to change to meet climate targets and reduce impacts on nature. It includes guidance on food group proportions and will be updated to a net zero scenario later this year
- The WWF’s Impact Action Calculator breaks down how much of each food group we should eat in a two-week period, depending on our country and dietary style
- The Vegan Society’s version of the UK Government’s Eatwell plate sets out how a plant-based diet can achieve nutritional balance. It includes advice on key nutrients – such as vitamins D and B12 – that might be harder to come by on a vegan diet

How can plant-based targets help?

Leon cofounder Henry Dimbleby’s National Food Strategy identifies that:

- a 30% increase in fruit and vegetables will bring us in line with the Eatwell recommendation to eat five pieces of fruit and vegetables per day
- a 50% increase in fibre will bring us in line with the Scientific Advisory Committee on Nutrition’s recommended 30g/day
- a 25% reduction in consumption of high fat sugar salt (HFSS) foods will take us towards the required 60% reduction in salt, 20% reduction in saturated fat and 50% reduction in free sugars
- a 30% reduction in meat is required over the next ten years to achieve the government’s legal commitment to reduce the UK’s carbon emissions to net zero by 2050 and its pledge to ensure that 30% of UK land is protected for nature by 2030

No one is suggesting that achieving these huge reductions will be quick or easy. But as consumer awareness rises, and regulation tightens in response, the time to begin the transformation is now.



“Moving towards a plant-based diet is the single biggest thing operators can do to minimise their impacts. Ask: how can I buy 30% less meat? Just by doing that, you will introduce more vegetables and lower your environmental footprint.”

Henry Dimbleby, National Food Strategy author and Leon cofounder

Supporting chefs and menu teams

Sustainable dishes involve new recipes, cooking skills and culinary norms. Ensuring chefs and menu development teams have the skills to devise and cook them is crucial. Fortunately, the industry is working

hard to fill the knowledge gap, as these examples show:

- Sysco GB is equipping its development chefs with the skills and knowledge to advise operators on how to offer more plant-focused dishes
- The Vegan Society and ProVeg

host online plant-based workshops for school caterers

- Nestlé expanded its free World Chefs webinar program to include healthier diets. Nestlé Professional provides plant-based recipes alongside Garden Gourmet products to inspire chef customers, while its Toque D’Or talent competition has a Sustainable Futures theme and includes elements such as nutrition, health, food waste and seasonality
- Compass and CH&CO run sustainability-themed training for senior chefs, who then cascade techniques and knowledge throughout the business



INSIGHT 2

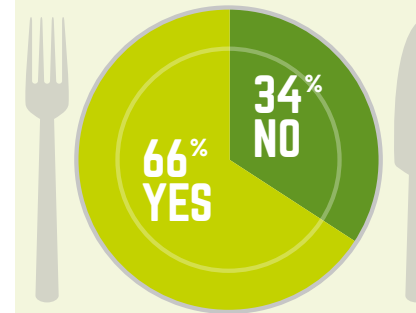
Radical change is needed

“We need transformational, radical change. We are hitting the biological limits of how much we can reduce carbon with our current food system. So we need to change that system.”

Bob Gordon, director, Zero Carbon Forum

Footprint consumer poll

Would you choose a place to eat because it tries to serve sustainable food that has a lighter impact on the planet?



Existing food production systems place physical limits on the carbon reductions that can be achieved. And those limits do not align with the reductions necessary to achieving global climate targets and avert the worst effects of the climate crisis.

That means we need to reimagine our food systems.

“We need to create a long-term shift in our food culture...”

concludes Henry Dimbleby’s National Food Strategy. “We need to change the way we use our land, reintroducing forgotten farming wisdom while simultaneously developing robots and AI to serve the farms of the future.

“We need businesses to innovate, creating new food products and reformulating old ones so that they do less damage.

“And we need to rethink how public policy works, finding more effective ways to improve our national eating habits.”

But how can we make this happen? “We have 18 years to achieve our net zero by 2040 target,” Bob Gordon notes. “We can’t just keep gently encouraging people to eat more plants and less meat. We need transformational changes in the way we produce food.

“It is quite possible that meat will be cultured meat, milk will be produced through precision fermentation, and fruits and vegetables through vertical farming. And we will have to feed livestock on insects fed on food waste.”

The challenge is to identify those farming systems that provide the nutrients we need in a resilient,

low impact way, and in which crops and livestock are not destroyed – or supply chains disrupted – by climate and political impacts. This was thrown in sharp relief in 2022, when floods in Pakistan, war in Ukraine, and drought in Australia and Somalia decimated food-producing regions and dangerously disrupted global supplies.

But there is the potential for locally-produced, weather-resilient, food-secure systems with minimal planetary impacts. Protein, for example, can be produced in shipping containers full of grubs fed on food waste and powered by renewable energy, with companies like the UK-based Entocycle, and Australian-based Goterra working to scale these types of solutions.

Advocates of innovations such as cultured meat, precision fermentation, vertical farming and insect farming suggest that wholesale shifts are needed because they are the only way to produce nutrients at scale in a way that works with existing diets. There simply isn’t time to shift diets through changing consumer preferences alone.

Meanwhile, suggests carbon-neutral wheat farmer Thomas Gent, farming systems must be decoupled from global commodity markets. Those markets, he says, prevent transparency by combining crops from farms with very different practices. The opaque results prevent buyers from identifying and prioritising those with sustainable practices. And they prevent farmers and producers telling and sharing their stories with customers.

The system also divorces farmers from charging prices that are directly related to their costs. This disincentivises investments in more sustainable practices.

TOP TRANSFORMATIVE TREND: Cultured meat



Footprint consumer poll

Would you eat lab-grown meat if it was served to you in a restaurant?



Lab-grown meat hit its first milestone when it received regulatory approval in Singapore and appeared on a restaurant menu⁸. Meanwhile, Osaka University

scientists have created the first 3D-printed, lab-grown Wagyu beef steak, using bovine stem cells⁹.

Cultured meat technology is making a play as a ‘clean’ option that circumvents animal welfare issues while potentially dramatically reducing the land, water, environmental, chemical and CO2e impacts of producing animal protein.

Lab-grown or cell-cultured meat is grown in a test tube, a culture dish, or elsewhere outside a living organism. And money is flowing into upscaling the technology. The Good Food Institute Europe has partnered with EIT Food to launch a €100,000 prize that aims to bring down the cost of producing such meat¹⁰. In 2021, Europe’s sustainable protein companies raised more than \$2.5 billion, according to the Good Food Institute, with cultivated meat proving particularly popular.

Meanwhile, major players in HaFS are stepping up. Scientists at Nestlé Research in Lausanne are working with Future Meat Technologies, a leading start-up, to explore cultured meat that does not compromise on taste or sustainability.

And consumers seem to be coming around to the idea of eating meat grown in a dish. In our survey, a substantial 40% said they’d eat lab-grown meat in a restaurant. This is backed up by FSA research from 2022 that found one-third of UK consumers would try cultured meat¹¹.

However, the complexity and cost of growing meat that mimics

the texture and nutritional profile of an animal casts doubt on whether technology will be able to deliver at the scale needed. And UK regulatory approval for lab-grown meat appears way off, while risks such as compositional purity and authenticity – and the tools to manage them – will be challenging for the resource-stretched Food Standards Agency¹².

TOP TRANSFORMATIVE TREND: Precision fermentation

Environmental campaigner George Monbiot argues that agroecology – agriculture that mitigates climate change, works with wildlife and puts farmers and communities in the driving seat¹³ – can help “ensure that all farming is both low impact and high yield¹⁴”. Yet in instances where agroecological systems would reduce yields too drastically, risking mass starvation, we need to “urgently help to develop new food systems¹⁵”.

This is where transformational change comes in. The solution, says Monbiot, is precision fermentation¹⁶.

Precision-fermentation-derived proteins use microbes such as yeast, algae or bacteria, and sunlight to replicate existing animal products. The result: protein-rich, low impact meat substitutes (such as Quorn), and ingredients to flavour and enhance other foods. This could hugely reduce “food production’s land, water and fertiliser demands” while greatly “enhancing food sovereignty and food security, far more effectively than any change in farming systems¹⁷”.

TOP TRANSFORMATIVE TREND: Insect protein

Footprint consumer poll

Would you eat a brownie or other baked good if it contained insect flour? This would make the treat contain extra protein and have a lower planetary impact



After serving brownies made with insect flour and running taste tests for peri peri crickets, catering forays into serving insects seem largely to have been shelved. Meanwhile, red tape around introducing insects fed on food waste into our food chain has complicated commercial opportunities.

Current development is instead focused mainly on animal feed. And while that feed might seem remote from food served on a restaurant plate, it has huge potential for reducing the impact of eating animal products. Insect meal outperformed soybean meal and fishmeal on all indicators – including climate, water, land use, carbon footprint, pollution and

‘We are getting closer to insects becoming an important part of our food system: the role they can have in replacing the commodity crops used in animal feed, and reducing nature degradation, is significant.’

Dr Emma Keller, head of sustainability, Nestlé UK&I

waste – in a WWF Future of Feed study¹⁸.

Another study found that on a free-range egg farm, 85% of the carbon footprint is from the feed¹⁹. According to Better Origin, an insect feed systems supplier, one square metre of insects produces a whopping 750kg of feed, compared to 0.5kg of feed from one square metre of soy²⁰.

There are also indications that chickens fed on insects have better gut health, which reduces reliance on antibiotics. And eating grubs promotes natural foraging, reducing aggressive pecking. These factors combine to create happier hens and increased yields²¹.

TOP TRANSFORMATIVE TREND: Vertical farming

Vertical farming involves growing crops in stacked layers, often in a way that utilises existing structures such as shipping containers, tunnels and abandoned mine shafts. This enables farmers to grow produce in controlled environments, which can optimise growth by protecting crops from pests and weather, as well as ensuring optimum nutrition and growing conditions

by utilising soilless techniques that enable farmers to ensure plants get exactly what they need. These include hydroponics (growing produce through water-based nutrient solutions) and aquaponics (combining hydroponics and aquaculture).

Vertical farming offers:

- much more efficient use of land
- increased resilience, because so many factors can be controlled or removed, such as pests, weather and climate events such as flooding
- increased food security, because food can be grown much closer to the end user as vertical farms can be situated in urban and suburban areas



INSIGHT 3

Embrace regenerative agriculture

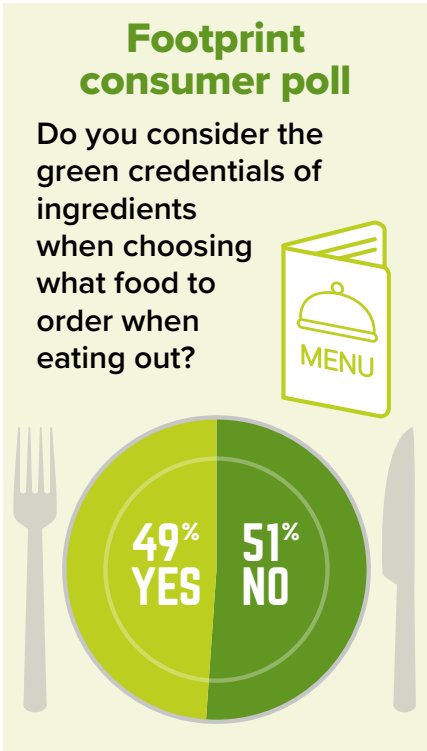
“Sustainable farming is farming without compromise. It doesn’t compromise ecosystems, the soil, water, people... Everything is in balance.”

Thomas Gent, fourth-generation arable farmer and Gentle Farming founder

farming, i.e. the production of food or fibre, which at the same time improves the environment²³. This may include a greater diversity of crops, to support biodiversity, and investing in techniques such as no-till farming that help to improve the water cycle and store carbon in the soil.

However, there is a difference between token gestures and structuring an entire system around regenerative principles. Sorting the truly green from the green-washers is time-consuming. Enter initiatives such as the Global Farm Metric, which aims to set out a consistent, clearly defined framework for sustainability in farming. There is even a campaign for that metric to be included with sustainable farm payments, to incentivise farmers to complete the data.

HaFS can drive change by asking suppliers to get behind the metric. “One foodservice operator wants us to pilot the Global Farm Metric,” says Julie Owst, head of sustainability at Bidfood.



- Pepsico aims to have 7 million acres under regenerative agriculture by 2030
 - Innocent has a farmer innovation fund, worth up to £100,000, for projects that reduce carbon in agriculture and inspire farmers to use carbon-saving practices²²
 - Nestlé is investing CHF1.2bn (£960m) in regenerative agriculture across its supply chain
 - First Milk will pay a premium to farmers who commit to a regenerative farming plan
- Regenerative agriculture is defined by Groundswell as “any form of

Regenerative agriculture dominates the sustainable diet discussion. HaFS and food industry ESG reporting is awash with support for this type of farming:

- Compass says 70% of its fresh meat, dairy and vegetables will be sourced from regenerative agriculture by 2030
- McDonald’s is working with FAI Farms to define the benefits of applying regenerative agriculture to beef farming



Groundswell’s principles of regenerative agriculture:

- 1) Don’t disturb the soil
- 2) Keep the soil surface covered
- 3) Keep living roots in the soil
- 4) Grow a diverse range of crops
- 5) Bring grazing animals back to the land²⁴

“We’ve identified products with a straightforward supply chain that we can map from farm to fork, such as UK sourced peas. We sent questionnaires to those suppliers, and are assessing how easy it is for the suppliers to provide the information. It’s a start.”

In the meantime, an effective way to identify sustainable suppliers is to invest in building direct relationships up and down the supply chain, advises Mike Hanson, director of sustainable business at WSH. Suppliers can share their efforts and progress

towards targets, enabling operators to prioritise those doing the most. Meanwhile, operators can identify how supplier efforts impact on and feed into their own net zero and sustainability strategies and targets. This can help highlight hot spots in need of attention.

WSH is working with Zero Carbon Forum and Gentle Farming to “get more foodservice providers to request regeneratively farmed product”, says Hanson. “If we, as foodservice operators, don’t request it, it won’t happen.”

Gentle Farming was borne

of wheat farmer Thomas Gent’s frustration at seeing his carbon-negative, regeneratively farmed wheat mixed with conventionally farmed wheat when it entered the market. Now, WSH, Zero Carbon Forum and Gentle Farming are exploring the possibility of WSH and other operators buying flour from Gentle Farming directly to use in its kitchens.

“Gentle Farming have been farming regeneratively for 14 years, and their wheat is now climate-positive,” notes Hanson. “It will be a great story to tell.”



“Soil has finally become sexy. There’s the realisation that a big part of the problem and the solution are right beneath our feet.”

Dr. Emma Keller, head of sustainability, Nestlé UK&I

Driving tangible action

To advance regenerative agriculture among its network of more than 500,000 farmers and 150,000 suppliers worldwide, Nestlé has a three-stage approach:

- Providing technical assistance, backed by a network of agronomists and R&D experts. Support includes agricultural training and the exchange of information and best practices that can be adopted locally
- Co-investing to mitigate the risks and costs for farmers as they transition to regenerative agriculture. This might involve providing loans or support with access to funding, or jointly investing in pilot projects
- Incentivising farmers for producing ingredients in a regenerative way

Nestlé also supports a new platform²⁵ to attract and train the next generation of farmers. And more than 40,000 farmers have participated in its ‘agripreneurship’ programmes to learn about regenerative agriculture and make their farms more resilient to climate change²⁶.



Honing in on milk’s impacts

Nestlé UK&I won the 2022 Footprint **Sustainable Use of Natural Resources** award for its work with UK dairy farmers. The milk used in Nestlé’s Out of Home and Retail products comes from a cooperative of farmers that the company has encouraged to change to regenerative practices since 2015. These practices include short-duration, higher density grazing, the use of natural feed supplements, and the introduction of trees in grazing areas. The aim is to halve the carbon footprint of Nestlé’s fresh milk supply in the UK by 2025.

INSIGHT 4

Support better data

“Everyone is shouting about scope 3 emissions and getting to net zero.”

**Simon Galkoff, procurement and supply chain director,
The Big Table Group**

Professional. “But the globally available GHG emissions data for ingredients needs improvement. Figures may vary significantly, depending on the country you source from and the practices followed by the farms.

“We are also getting many more questions regarding our sustainability journey and the tangible actions we are taking regarding our ingredients. Are they sourced locally? How are they grown and produced? What kind of practices are followed in the fields and farms? Do you use renewable energy?”

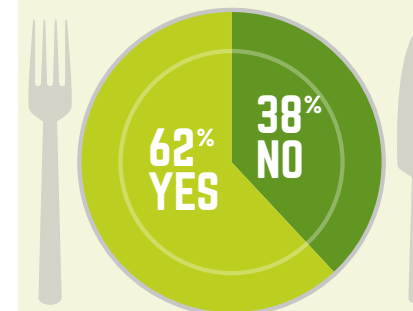
The lack of clear data is a challenge for HaFS operators wanting to tackle their scope 3 emissions. It also prevents them distinguishing producers and suppliers who measure their impacts, and take action to reduce them, from those who don’t.

However, the cost, complexity and poor availability of data means most businesses’ calculations rely on average emissions for the country or region in which a product is produced, rather than the emissions associated with a farm’s specific methods of production.

“We are receiving more and more demands for carbon figures, especially when our operator customers start to label their menus,” notes Ana Aragon, nutrition and sustainability manager at Nestlé

Footprint consumer poll

Would you be inclined to choose a restaurant if it had sustainable menu choices?



Within HaFS operators’ carbon footprints, scope 3 emissions – arising from purchased goods and services – are dominated by food. Such emissions typically account for 97% of total emissions for quick service restaurants, and more than 80% for every sector bar hotels (61%)²⁷.

Ingredients are therefore integral to tackling the climate crisis. Accordingly, many HaFS businesses have begun setting scope 3 targets.



Some HaFS operators are dealing with the data challenge by focusing time and finance on identifying the footprint of their top 10 hero products

Meanwhile, distributor databases may not be designed to highlight credentials. Therefore, certifications such as RSPCA Assured or BCorp, or net zero commitments, are not flagged, filtered or logged. This is a big missed opportunity for marketing.

That’s one reason why CH&CO has become the first operator to utilise Authenticate’s ESG Assessment. This provides suppliers with a score on their performance and identifies areas for improvement. CH&CO is also investing in ensuring that certifications on products that the company uses, such as BCorp, RSPCA Assured and MSC, are captured and communicated to teams and head office.

Distributors and HaFS operators note that suppliers can be lax or poorly informed about their own credentials when environmental data is requested. “One organic supplier that completed our ESG questionnaire gave no detail on the work they do to support biodiversity,” reveals Clare Clark, head of sustainability at CH&CO.

“As a supplier of organic produce, they would have had lots of evidence for that. This indicates a training issue rather than poor farming practice.”



Collective pressure and consistent approach

“We need to collectively exert pressure on the supply chain to get accurate and consistent environmental impact data,” says Kate Nicholls, CEO of UKHospitality, “rather than one restaurant or one pub chain asking the supplier their own questions.”

This is where mechanisms such as WRAP’s Scope 3 Measurement and Reporting Protocol for Food and Drink and the Global Farm Metric, and forums such as the Zero Carbon Forum, are so powerful. They bring the industry together, building consistent data and frameworks that ask matching questions. The result: collaboration and efficiency.



Changing market dynamics

Organisations offering specific and detailed carbon footprinting data for food products and food producers – such as Mondra, How Good, Food Steps and BX – are also changing the landscape: helping operators to access specific data on their ingredients’ suppliers.

And growth in the data industry means the costs of creating datasets and ongoing measurement are coming down. Some HaFS operators report the welcome problem that their footprints keep changing as suppliers provide more accurate data.

Other operators are piggybacking on the work of retailers whose buying power and market share enable them to drive – and, in some instances, support – the carbon analysis, reporting and reduction efforts of farmers and producers.

As retailers and HaFS push for accurate emissions data, its prevalence will rise. And those suppliers who push for data and start taking action now will benefit. Because, when regulation comes, operators and retailers will choose suppliers who already have data and reduction strategies in place.



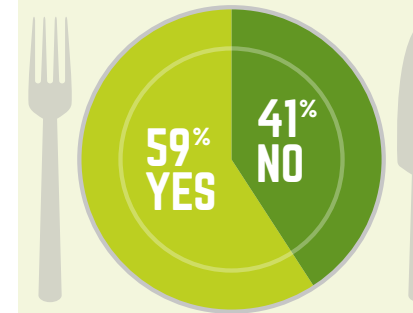


INSIGHT 5

Share costs

Footprint consumer poll

Would you be happy to pay more for your meal or snack if the ingredients had been produced in a way that was kind to the planet?



The cost of scope 3 analysis – and the reluctance of many hospitality and foodservice operators to share footprinting and carbon mitigation costs with producers – stymies farmers and producers’ ability to provide emission and impact data for their products.

“Farmers and producers have to make huge investments in technologies,” explains Julie Owst of Bidfood UK. “In some instances, those technologies don’t even exist yet, so they need to be developed. So farmers and suppliers need financial and contractual commitments to be able to undertake the investments.

“It’s like converting to free range eggs: it takes time and they’ve got to make massive capex investments. But when the operators can’t pay



more because their clients won’t either, where is the money to fund these things?”

The issue also causes frustration for foodservice operators who report that although their contract catering clients ask for more sustainable innovations/products or more plant-based options to be included on operator menus in their office (or school, prison,

barrack etc) food outlets, clients tend to expect operators to absorb any additional costs that result from these changes.

Operators and their clients must therefore be prepared to pay more to reflect the often substantial efforts required to measure impacts and to invest in more sustainable production and products.

Sharing resource and expertise



“We’re looking at how we can help smaller customers in the hospitality sector,” says Julian Hunt, vice president of public affairs, communications and sustainability, GB, Norway and Sweden, at Coca-Cola Europacific Partners. “We’ve

partnered with Net Zero Now to develop protocol toolkits for sectors including hospitality, because many small operators don’t have sustainability teams. They need tools and support to take net zero action.”

INSIGHT 6

Menu

Starters

Crunchy veggie gyoza
Chilli bean nachos
Red pepper and tomato bruschetta

Burgers

Hearty halloumi
Portobello steak and red onion
Garden Gourmet plant-based

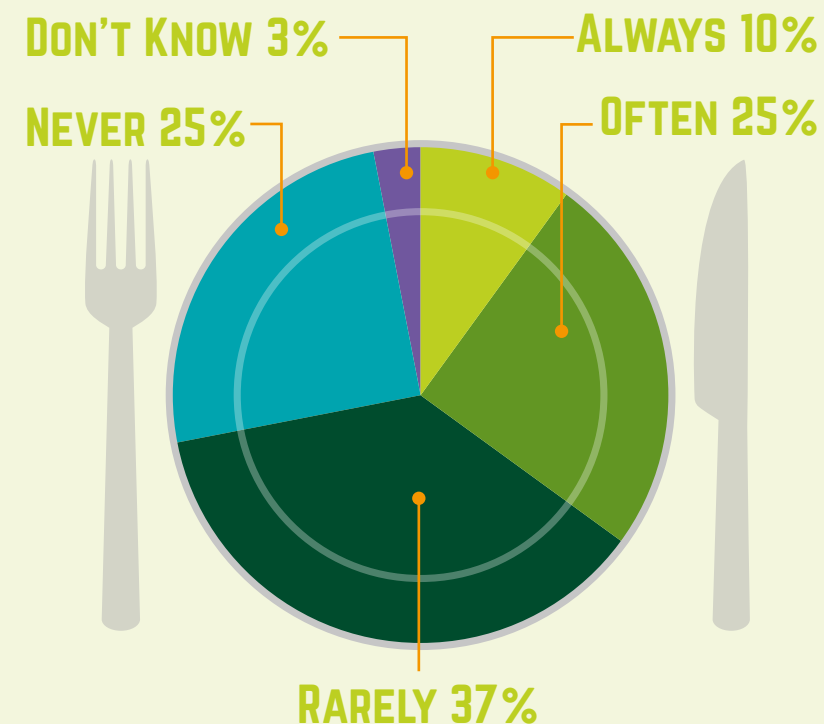
Mains

Thai curry with broccoli tempura
Beefy lentil lasagne
Roast pumpkin Caesar salad
Veggie meatballs in Tuscan tomato sauce

Sustainable diets are mainstream: now make them the norm

Footprint consumer poll

How often do you choose a veggie or vegan meal or snack when eating out?



The transformation to plant-based in HaFS is truly underway. In 2022, Lumina Intelligence found that 57% of starter options, 33% of main options and 62% of side options on pub and bar menus were labelled as vegan²⁸.

And plant-based options may soon become mandatory on menus. A Climate Change Committee report panned the UK government's agri policies, concluding that it should consider influencing diet shifts, for example, by mandating plant-based options in public settings and requesting health and education providers incorporate

carbon footprinting in their menus²⁹.

92% of plant-based meals are eaten by non-vegans³⁰ and six in 10 users eat meat substitutes at least once a week³¹. The consumer research conducted for this report found that 72% of UK citizens reported eating veggie or vegan meals or snacks at least some of the time. Nearly two thirds (61%) also said they'd like more vegetarian/vegan choices on menus.

"The real explosion is that consumers who would not normally describe themselves as following a particular diet now go for a plant-

"Plant-based milks are now mainstream. Almost every coffee shop or restaurant offers milks such as oat, coconut and soy, as well as dairy."

Hannah Baugh, nutrition manager, Nestlé UK&I

based option from time to time," observes Kate Nicholls, CEO of UKHospitality. "Sustainable diets have gone mainstream. Operators must ensure they've got a good range of options to meet that need."

HaFS has a key role to play in changing cultural dietary norms. And it's heartening to see so many businesses taking this responsibility seriously:

- Burger King went 100% meat-free for the 2022 reopening of its flagship restaurant in London's Leicester Square. For the first month, the site showcased favourites ranging from the plant-based Whopper and Vegan Royale to a new, plant-based Bakon Double Cheeze XL. And since July 2022, the chain has offered a meat-free version of every option on its menu in Germany³².
- Manchester City and Garden Gourmet* are promoting plant-based eating across Manchester's Etihad Stadium. Everywhere a meal option is served in general

admission, a vegan alternative is offered alongside. With match day vegan sales averaging 10% of total product volume, over the 2021/2022 season, this is estimated to have saved the equivalent of over 19,000kg CO₂e when compared to typical beef equivalents. These savings correspond to driving over 64,000 miles by car³³.

- Foodservice outperforms food retail for sustainable sandwiches. 34% of sandwiches at Pret A Manger, Costa, Caffè Nero, Greggs and Subway are plant-based or vegetarian, compared to 27% at the supermarkets surveyed³⁴. Greggs is using price as a lever, making its plant-based sandwiches 21% cheaper.

To encourage wider uptake, plant-based products must be priced carefully. Customers expect them to be less expensive or equally priced when compared to meat products, and are confused if they cost more.

Higher prices for plant-based dishes are often caused by the substantial research, development and production costs that go into replicating the taste or feel of meat. Ingredients may be more exotic or lower volume, and therefore more expensive. But higher costs prevent customers choosing plant-based options.

Making healthy options affordable is key to ensuring they are accessible to all. The Food Foundation's Broken Plate report found that healthy and sustainable foods are unaffordable and



inaccessible for many – including food sector workers such as kitchen, catering and waiting staff who are likely to be on or below the minimum wage. The report concluded that the poorest fifth of UK households would need to spend 47% of their disposable income on food to meet the cost of the government's recommended healthy diet, the Eatwell Guide³⁵.

Appetite for Change³⁶ identified that business can drive consumers to healthier and more sustainable diets using signposting, placement, product, influence and incentives.

Research by the Better Buying Lab, with Sainsbury's Café, found that rebranding a "meat-free breakfast" as a "field-grown breakfast" increased sales by 17 percent³⁷.

Compass Group's "Fresh by Eurest" delivered a 21% uplift in fruit and vegetable uptake and a 10% uplift in salads via appealing, health-themed concepts like Buddha Bowls and Topped Salad bars. And the Good Stuff brand was used to drive consumers to the most nutritious dishes³⁸.

To take action on climate change, Sky encouraged fans to swap meat for vegan alternatives at sports venues. The campaign included showing fans at the Hundred, the British Grand Prix, The Open, The Goodwood Festival of Speed and the Super League Magic Weekend images of how the changing climate is impacting sports, with cricket grounds flooded and golf courses battered by storms³⁹.

INSIGHT 7



Join the move away from meat and dairy

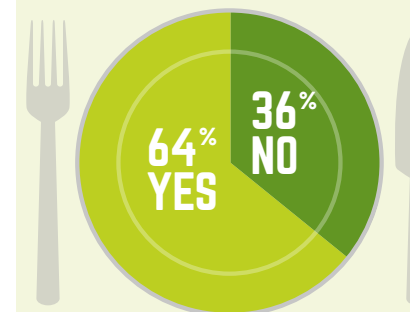


“No HaFS business will achieve their carbon reduction targets without reducing the amount of meat and dairy they sell.”

Joanna Trewern, head of consumption, WWF-UK

Footprint consumer poll

In the last 12 months, have you tried to reduce the amount of meat you eat?



It's not surprising that HaFS is moving away from animal protein. Plant-based proteins produce, on average, 70 times fewer greenhouse gas emissions than an equivalent amount of beef, and use more than 150 times less land, although beef-related emissions can vary enormously between countries, with GHG emissions from UK beef about half the global average⁴⁰.

Henry Dimbleby's National Food Strategy identified that the British

national diet needs to increase vegetables and fruit by 30% and reduce meat by 30% by 2032 – i.e. in less than 10 years – to achieve the government's carbon and diet-related targets.

Meat is also increasingly pricey. Analysis by catering butcher Birtwistle's shows dramatic cost increases across all major meat categories in 2021-22⁴¹.

HaFS – increasingly cognizant of food-related emissions and opportunities – is taking this on board. Major meat-based brands such as Burger King, McDonald's and KFC have launched plant-based protein alternatives for their flagship dishes, and are marketing them heavily. Burger King is even testing whether it can change social norms by making vegan the default and asking customers “Normal or with meat?” when they order fast food in Vienna.

Bath University is testing a similar verbal nudge away from cows' milk, by suggesting baristas ask, “What milk would you like with that?”⁴²

Other brands are using acquisitions to help transition their portfolios towards a plant focus.

The Big Table Group's takeover of the Banana Tree chain was billed as being heavily influenced by its “favourable sustainability credentials” (40% of its menu is plant-based) that are “aligned with key customer trends”⁴³.

Contract caterers are also making significant commitments:

- Compass is targeting a 40% switch to plant-based proteins by 2030, and has increased the number of recipes containing plant-based protein by 54% since 2020⁴⁴
- Aramark is changing recipes, increasing the mix of plant-based and environmentally sustainable dishes which are based on 50 key ingredients.
- Sodexo has committed to promote plant-based meal options to achieve its target of 33% of its menus being plant-based by 2025. Menus are being reformulated to increase plant-based components or replace meat with plant-based alternatives. Promotions and offers are being reimagined, and research is being undertaken to understand which nudges and interventions increase the uptake of plant-based options.

Juicy plant-based stats

- One of the fastest growing food categories, the plant-based sector is predicted to hit \$162 billion by 2030⁴⁵
- Retail sales of plant-based meat in western Europe climbed by an estimated 19% to a record \$2.6 billion in 2022⁴⁶
- Investments in plant-based meat alternatives lead to far greater cuts in climate-heating emissions than other green investments, says the Boston Consulting Group⁴⁷
- Alternative proteins will represent 11% of all protein consumption by 2035, though investment in new technologies could push them up to over a fifth (22%) of the global market⁴⁸

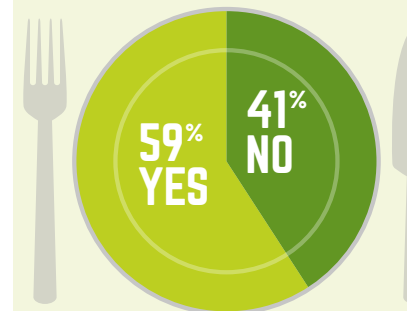


INSIGHT 8

Ensure meat substitutes are healthy

Footprint consumer poll

Do you think plant-based options, such as veggie burgers, nuggets and sausages, are healthier than their meat alternatives?



Converting to meat-free dishes means HaFS must ensure the new products are healthy and sustainable, especially when they're promoted as replacing junk or 'treat' foods. And HaFS must be transparent: consumers are confused about health traits, nervous about meat alternatives, and surprised by the high calorific values of some plant-based alternatives.

According to the **Footprint Sustainability Index 2022**⁴⁹, "Brands should expect far more scrutiny of the nutritional qualities of plant-based processed foods in the coming months. Plant-based products are often perceived to be healthier but this isn't always the case and there has been debate over the health credentials of some meat alternatives⁵⁰."

"A huge amount of work needs to be done, particularly to understand the effect processed plant-based products have on our body," says Dr Emma Keller, head of sustainability at Nestlé UK&I. "Are they making us want more? Or actually making us unhealthy? Can they be part of a healthy sustainable balanced diet?"

"We used our expertise to ensure Garden Gourmet" had no red nutritional traffic lights across the front of the pack."

The wide range of meat analogue products out there – some of which qualify as high fat, sugar, salt products like the fast-food-treat meat products they replace – does muddy the waters of the meat-replacement debate, and means that procurement teams and consumers do need to choose products with care.

Research that compared the nutritional information published on the packet between analogues and their meat alternatives – including McDonald's burger patties – found that the plant-based burger patties, meatballs and nuggets had a wide range of nutritional profiles. However, these plant-based products tended to have similar levels of protein, increased fibre, fewer calories and less fat⁵¹.

A review of plant-based meat analogues with reference to formulation and gastrointestinal fate concluded that: "Generally, the plant-based meat analogues contain high protein with essential amino acids and low-fat content which makes these products good for human health⁵²." It did highlight the



need, however, for more research on areas such as digestion and absorption. There are also potential health risks when these products are cooked at high temperatures because of the resulting toxins and carcinogens. The paper reports the same concerns for meat cooked at high temperatures but also notes that, "Naturally occurring phenolic compounds act as inhibitors against the formation of toxicants thus improving the safety of the plant-based meat alternative products".

Food businesses must undertake more research, and support the academic community's independent investigations. They also need to work harder to communicate the nuanced findings. This will help build transparency and trust in the health credentials of meat replacement products.

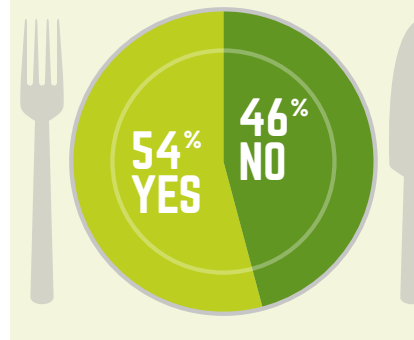


INSIGHT 9

Focus on familiar favourites

Footprint consumer poll

When eating out, do you eat plant-based versions of familiar favourites, such as veggie burgers or nuggets, or veggie versions of classics like lasagne and cottage pie?



“Whilst eating out is often considered a treat, consumers will switch to plant-based options, providing the right choice is offered,” observes Hannah Baugh, nutrition manager, Nestlé UK&I. “It’s no longer enough to provide one vegan option and think the job is done. Meat eaters expect (and are used to) being able to choose from their familiar favourites. So why should this not be the same for plant-based options too? There needs to be a balance struck between familiar favourites and more interesting alternatives.”

The plant-based dishes that are most successful with consumers are those that reimagine old favourites. “Rather than creating bespoke vegan options, operators need to focus on creating vegan

or vegetarian options of familiar favourites to appeal to a wider audience,” concluded Nestlé research⁵³. Greggs’ high-profile success of its vegan takes on classic sausage rolls and sausage, cheese and bean pasties are a case in point.

“The challenge isn’t changing our recipes,” observes Nicky Martin at Compass. “It’s customer culture. Meat and dairy options are still the go-to for the majority of customers. So we’re working hard to reformulate traditional favourites. And when we look at our sales, the dishes that are a spin on familiar meals are coming through as the



highest plant-based sellers.”

TOP TRANSFORMATIVE TREND: Less is more

Confusion over costs and a desire for ‘cleaner’ foods that are closer to nature are leading “a return to simpler vegetarian and vegan food that is not so reliant on processed ingredients and expensive meat substitutes,” observes Kate Nicholls of UKHospitality.

“We recommend HaFS companies focus on natural and largely unprocessed alternatives that can be used in meals, replacing meat entirely or in part, and therefore bringing meat volumes

down,” advises Joanna Trewern of WWF-UK. “The goal should always be to make really tasty meals, with good quality, sustainably sourced, wholefood ingredients.”



TOP TRANSFORMATIVE TREND: Novel ingredients

New or unusual ingredients can provide opportunities to meet customer needs and create enticing products. “When we launched Wunda – a pea milk alternative – it was exciting because it has a different protein and nutrient profile,” observes Hannah Baugh, nutrition manager, Nestlé UK&I. “It’s really versatile. You can drink it straight, pour it over cereal, use it in hot beverages, froth it, and cook with it.”

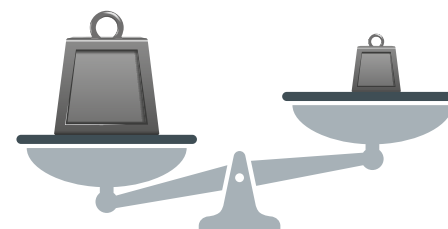
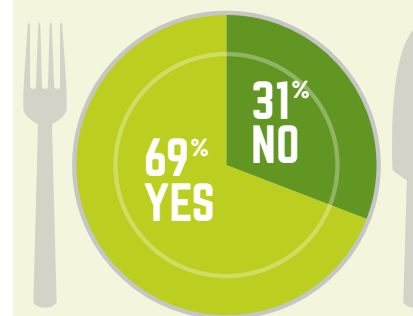
Programmes like Future 50 Foods identify ingredients that could support individuals and businesses in transforming to a more sustainable way of eating. But novel ingredients such as insect protein require FSA approval for use in the UK – a process that can take years. “So,” says Baugh, “we need to ask, what more can be done across all sectors of the industry, from research to government, to ensure these sustainability-focused ingredients are tested quickly so we can start safely using them?”

INSIGHT 10

Keep focused on waste

Footprint consumer poll

Do you want to hear from pubs and bars about how they're tackling food waste?



HaFS throws away 1.1 million tonnes of food waste every year. And each kilogram of that waste is equivalent to 3.39 kilograms of CO₂ equivalent⁵⁴, so every bite that isn't eaten means those impacts were for nothing.

Food waste is also the top food-related concern of consumers⁵⁵ – research undertaken for this report found that over two thirds of citizens (69%) want to know how food venues are reducing waste.

“Tackling food waste is a low hanging fruit,” notes Dr Emma Keller, head of sustainability,

Nestlé UK&I. “We simply shouldn't be wasting a third of all calories produced. And it's more important than ever as we face into both the climate and cost-of-living crisis.”

“The industry is much further ahead on food waste than it is on many other issues,” observes Kate Nicholls, UKHospitality. “And the focus on cost control gives added grist to the mill to do even more, such as measuring your waste streams – such as plate, prep and spoilage – to identify hot spots. In these cost-conscious times, you want to make sure that you aren't over-portioning, and that you use leftovers and surpluses in creative ways.”

Wrap recommends a Target, Measure, Act approach to tackle food waste: waste is measured by food left on the plate, preparation waste and spoilage at the end of every service, to identify what is being wasted and why, and to keep reduction efforts front of mind. Wrap's Guardians of Grub campaign provides free tools and resources – including training – to support the industry's waste reduction⁵⁶.



About Footprint Intelligence

The ever-shifting sustainability debate makes it vital for businesses to have accurate intelligence to make informed decisions. Footprint Intelligence is Footprint Media Group’s research and analysis division, helping companies develop successful strategies in the context of responsible business practices. Footprint Intelligence aims to drive, promote and share best practice by helping industry resolve pressing sustainability issues. It asks tough questions and finds answers. It uses research and industry insight to bring businesses together to identify solutions, opportunities, trends and challenges.



About Nestlé Professional

At Nestlé Professional®, hospitality is more than just a business. It is our business. This means inspiring the next generation of culinary talent through Nestlé Professional® Toque d’Or®, striving in the field in Nutrition, Health and Wellness; and collaborating with the industry for a more sustainable future. From coffee to cocoa, and from food waste to water, Nestlé works with farmers, chefs and operators continually to help make sustainable strides forward.



About this research

Footprint Intelligence was commissioned by Nestlé Professional to write this report. The research comprised in-depth, semi-structured interviews with industry experts, original consumer research conducted by Vypr, desk-based research, involvement in industry events and forums, and comments and insights from opinion leaders linked to the industry.

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Vypr is a leading predictive consumer intelligence platform that combines research into behavioural science with a well-segmented consumer panel. Vypr works with retailers including The Co-op Food and Starbucks, brands like Weetabix and Müller, and large manufacturing groups such as Cranswick PLC and 2 Sisters Food Group.

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