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Eating smart: Innovating food for health, flavour and the planet

By **Dr Aoife Marie Murphy**

17 January 2024

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Kerry's Dr Aoife Marie Murphy explains why the food industry must come together to create sustainable nutrition solutions. The food industry must come together to create sustainable nutrition solutions that deliver better nutrition without compromising taste while minimising negative environmental impact.



By **Dr Aoife Marie Murphy**, Sustainable Nutrition Manager at Kerry.

In November 2023, the world's population hit eight billion. The United Nations (UN) has projected the figure to climb even higher – to 9.7 billion by 2050.

If we continue to produce, supply and consume food in the same ways, we will need the resources of not only one but three Planet Earths to feed nearly 10 billion people adequately.

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Needless to say, there is no Planet B, or for that matter Planet C. To solve the challenge of sustaining everyone on our one and only planet, the food industry must play a critical role – we need to innovate sustainable nutrition solutions that provide healthy diets to people while minimising the environmental impact.

In this article, I will discuss the challenges of the global food system and explore how the food industry can drive change through sustainable nutrition innovations.

Challenges of the global food system

The global food system is grappling with complex and interlinked challenges that

The global food system is grappling with complex and interlinked challenges that affect the health of people and the planet.

With the prevalence of unhealthy diets and sedentary lifestyles, obesity has almost tripled worldwide since 1975. Now, two billion men, women and children are overweight or obese and at higher risk of non-communicable diseases like Type 2 diabetes and cardiovascular diseases.

Yet, at the same time, over 700 million people are hungry or undernourished, with limited access to affordable and nutritious food due to poverty, climate change or war and conflict.

Despite many lacking the food and nutrients they need to support health, the UN Food and Agriculture Organization (FAO) estimates that one-third of all food produced – over 1.3 billion tons – is lost or wasted annually. This food is thrown away either on the way from farms to markets, or in homes, retail or food service, before people have a chance to eat it.

Food loss and waste hurt the planet's health too. All the resources put into production, such as water, energy, land and labour, are wasted when the food does not eventually reach consumers. Moreover, food waste discarded into landfills decomposes and emits methane, a greenhouse gas, contributing to global warming.

In fact, according to naturefood.com, the global food system is responsible for more than 30 percent of human-caused greenhouse gas emissions. The contributions come from the entire supply chain, from agricultural activities, transport and processing to packaging, retail and disposal.

Rise of the AND consumer

Increasingly, consumers recognise what they eat impacts their health and the environment. They have leaned into sustainability with their actions:

- They prefer to buy from sustainable brands. Sustainability-marketed products grew two times faster than products not marketed as sustainable, according to the Sustainable Market Share Index 2023 by the NYU Stern Center for Sustainable Business
- One in three consumers claimed to have stopped buying from brands because of ethical or sustainability concerns, as reported in Deloitte Sustainability & Consumer Behaviour 2023
- 57 percent of European consumers want sustainability information to be compulsory on food labels, the European consumer organisation BEUC found in a survey in 2020.

This rising class of consumers, known as AND consumers, places increasing importance on personal health and planetary well-being. The products they buy must meet multiple criteria – tasty and healthier and convenient and affordable and sustainable.

Creating healthier food environments

While consumers are taking a stand on sustainability, governments face mounting pressure to monitor and regulate their food supply to create healthier food environments for their people.

Reducing sodium intake

Excessive sodium intake is a significant risk factor for stroke, heart disease, some cancers and premature death. According to the Global Burden of Disease Study 2019, an estimated 1.89 million diet-related deaths each year are linked to excessive sodium intake.

The World Health Organization (WHO) recommends less than 5 grams of salt per day, but the global average salt intake is estimated to be at least double that at 10.8 grams per day.

Even though the WHO has set a global target of reducing sodium intake by 30 percent by 2025, its Global Report on Sodium Intake Reduction noted that the world is still off track as of 2023 to achieve this target.

Currently, only 27 percent of the world's population live in countries with mandatory measures for sodium reduction. The main reason is that most governments have yet to adopt compulsory policies and have left businesses to reduce sodium in food products voluntarily.

According to WHO, in the Middle East, North Africa and Turkiye (MENAT) region, only a handful of countries – Bahrain, Iran, Qatar, Turkiye, United Arab Emirates

(UAE) and Saudi Arabia – have introduced mandatory measures to reduce sodium or help consumers make healthier food choices with compulsory labelling of sodium content on all pre-packaged food.

Saudi Arabia has gone one step further by implementing the WHO's recommended interventions related to sodium that help prevent non-communicable diseases. These interventions include:

- reformulating foods to contain less salt and setting targets for sodium content.
- establishing procurement policies that limit salt or sodium-rich foods in public institutions.
- front-of-package labelling that helps consumers choose lower-sodium products.
- changing consumer behaviour with communication and mass media campaigns.

Reducing sugar intake

Diets high in refined carbohydrates and sugar contribute to overweight and obesity. In the WHO's Eastern Mediterranean Region, for example, 53 percent of adult women and 45 percent of adult men are overweight or obese. The region also has the highest rate of diabetes at nearly 14 percent of the population.

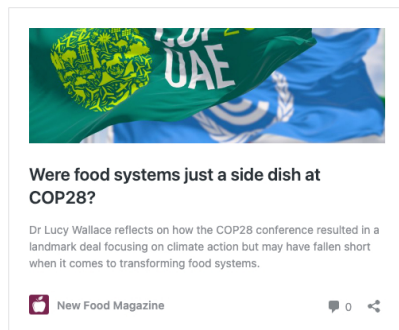
The WHO has set a target for the MENAT region to reduce obesity in children and adults by 35 percent. It has recommended that governments implement nutrition labelling that supports healthy choices and monitor the food environment for nutritional quality, prices, and marketing practices.

Only a few countries within the region have introduced traffic light labelling on food products. The label indicates the sugar, salt and fat levels to help consumers make healthier food choices. Iran has made such labelling mandatory, while Saudi Arabia has made it voluntary.

Several countries in the region, including Saudi Arabia and UAE, have also rolled out a tax on sugar-sweetened beverages. Saudi Arabia, in particular, has seen encouraging results following a sugar tax of 50 percent – a 35 percent reduction in the sales of carbonated beverages.

How the food industry can drive change

The planet's well-being is in jeopardy. Countries face public health crises despite some measures to stem obesity and prevent non-communicable diseases. And consumers increasingly seek sustainable products that benefit them and the environment.



At Kerry, we work with our customers to help them move along the sustainable nutrition spectrum where they can produce healthier, tasty foods while cutting carbon emissions and food waste. The range and complexity of challenges our industry is facing right now is unprecedented and there is an urgency for the food industry to step up and proactively develop sustainable nutrition solutions. How then can the food industry make a meaningful difference by creating sustainable nutrition solutions?

Nutritional optimisation and reformulation

Consumers are becoming more conscious of eating healthier diets. Governments are introducing taxes and regulations on products high in fat, sugar and salt to tackle obesity and prevent non-communicable diseases.

The food industry is hence feeling the heat to reformulate existing products. The good news is that manufacturers can now leverage available taste modulation technology such as Kerry's **Tastesense** to successfully reduce sugar and salt to

meet nutritional guidelines while retaining their products' appealing taste.

Food manufacturers can also use digital tools in the market such as the [Kerry NutriGuide](#) to predict how changes in ingredients or recipes will affect their products' nutritional profiles.

Preventing food waste

One way to address the issue of food waste is by developing products with a longer shelf life. Take, for example, bakeries. Bakeries create a lot of waste due to the short shelf life of bakery goods.

By creating more resilient and longer-lasting products, such as with enzymes and fermented ingredients, food manufacturers can eliminate visual discards and help reduce emissions associated with landfill waste. Kerry's [Food Waste Estimator](#) helps companies and individuals quantify the impacts of food waste.

Plant-based alternatives

With health and sustainability at the top of their minds, more consumers are opting for nutrient-dense plant-based alternatives that also come with lower greenhouse gas emissions.

Still, taste is the number one reason consumers favour one product over another. To appeal to a broad range of consumers with varying dietary needs and demands, food manufacturers must develop [plant-based dairy and protein alternatives](#) that offer the same desirable taste, texture, functionality and nutrition as animal-based counterparts.

Nutritional and eco labelling

Over the past decade there has been a proliferation of front of pack nutrition labelling globally (e.g., NutriScore, Traffic Light Label and Health star rating) which aim to guide and inform consumers to make healthier food choices at the point of purchase. More recently, eco-labels are also entering the market with front of pack ratings to help consumers to understand the environmental impact of their purchases.

Even though there are challenges in standardisation and consumers may still need more education to fully understand what the labels mean, these labels are still a useful tool for educating consumers on the health and environmental impact of their purchases.

Nutritional and eco labelling may also motivate producers to create better-for-health food, reduce their carbon footprints and develop sustainable products.

Collaboration is key

The world faces complex and urgent challenges in global health and environmental sustainability. We can no longer wait on or rely on a single party to take action.

As the food industry seeks to respond to these challenges in addition to regulatory and consumer demands, it makes sense to collaborate with partners that can support them in creating products that deliver even more value in sustainable nutrition.

The food industry must thus unite to innovate in sustainable nutrition. This shift is essential not just for consumer and planetary health but also for economic benefits. Collaborative efforts are vital to making a more meaningful impact, creating foods that are better for people, society and the planet.

About the author



Kerry Wellness Conference 2019.
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By Dr Aoife Marie Murphy,
Sustainable Nutrition Manager at
Kerry. Dr Murphy spoke at Gulf Food
Manufacturing 2023, where she
presented insights on the consumer
market for sustainable nutrition in the

Middle East, North Africa and Turkiye (MENAT) region, how food companies can drive sustainability impact, and the evolving regulatory landscape for nutrition labelling.



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