Briefing for the Citizen Participation and Public Petitions Committee on petition PE2144: Ban the sale and use of artificial sweeteners in food and drinks, lodged by Ben Ronnie Lang

Brief overview of issues raised by the petition

The petitioner, Ben Ronnie Lang, is concerned about the use of artificial sweeteners such as sucralose, and their contribution to diet-related diseases such as type 2 diabetes. The petitioner believes that people in Scotland would be healthier if artificial sweeteners were banned from food and drinks.

Background

Artificial sweeteners are chemicals used instead of sugar to sweeten foods and drinks. They are recognised by the sweetness receptors on the tongue and most provide no calories because your body cannot break them down. Some contain a small number of calories, but the amount needed to sweeten is so little you still end up consuming barely any calories. They can be an effective way of keeping the sweet taste while reducing sugar intake. Sweeteners can be made in many ways: they can be extracted from plants, or from other vegetable material and they can also be synthesised or obtained using micro-organisms.

While most mainstream sources in the UK, including the NHS and organisations such as the British Heart Foundation and Diabetes UK advocate for the replacement of sugar with sweeteners, because of the impact of sugar on tooth decay, obesity and type 2 diabetes, they do acknowledge the lack of good evidence for sweeteners helping with sustained weight loss. A World Health Organisation guideline: use of non-sugar sweeteners, was published in May 2023, based on a systematic review and meta-analysis published in 2022. The guideline recommends that “non sugar sweeteners should not be used as a means of achieving weight control or reducing the risk of non-communicable diseases (conditional recommendation)”. The review included 280 studies looking at various health outcomes linked to the consumption of non-sugar sweeteners.

According to a blog published by the MRC Epidemiology Unit, the studies included in the WHO systematic review did not all necessarily fully support the recommendation:

> “The randomised controlled trials showed that higher intakes of non-sugar sweeteners resulted in reduced calories (-136 kcal/day) and sugars (-38.4 grams/day) intakes and lower body weight (-0.71 kg). But evidence from prospective cohort studies suggested that higher intakes of non-sugar sweeteners were linked with higher BMI (0.14 kg/m2) and increased risk of

obesity (76%), type 2 diabetes (23%), mortality (12%), stroke (19%), and preterm birth among pregnant women (25%). Case-control studies also found links between non-sugar sweeteners (mainly saccharin) and bladder cancer risk, but not other cancers.

Overall, the WHO concluded that any potential short-term benefits of using non-sugar sweeteners for weight control, as shown in trials, were outweighed by the potential long-term risks of obesity and chronic disease as suggested in cohort and case-control studies."

Some common examples of artificial sweeteners, along with their relative sweetness, include:

- Sucralose - this sweetener is 600 times sweeter than table sugar and is mostly used for cooking, baking, and mixing with acidic foods.
- Advantame - this sweetener is 20,000 times sweeter than table sugar and is also suitable for cooking and baking.
- Acesulfame potassium - this sweetener is 200 times sweeter than table sugar and again is also used for cooking and baking.

A large study of the associations between the use of artificial sweeteners and the risk of cardiovascular diseases in France, involving about 100,000 people aged 42, found that regularly having artificial sweeteners was linked to an increased risk of cardiovascular diseases (heart disease) and cerebrovascular disease (stroke).

Some studies and commentaries challenge the conclusions of the WHO review and the safety and efficacy of non-sugar sweeteners remains a controversial topic.

Food Standards Scotland

Food Standards Scotland (FSS) was established on 1 April 2015 as the new public sector food body for Scotland. Their mission is to protect the health and wellbeing of consumers and as set out in the Food (Scotland) Act 2015 they have 3 main objectives:

- To protect the public from risks to health which may arise in connection with the consumption of food.
- To improve the extent to which members of the public have diets which are conducive to good health.
- To protect the other interests of consumers in relation to food

They work to provide advice which is impartial and based on robust science and data.

Food (Scotland) Act 2015

In this Act the general functions of Food Standards Scotland are as follows:

- to develop policies in relation to food matters and animal feeding stuffs matters,

- to advise, inform and assist the Scottish Ministers and public bodies and officeholders and other persons in relation to food matters and animal feeding stuffs matters.

- to keep the public informed about and advised in relation to matters which significantly affect their capacity to make informed decisions about food matters.

- to keep users of animal feeding stuffs informed about and advised in relation to matters which significantly affect their capacity to make informed decisions about animal feeding stuffs matters,

- to monitor the performance of, and promote best practice by, enforcement authorities in enforcing food legislation.

Their remit looks at all aspects of the food chain which can impact public health and aims to protect consumers from food safety risks and promote healthy eating.

Regulation and risk assessment – how are sweeteners and other food additives deemed safe?

Sweeteners are a regulated product in the UK given they are classed as food additives. Regulated products are products that require to be safety assessed and authorised by Ministers before they can be placed on the market. The FSS, along with the Food Standards Agency (FSA) which covers England, Wales and Northern Ireland, deal with the market authorisation of regulated products in the UK.

The regulation of sweeteners has a long history. Food standards, safety, labelling and regulation are devolved to the Scottish Parliament, although there is close working between the UK Food Standards Agency and Food Standards Scotland (FSS) through a Memorandum of Understanding. However, partly because of the quantities and types of food that are imported and exported, the regulation of food is globally complex, and the impact of leaving the European Union continues to present uncertainty on future regulation across Great Britain.

Regulation of food and food additives pre-Brexit

When the UK was a member of the EU, all UK nations were subject to EU legislation on food and food additives.

Food Standards Scotland and the Food Standards Agency existed, but did not handle market authorisations for food products. Their role was to enforce the EU regulations and standards in the respective devolved nations.

The impact of leaving the European Union on food regulation

Brexit has had a potentially significant impact on the regulation of food and food additives. This academic blog article, published in 2019, details some of the impacts and challenges created by the decoupling of UK food regulation from the EU. Prior to Brexit, as stated above, regulatory standards on food additives, including non-sugar sweeteners were made at EU level and applied across the EU.

The EU Withdrawal Act 2018 aimed to create a "functioning statute book" on Brexit day by transferring EU law, as it stood immediately before exit day, into UK law. Extensive powers were given to UK Ministers, and, in the realm of certain legislation including food, to Scottish Ministers, to make secondary legislation – in the form of statutory instruments (SIs) and Scottish statutory instruments (SSIs). The use of these instruments along with any future changes to primary legislation could mean that over time, the laws in Great Britain would diverge from EU law. However, because of the extent to which food is subject to overseas trade, and, that exports from the UK to the EU have to comply with EU law, so far there has not been significant divergence.

Following Brexit, FSS and FSA states that the position is:

> "The vast majority of EU derived food and feed standards in law continue to apply in Scotland. For example, the precautionary principle continues to be enshrined in UK general food law (Regulation (EC)178/2002) as does detailed EU derived requirements for food and feed hygiene and safety."
>
> "All food additives authorised prior to the end of the transition period may continue to be used in line with the specifications and conditions of use specified in the retained EU law. From 1 January 2021, applications for new additives, flavourings and enzymes will be managed within the UK by the FSA and FSS." (FSA website)

The FSA and FSS continue to act as regulators, watchdogs, and advisory bodies to ministers and the industry. In recognition of the need to support food businesses in trading, the two bodies continue to work closely together in these areas.

The UK Internal Market Act

Future food regulation is potentially impacted by the post-Brexit UK Internal Market Act 2020, which introduced a new market regime whereby:

1. **mutual recognition** – any good that meets regulatory requirements in one part of the UK can be sold in any other part, without having to adhere the relevant regulatory requirement in that other part; and

2. **non-discrimination** - a prohibition on direct or indirect discrimination based on treating local and incoming goods differently. It also provides for limited exclusions from these rules, based on individual policy areas.

This means that divergence from the rest of Great Britain in regulations and legislation in Scotland on sweeteners is more difficult as it would not necessarily have the effect of banning sweeteners in all goods sold in Scotland, unless the ban

was Great Britain wide. However, a request could be made by the Scottish Government to the UK Government for an exemption to disapply the UK Internal Market Act in this policy area.

What evidence is used by the UK regulators and other global regulators to assess food additive safety?

FSS (and the FSA) gather evidence from a wide range of global sources to inform their decisions on market authorisations and any changes to food additives, and primarily to inform their advice to ministers.

The European Food Safety Authority (EFSA) is the EU regulator which bases its assessment of additives against a number of criteria, but EFSA points out that their assessments are directly linked to EU legislation rather than risk assessment per se, which, in a global context is undertaken by the US Food and Drug Administration (FDA) and the World Health Organisation . The FSA and FSS are no longer bound by EU law which diverges from the retained law and will formulate their own advice to Ministers about risk and adverse effects, but will use the full range of evidence available to them, from bodies such as the US FDA, WHO and EFSA, for example.

Position of the Scottish Government in relation to banning sweeteners

Scottish Ministers could ban / remove an (market) authorisation of any regulated product. However, this would have to be based on new evidence coming to light which would then trigger the requirement for an updated safety assessment to be commissioned. This would then form the basis of any updated advice from FSS to Scottish Ministers. This evidence is likely to considered in the broader contexts described above, and in collaboration with relevant agencies and bodies in the UK.

There could be a scenario whereby FSS and FSA had diverging positions on their recommendations to their respective Ministers. However, that is generally unlikely as the two agencies work collaboratively on their safety assessment work, using the same scientific body of evidence, and legislation on which to base risk management and authorisation recommendations.

Related action by UK government

The soft drinks industry levy regulations, 2018

The petition might appear to run counter to measures brought in to reduce the population's sugar intake, such as the levy brought in to encourage the drinks industry to reformulate its products, replacing sugar with different sweeteners.

The purpose of the "sugar tax" introduced across the UK on the 6th of April 2018 was to help tackle childhood obesity and over consumption of sugar by increasing tax on soft drinks and therefore, potentially making them more expensive for consumers.

The rates companies need to pay are as follows:

- 24p per litre of drink if it contains 8 grams of sugar per 100 millilitres.

- 18p per litre of drink if it contains between 5 – 8 grams of sugar per 100 millilitres.

This caused many manufacturers to switch to sweeteners to avoid paying the sugar tax, resulting in an increase in sweetener usage, but has seen no particular rise in the cost of artificially sweetened drinks because of the reformulation. In contrast, the cost of drinks with a high sugar content has risen. The Institute for Government published a helpful explainer about the 'sugar tax'.

High Fat, Salt, and Sugar (HFSS) Foods

HFSS foods are heavily linked to **weight gain and poor health**. These foods are often:

- **Highly processed**, making them easy to overconsume.
- **Calorie-dense**, leading to excessive energy intake.
- **Nutritionally poor**, lacking essential vitamins and minerals.

Both UK and Scottish Governments are pushing for tighter **advertising restrictions** and **healthier food reformulation** to reduce the consumption of HFSS products.

The Food (Promotion and Placement)(England) Regulations 2021 came into force on 1 October 2022. Implementation guidance.

Related action by Scottish Government

Obesity in Scotland

Scotland has some of the highest obesity rates in Europe. Obesity contributes to major health issues, including **type 2 diabetes, heart disease, and cancer**.

The Scottish Government has implemented policies to address obesity, including:

- Consulting on restricting **multi-buy promotions** on high-fat, salt, and sugar (HFSS) foods. (consultation analysis to be published early 2025)
- Consulting on **Calorie labelling** in cafes and restaurants.
- Public awareness campaigns about **healthy eating and physical activity**.

Reducing the visibility and availability of HFSS foods is one aspect of the attempt to improve diet in Scotland, but there are a number of other potential avenues such as:

- Encouraging walking, cycling and active travel
- Reducing the relative price of healthy food through agricultural subsidies
- Free or subsidised healthy school meals
- Reformulation of food and drink products through government regulations

- Providing health, diet and exercise education for children
- Extending or increasing education in cooking and nutrition in schools and in communities.

  (source: SPICe Briefing: How can we reduce obesity in Scotland?)

Key Organisations and relevant links

- World Health Organisation
- Food standards Scotland
- British Heart Foundation
- Food Standards Agency
- The Sweeteners in Food Amendment (Scotland) Regulations 2004 lists the allowable amounts of non-sugar sweeteners in a range of food and drinks.
- Article about a study on a novel non-sugar sweetener, and including links to other studies suggesting potential links to disease, such as dementia and ischaemic stroke.

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