Trends in twitter conversations about food during 2019-2020

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Summary

In order to build our understanding of the views and concerns of the public when it comes to food, the FSA commissioned analysis of social media data in September 2020. The work was undertaken by Pulsar, an audience intelligence company. Pulsar used a broad pool of circa 4 million tweets from March-August 2019, mentioning keywords such as cooking, eating, ingredients, to identify prominent topics that could be considered to be trends.

Trends were grouped in 7 category topics and year on year comparisons were made to identify growth between 2018-19 and 2019-20. The majority of trends seeing high growth over the period are largely conversations which are driven by Brexit and COVID-19, demonstrating that throughout 2020, these events influenced people's attitudes towards food as well as everyday interactions with the food system.

This report provides a high level view of each category, reporting additional analyses on key category macro trends and key findings from the audience analysis where undertaken.

1. Food systems: Macrotrends include: Food business diversification during lockdown restrictions, Eating out during the pandemic

2. Ingredients and process: Macrotrends include: Alternative milks

3. Health: Macrotrends include: Disease prevention

4. Intolerances and Hypersensitivities: Macrotrends include: Eating out with intolerances and/or hypersensitivities

5. Diets, Habits and Routines: Macrotrends include: Plant-based alternatives
   Food Safety and Standards: Macrotrends include: British Animal Welfare

6. Sustainability: Macrotrends include: Meat consumption and environmental concerns

Method

Pulsar devised a multi-step framework to go from large-scale trend discovery to trend deep-dives. An initial broad pool of circa 4 million tweets mentioning keywords such as cooking, eating, or ingredients in March- August 2019, was used to identify prominent topics that could be considered to be trends. The first stage used broad keyword syntax to capture the wider food conversation, leading to the development of bespoke keyword search syntax and keyword exclusions for every trend to ensure relevant results were captured. Trends were grouped in 7 categories:

1. Food systems
2. Ingredients and processes
3. Health
4. Intolerances and Hypersensitivities
5. Diets, Habits and Routines
6. Food Safety and Standards
7. Sustainability

Year on year comparisons were then made to identify changes in conversation between 2018-19 and 2019-20 (September – August). To provide context to changes in trend categories, individual trends within said categories were grouped into a smaller number of macro trends.

Digital audience segmentation was also carried out on the ‘Food Safety and Standards’ and the ‘Intolerances and Hypersensitivities’ categories, to capture who was engaging with the topics. Audience maps were created, inferring interests by analysing the relationships (follows) and interactions (tweets, likes, clicks, etc.) throughout the audience, understanding how users are connected to, or engaged with, other users and accounts in the network. The demographics of the users within the audience are reported according to interactions (tweets, follows, likes, clicks, etc.), the information in users' profiles (name, profile photo), and other public information (demographic census).

This report provides a high level view of each category, deep dive analyses on key category macro trends and key findings from the audience analysis where undertaken.

Note, whilst analysis of social media has a number of advantages, such as the potential for large samples, and rapid data collection and analysis (once systems in place), caution is needed in interpreting the results and/or generalising from these data to the public at large. Social media users are not representative of the general population (with social media use being more widespread amongst younger age groups) and different people use these media in different ways (with most posts being made by a subset of overall users, who again are likely to suffer from problems of representativeness). Findings presented here relate to relevant trends in twitter discussions, which do not necessarily reflect FSA views or future policy direction.

Key findings by category topic

Food systems

The food systems category encompasses mentions of various ways in which food is supplied, delivered and distributed across the UK, issues associated with this, and any alternative methods of acquiring food discussed by people on social media. There was growth in annual volume across all food systems macro-trends. ‘Suppliers’ had the highest share of the voice with over 4.4 million mentions, followed by ‘Food sharing and growing at home’ and ‘Food charity’ each with under 1 million mentions. This includes mentions of new food sharing apps such as Olio and campaigns like #LoveFoodHateWaste. Most of the macro-trends in this topic appear to reflect concerns and changes brought forth due to COVID-19 and Brexit discussions.

Food business diversification during lockdown restrictions

During the lockdowns, restaurants and pubs announced a shift to offering food delivery services. We also see other businesses following suit, ranging from professional chefs and restaurant wholesalers trickling down to individuals running businesses from home for the first time. The latter often offer regional menus aligning with the business owners’ heritage, with Caribbean food delivery seeing buzz. Food safety standards are not typically mentioned.

Concerns about eating out during the pandemic

The most prominent concern about eating out is observed before hospitality establishments shut in the wake of COVID-19. With the announcement of pubs and bars reopening on the 4th of July comes renewed concern as people question whether it is safe to reopen. Specific concerns most often revolve around the lack of trust in people’s ability to socially distance. Others fear risk of COVID-19 transmission by restaurant staff. In August, some people recount experiences with Eat Out To Help Out, while others suggest they did not feel safe to eat out again following their experience.

Figure 1: Food business diversification, twitter conversation Aug 2019-Aug 2020

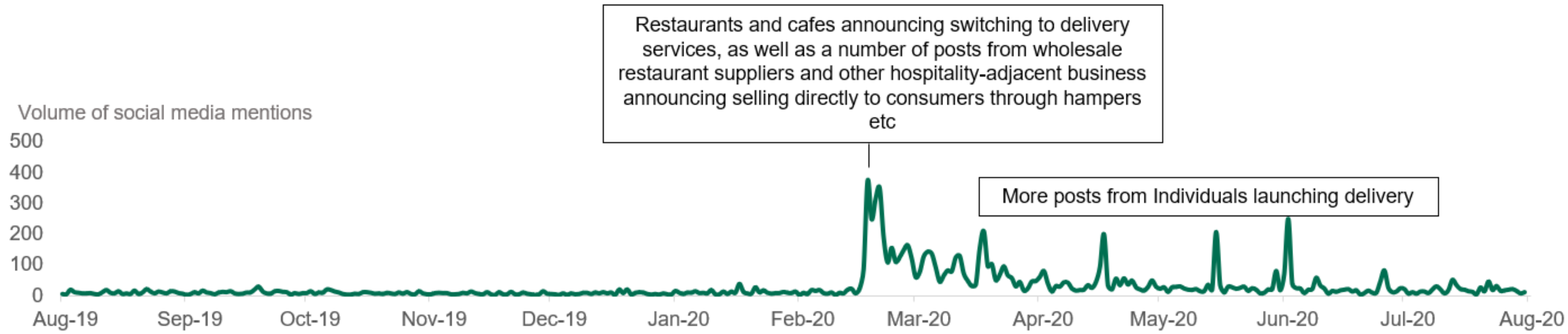
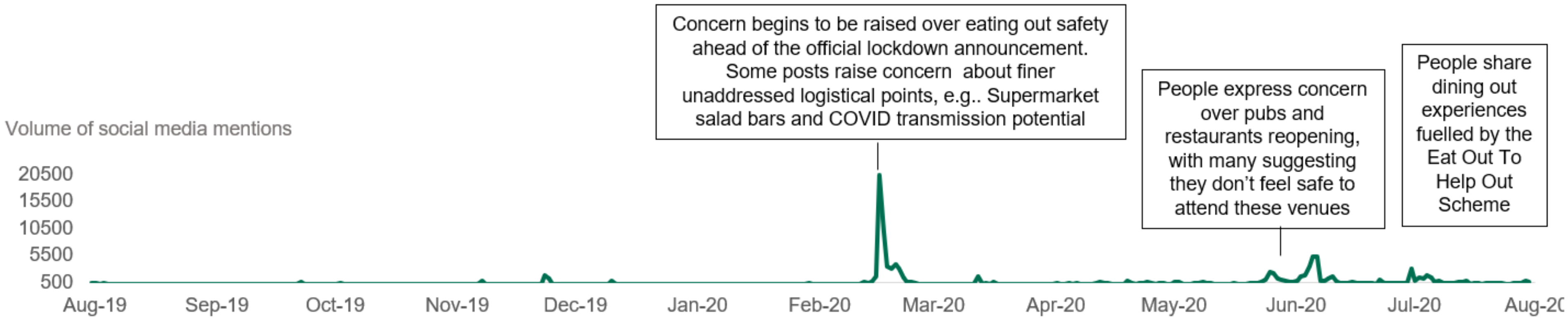


Figure 2: Concern about eat out during the pandemic, twitter conversation Aug 2019-Aug 2020



Ingredients and processes

The ingredients and processes category reflects a non-exhaustive list of specific ingredients, dishes and cooking processes which surfaced during the exploration of the broad food, cooking and ingredients dataset. The largest macrotrend was 'Cooking during Covid-19', as the pandemic and lockdown restrictions changed many people's eating habits and meant that more people were cooking at home instead of eating out. Discussions about cooking methods gained traction, such as alternatives to boiling, frying and roasting. Wellness-focus trends declined, as did more recently popularised food additions, like CBD. Wellness-focused trends are often propelled into attention by online influencers in a cycle of new content, providing context to the general decline to trends.

However, the conversation about meat substitutes increased, underpinned by the news of innovation in the industry. There is enthusiasm for such innovation but also consumer concern around the level of processing that goes into production.

Alternative milks

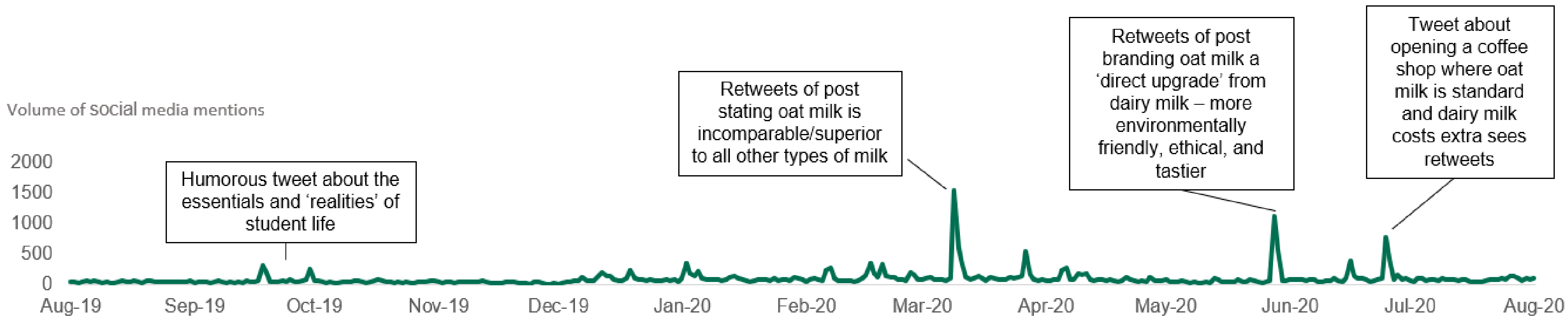
The conversation around different milk types was driven by groups and individuals advocating plant-based diets to combat animal cruelty and climate change and reduce the spread of disease. Those with allergies were also present but less active in the discussion. Many of the top posts aimed to spread awareness about the variety of plant milks available, suggesting that any such option is better than eating/drinking dairy. Some also included recommendations of which milk type to use for different purposes; people refer to mixing plant-based alternatives to suit taste and consistency.

Plant-based milk consumers discussed the benefits and shortcomings of different alternative products concerning sustainability, ethics, taste, etc. Key issues included almond milk's effect on biodiversity (i.e. bee population), deforestation from coconut milk production, and nut and soy allergies. Calcium deficiency and sustainable packaging was a concern across all plant milk types.

Overall, oat milk was the preferred alternative milk type, with consumers viewing it as a sustainable option with good taste and consistency.

The conversation around oat milk saw many upticks throughout the year, with peaks becoming both more prominent and frequent in 2020. These are often driven by comparisons with other milk types where oat milk is deemed the better option. People share the concern about the high price of oat milk, especially compared to dairy, with do-it-yourself content generating interest.

Figure 3: Oat milk, twitter conversation Aug 2019-Aug 2020



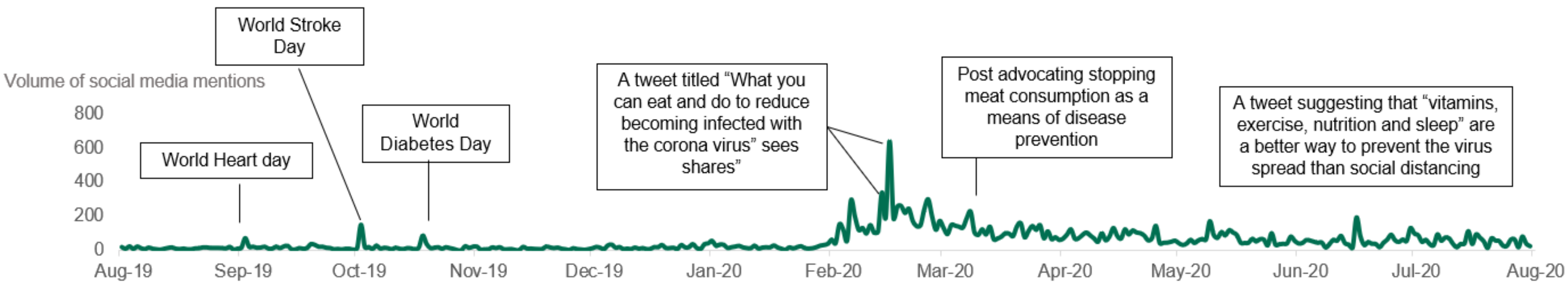
Health

The health category contains food conversations in the context of both physical and mental health, including everyday/lifestyle wellness, public concerns and food and supplements as a way to manage specific health concerns. By far, the largest proportion of this topic was 'Relationship with food and weight' (1.17 million mentions). While public domain discussion about eating disorders sees declining levels of conversation, personal accounts discussing unhealthy weight gain/loss and mental health increased. Discussions around disease prevention saw the highest annual increase (190%), partially due to speculation around the role of nutrition in helping fight the likelihood of suffering from COVID-19 and general concerns about curbing the spread of the virus through safe shopping etc.

Disease prevention

Before the pandemic, disease prevention conversation was driven by specific awareness days and research published, e.g. chocolate preventing heart disease or fruit preventing diabetes. During the pandemic, the bulk of prevention conversation related to hand washing before and after handling food. Some tweets refer to the consumption of specific immune-boosting foods to help prevent COVID-19, whilst others, whilst others challenge the view that any one food could help. The link between coronavirus risk and obesity is also highlighted by some.

Figure 4: Disease prevention, twitter conversation Aug 2019-Aug 2020



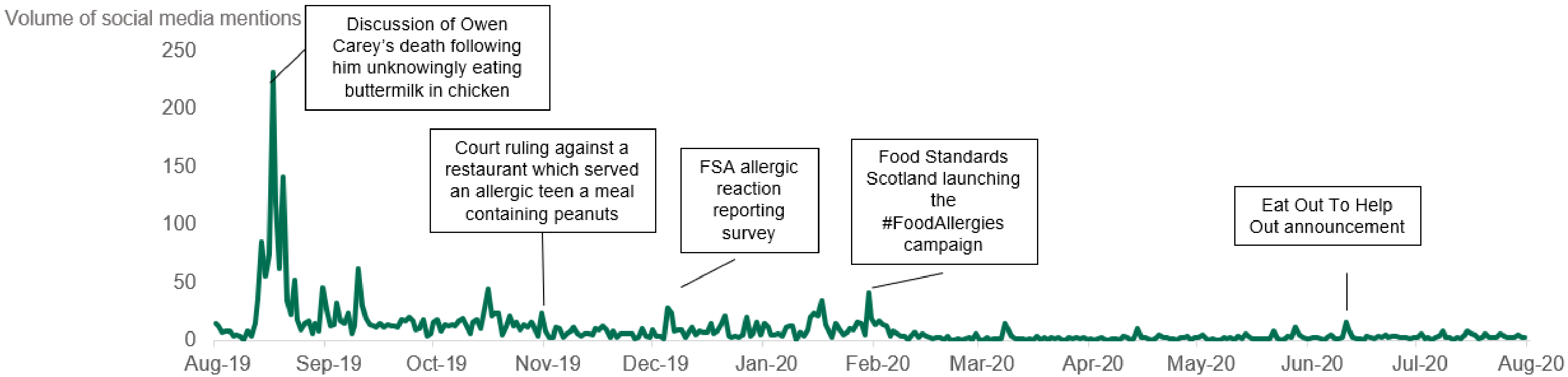
Intolerances and hypersensitivities

The Intolerances and hypersensitivities category contains all mentions of allergies and intolerances related to food in general and specific ingredients. Allergy-triggered behaviours and lifestyle impact (for example, avoiding restaurants and takeaways) are also included. The discussion is multi-faceted and involves consumers, food business owners and employees. Allergies and Intolerances conversation generally declined, including lower levels of fish and dairy allergy discussions. However, this topic is multi-faceted and highly emotive.

Eating out with intolerances and/or hypersensitivities

The conversation about intolerances and hypersensitivities and eating out showed a high level of caution amongst sufferers. With some of the largest number of shares, those suffering from intolerances and hypersensitivities are eager to share their experiences. Primarily, they share anecdotes of their needs being either accommodated or ignored and call out inadequate labelling.

Figure 5: Eating out with intolerances and/or hypersensitivities, twitter conversation Aug 2019-Aug 2020



There is a smaller subset of the discussion related to milk and milk alternatives in coffee, with people mentioning having to pay extra for plant-based milks or the negative impact of restaurants using oat milk as the new default, with some highlighting oat-specific intolerances or gluten intolerances.

Intolerances and Hypersensitivities audience

The intolerances and hypersensitivities audience shows interest in topics of public and personal concern such as current affairs, politics, environment and health & wellbeing. The audience skews slightly more female, with the majority based in large cities across the UK. Audience members tend to follow media outlets such as BBC and The Guardian, UK public opinion aggregators and health organisations. Many different groups participate in the conversation, including ‘Politicos’ (15%), ‘Persons of Colour & BLM Supporters’ (7%) and ‘Mummy Bloggers and Nutritionists’ (7%). See annex A for further details.

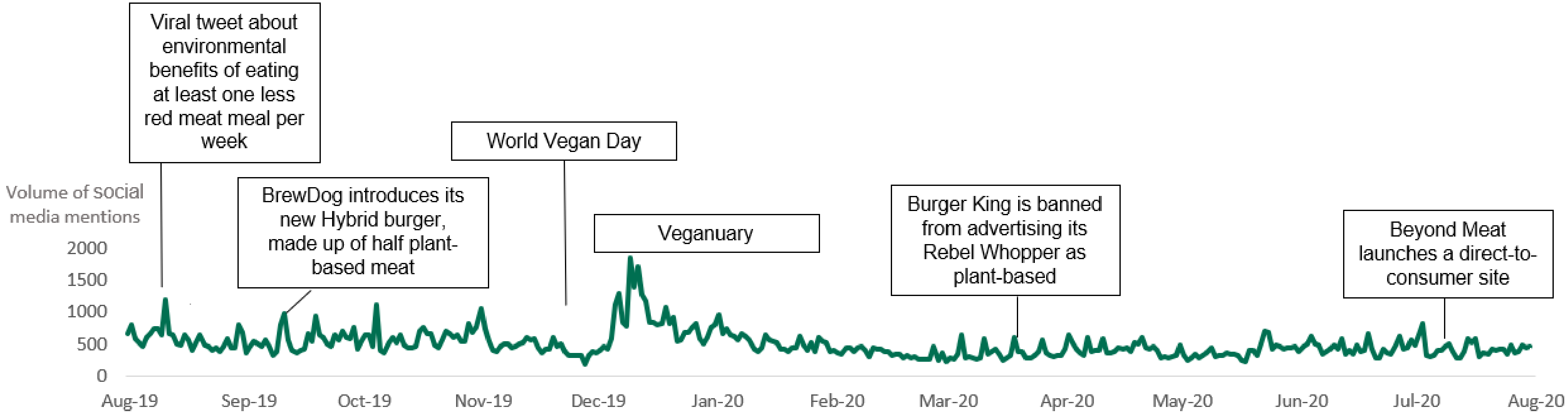
Diet, habits and routines

The category contains macro-trends related to conversations about diets and eating routines, both as a lifestyle choice or a necessity, as well as unfavourably perceived food habits. Most macro-trends across this category either see a decline or remain stable. This category includes discussions about meat and dairy reduction, where we see a general decline across the board. However, the plant-based macro-trend has the largest share of the voice, with 1.7 million mentions.

Plant-based alternatives

The term “plant-based” was used in multiple ways, denoting vegan meals or an effort to make or consume more plant-centric meals. It was also be used when discussing specific meat and dairy replacement products. Plant-based meat alternatives were discussed almost three times as much as milk alternatives. Some consumer favourite brands received very positive reviews. However, the discussions also make reference to the level of processing used in the production of plant-based foods. When people share images of their plant-based meals, they often include street-food style dishes, often featuring avocado.

Figure 6: Plant based alternatives, twitter conversation Aug 2019 - Aug 2020



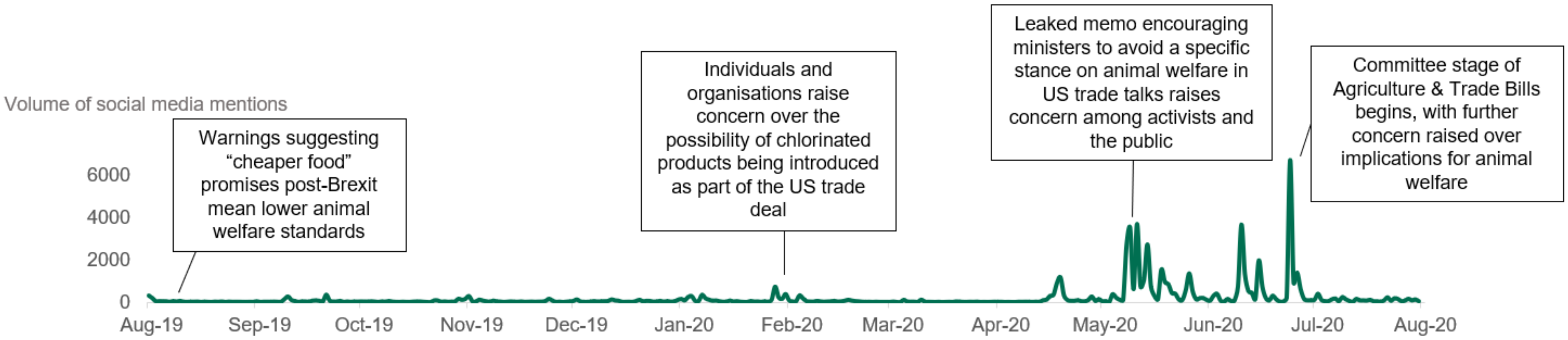
Food safety and standards

The Food Safety and Standards category captures discussion of public concerns related to specific events or political shifts regarding food, as well as guidance on everyday food preparation, storage and consumption. Trends in this category are dominated by concern about food standards post-Brexit and the predicted effects of potential new trade deals. COVID-19 concerns also influence food safety discussions, with COVID and meat being a topic of particular interest comprising 83% of this discussion. Food standards discussions generally see a considerable percentage of growth compared to trends within other categories due to most of this discussion unfolding since March 2020.

British Animal Welfare and Food Standards

In 2019, peaks in discussion come from concerned activists and relevant organisations, such as the RSPCA, voicing concerns over the potential effects of Brexit on food standards in the UK. People doubted that the US trade deal would positively impact product quality or the welfare of UK farmers

Figure 7: British Animal Welfare and Food Standards, Twitter conversation Aug 2019-Aug 2020.



Food safety and standards audience

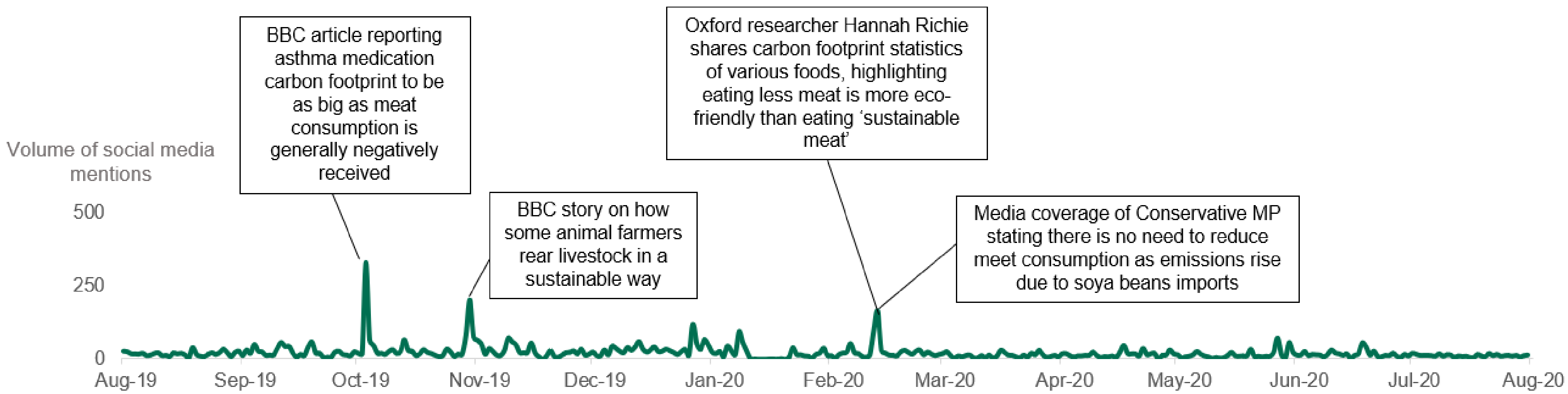
The Food Standards audience skews male and follows mainstream British news outlets and platforms dedicated to British politics and political figures. Conversations in this category are often politicised with the largest audience group being 'Pro EU' (52%), followed by 'Brexiteers' (10%) and 'Socialists' (9%). See annex A for further details.

Sustainability

The sustainability category contains conversations around food production, consumption and disposal related to the local and global environmental impact. In 2020, the sustainability conversation moved from general fears about climate change and pollution to more specific topics such as meat consumption and reduction, alternative farming, and buying local.

The conversation around meat consumption was generally consistent but downturned in volume following larger spikes at the end of 2019 up to the beginning of 2020. Conversations are often debate focused with environmentalists, animal rights advocates, farmers and meat-eaters all engaged in the discussion. There are two key themes and outlooks: livestock farming and individual action to reduce emissions (i.e. consuming less meat). Many farmers adopt and advocate for more sustainable practices, but express discontent at the perceived misrepresentation of livestock contribution to greenhouse gas emissions.

Figure 8: Meat consumption and environmental concerns, Twitter conversation Aug 2019-Aug 2020



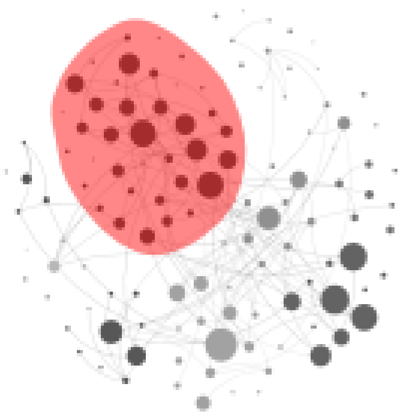
Appendix A – Audience mapping

Audience maps show the groups within the audience that have common affinities & characteristics

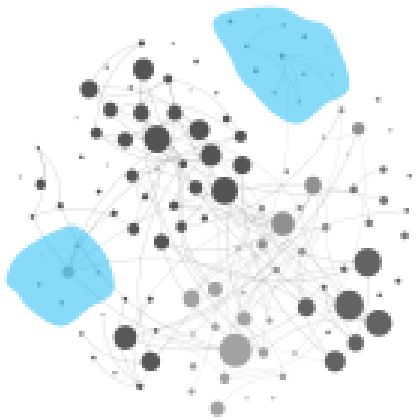
- Size of the segments = proportional to the # of members in the segment
- Lines represent interconnections between different members
- Size of each circle (nodes) = the # of interconnections the user has.
- Sections of each graph have been highlighted with demographic and affinity information below.

Intolerances and hypersenstivities audience

Older, more male compared to full audience



Younger, more female compared to full audience



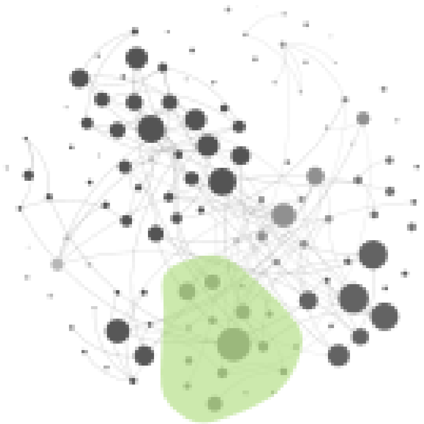
Politicos (pro- & anti- EU) – 15%

Segment defined by their strong political views and interests, containing people with both Left and Right ideologies. They are more likely to question government regulation around eating out in relation to COVID management and relief for those struggling financially.

Persons of Colour & BLM Supporters – 7%

Community strongly identifying with 'being black' and/or supporting the Black Lives Matter movement. They follow black content creators (YouTube, Instagram), businesses and entertainers. Allergy discussion focuses on individual intolerances and recognition of symptoms.

Older, more female compared to full audience

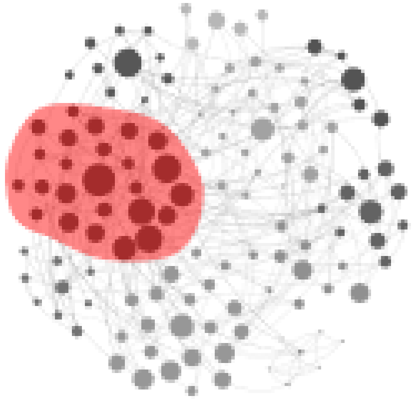


Mummy Bloggers & Nutritionists – 7%

Audience comprised of bloggers and writers interested in nutrition, healthy lifestyles and parenting. They seek and give advice/recipes on catering to family members with specific food intolerances (e.g. nuts) and dietary requirements (e.g. vegan).

Food safety and standards audience

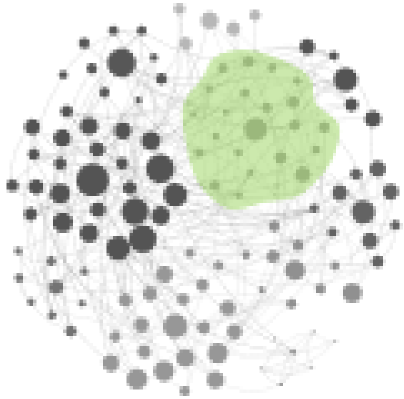
Similar age compared to full audience



Pro EU – 52%

This audience is defined by their strong anti-Brexit views. They are more likely to support the Labour party, advocate against Brexit, and critique decisions made by Boris Johnson and the Conservative party. They are engaged in conversations which span across a broad array of food safety topics. The central topic is the quality of food in the UK post-Brexit.

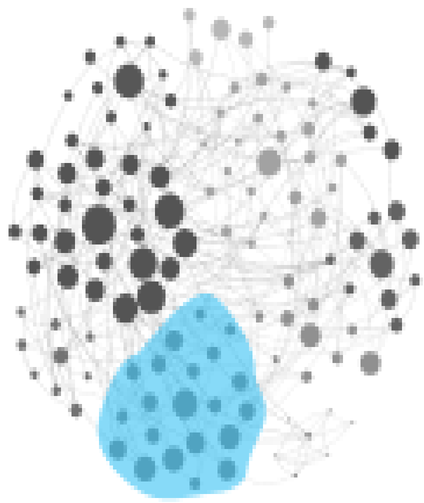
Older, more male compared to full audience



Brexiteers- 10%

This community is engaged with right-wing rhetoric and are involved in pro-Brexit movements. They show high affinity with conservative political figures, mainly in the UK but also in the US. Despite being the second largest audience they are less involved in conversations around food safety than other segments and argue that Brexit will positively impact food standards in the UK.

Slightly older compared to full audience



Socialists – 9%

This audience demonstrated a high affinity with the Labour party in the UK, and socialist ideals more broadly. Although they are mainly centred in London, there is a large proportion in Liverpool as well. They are more likely to critique and question the decisions of the Conservative party, highlighting issues of chlorinated chicken and hormone-injected meat.

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