

## ANNUAL REPORT ON HORIZON SCANNING PROGRAMME

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#### 1. Summary

- 1.1 This paper provides an update on the FSA's progress towards implementing the recommendations of the Science Council's Working Group 3 report on horizon scanning published in June 2019.
- 1.2 It also details how the FSA has used horizon scanning to provide insight during the current Covid-19 pandemic and supported our response to this major incident.
- 1.3 Finally, we discuss how we embed horizon scanning into the work of the FSA and establish it into 'business as usual'.
- 1.4 The Board is asked to:
  - Review the work already completed on implementing the recommendations of the Science Council report;
  - Recognise the work conducted to use horizon scanning and insight as part of the Covid-19 pandemic;
  - Consider our proposals for the future embedding of horizon scanning within the FSA.

#### 2. Introduction

- 2.1 Horizon scanning is the identification of emerging threats, risks and opportunities and subsequently enables proactive consideration, mitigation and exploitation of areas identified. The underlying principles and approaches can be used to look at a range of timeframes, from short-term incidents and surveillance response to long-term strategic challenges.
- 2.2 We are working on building capability for long term (5 to 10 years) horizon scanning for technological, social and environmental changes, developing tools and networks within the FSA and across Government, and piloting approaches to identify and respond to emerging topics.
- 2.3 A horizon scanning capability helps ensure the FSA is a proactive rather than reactive organisation.

### 3. Progress on developing a horizon scanning function within the FSA

- 3.1 In line with the recommendations on horizon scanning from the Science Council's Working Group 3, [presented to the Board in June 2019](#), we are drawing on many sources of information, including surveillance, economic analysis, social science, technological innovation, trade data and data science, to understand how current and emerging risks can offer insights into drivers of future risks.
- 3.2 We have taken forward the [recommendations](#) from the Science Council's WG3 report in order to develop the FSA's underlying capacity and capability for horizon scanning. Supporting this, we developed overarching guidance for how to undertake horizon scanning, based on a PESTLE (Political, Economic, Sociological, Technological, Legal and Environmental) analysis.
- 3.3 We have created a prototype tool to analyse academic journals to identify trends and patterns over time arising in academic publications, enabling the fast identification of new topics and providing an evidence base for the horizon scanning process.
- 3.4 Horizon scanning workshops have been carried out with FSA's Scientific Advisory Committees, drawing on their independent expertise to identify horizon scanning areas.
- 3.5 We have increased engagement with other Government Departments, especially Defra and GO-Science, ensuring that we are represented and able to draw on the cross-government Heads of Horizon Scanning Network. The benefits of this have included enabling us to share and have access to cross-government horizon scanning during Covid-19.
- 3.6 A horizon scanning community of interest including staff from across the agency has trialled our guidance for horizon scanning and the underlying approach.
- 3.7 In terms of ongoing work, a number of deep-dive literature reviews have been undertaken within the areas of gene editing and alternative protein. While our horizon scanning efforts will need to be wider ranging and look through many different lenses, a rolling programme of technology foresight will be a core component.
- 3.8 We have continued to explore digital developments that might impact the food system, both businesses and regulators, working with industry as well as colleagues in BEIS, HMRC and DCMS. Examples include distributed ledger technologies, AI and sensors.
- 3.9 Finally, we have also created a high-level horizon scanning process that allows new concepts/technologies to be assessed and then prioritised. Further detail on this process can be found in **Annex A**, based upon a worked example of lab-grown meat.

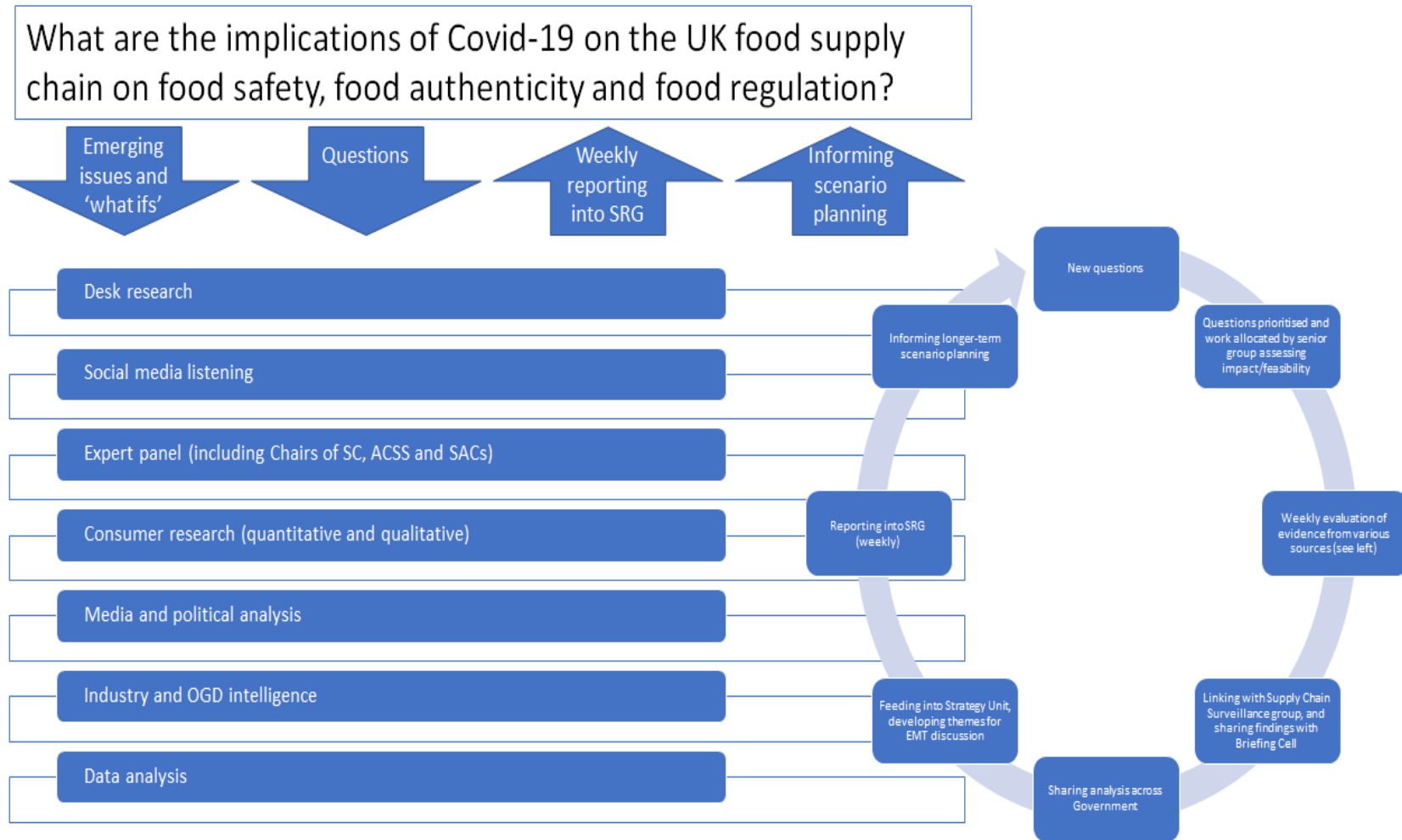
#### 4. Applying horizon scanning principles to Covid-19

- 4.1 As reported to the Science Council in June, since the beginning of lockdown we have been applying the principles described above to a scan of the nearer horizon in order to inform our response to Covid-19. This was such a rare but significant event it warranted taking a broad horizon scanning approach.
- 4.2 A multidisciplinary team was established to answer (and in part predict) the questions that were outside the day to day tactical delivery of the incident management response to inform strategic discussions. In parallel, a panel of experts drawn from academia, industry and civil society, including the Chairs of the Science Council, the Advisory Committee for Social Science, and the other Science Advisory Committees, helped us spot unknown unknowns and consider emerging themes.
- 4.3 An outline of the Covid-19 insights generation process is provided in **Figure 1**. Questions were reviewed and those questions, with the greatest impact on food safety, authenticity and regulation, were prioritised. These were then answered through insights from a broad range of disciplines e.g. operational analytics, data science, the latest economic, market and social research, intelligence from the food industry and other Government departments, and primary research including qualitative research, consumer surveys and social media listening.
- 4.4 Once identified, questions clustered into themes and actions taken to fill evidence gaps or develop, monitor and synthesise the insights for consideration by those managing the incident. The themes, questions and resulting actions from this work were wide-ranging and are summarised in **Annex B**. Key insights from the desk research conducted as a result are provided in **Annex C**.
- 4.5 The evidence gathered helped tailor our own messaging on social media. Then our social media listening, in almost real time, has allowed us to reflect more frequently and adapt the messages.
- 4.6 As well as being used internally, our analysis has been shared with colleagues across Government including the Food and Other Essential Supplies for the Vulnerable Ministerial Task Force, the Directors of Policy group and local authorities. It has fed into wider Government discussions on new Areas of Research Interest in a post Covid-19 world and the National Food Strategy, with the Part 1 report drawing on research insights from the FSA's Covid-19 tracker.
- 4.7 Changes in food behaviours from the Covid-19 tracker will also be reported in PHE's [WICH tool](#) (to be released at the end of August). This monitoring tool provides data on the wider impacts of Covid-19 on health and contains trend data on grocery purchasing, business impacts and public health e.g. smoking.
- 4.8 In June, we published the first reports from our primary research, providing the first Government statistics on household food insecurity during lock-down. [Alongside this paper we have now published:](#)
- A report on four waves of the Covid-19 tracker survey

- A report on the experience of people living in food insecurity during Covid-19
- A report on the way that Covid-19 has impacted on consumers' engagement with the food system
- A review of our Covid-19 & food social media monitoring (March to July)
- A summary of the inputs of our Covid-19 expert panel

**Figure 1** follows overleaf.

Figure 1: Covid-19 insight generation process



## 5. Bringing horizon scanning principles into business as usual

- 5.1 Over and above the value of the insights generated for the FSA and colleagues across Government as a result of the Covid-19 work, this has allowed us to generate a model that the FSA will be able to call upon in future.
- 5.2 Using this model, we are better prepared for future rapid insight generation in future; either focused on key topics or themes identified as part of 'business as usual', or as a 'stand it up' function, created in response to an incident.
- 5.3 Using these principles in our Covid-19 response has demonstrated the value of a science, evidence and insight generation and sensemaking system, that is proactive, interdisciplinary and timely. It supports the FSA as a future-facing agency with excellent situational awareness and a broad view of the consumer interest.
- 5.4 This approach also aligns to our Areas of Research Interest (ARI; published July 2020), where one of the four priority themes is **the future of food systems**. This includes the question of how the FSA can remain responsive to emerging challenges and opportunities in the UK food system (including unprecedented challenges such as those associated with Covid-19).
- 5.5 Building on the model developed during the pandemic, we will continue to scan and develop questions across the FSA's brief, and then prioritise, task and take action as appropriate.
- 5.6 Within the FSA, we are now using well-established approaches to develop scenarios to test our strategic thinking and future business planning, seeking to integrate the pre-Covid-19 orthodoxy on food system futures with an analysis of Covid-19-related disrupters and their potential lasting impacts. We are taking a cross-FSA approach to run scenario development workshops this autumn.
- 5.7 In the longer term, we will continue to embed the Science Council's horizon scanning recommendations, which have now been implemented. This will involve the ongoing provision of case studies on topics identified through horizon scanning and technology foresight, engaging our Scientific Advisory Committees, and running workshops on priority FSA areas, such as allergens, to provide insight and recommendations into the future landscape.

## 6. Conclusions

- 6.1 The Board is asked to:
  - **Review the work on implementing the recommendations of the Science Council report;**
  - **Note the work conducted to use horizon scanning and insight as part of the Covid-19 pandemic;**
  - **Consider our thinking on the future embedding of horizon scanning within the FSA.**

## ANNEX A: HIGH-LEVEL HORIZON SCANNING ASSESSMENT PROCESS

Horizon scanning will naturally give rise to multiple ideas of varying priority. Having a pragmatic method of assessing priority of horizon scanning outputs is critical in addressing possible opportunities and mitigations in an efficient and timely manner.

In our model, this is completed utilising a two-step process:

1. Cause, barrier and effect assessments, and:
2. Prioritisation.

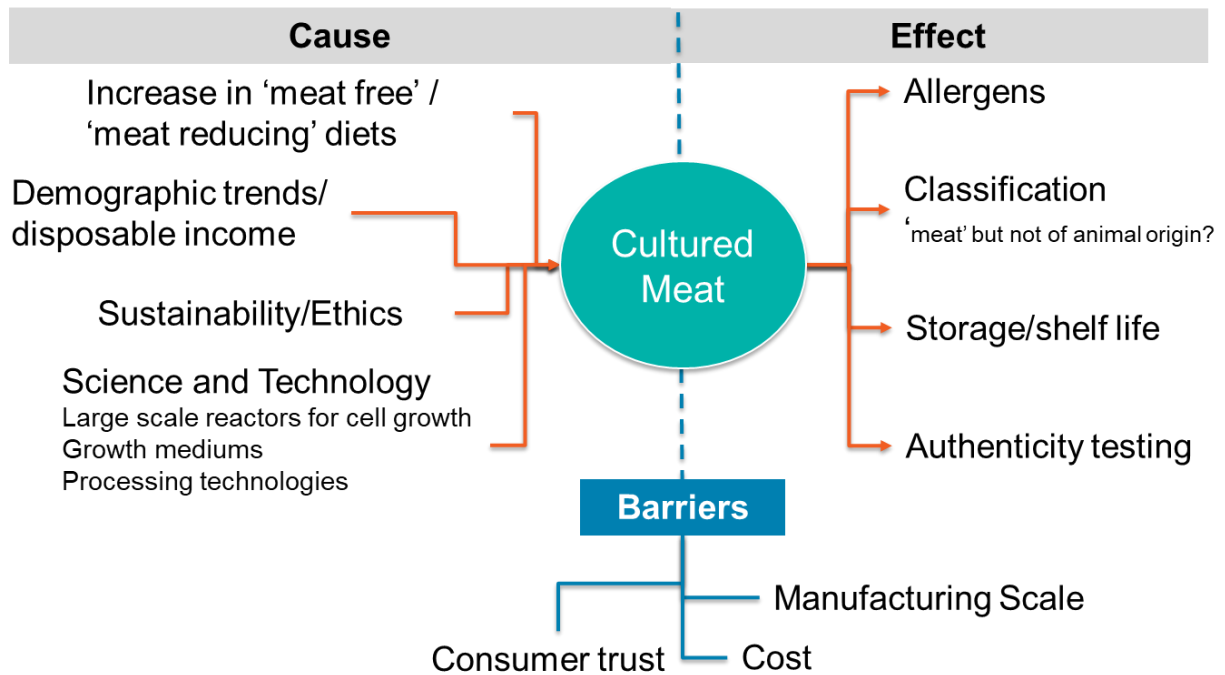
This two-step process seeks to complete a deep dive into the concept/change and from this to prioritise the concept/change, with regard to impact and likelihood.

A cause, barrier and effect assessment seek to guide a deep dive assessment of the concept/change and to crucially identify the 'so what'. There are 3 key aspects of the concept/change to assess – cause, barrier and effect.

- **Cause** - The cause aspect of the assessment seeks to identify the drivers for the concept/change and therefore what has caused this concept/change to be flagged. This may be a range of factors including social change, science and technology development or ethics.
- **Barrier** - The barrier aspect of the assessment seeks to identify the key barriers to full adoption of a concept/technology into the UK Food system. These barriers can range from consumer trust to cost to technological advancements. These are also mechanisms by which uptake and progress of the change/concept could be identified.
- **Effect** - The effect aspect of the assessment will seek to identify what aspects of the FSA's operating environment and wider responsibility areas will be impacted and what mitigations or actions may be required. The effects can include policy development, new regulation procedures, capacity planning *etc.*

Upon completion of this assessment, a broad overview of the concept/change will be generated and is represented by the example for cultured meat (see over). By reviewing these overviews, actions can be prioritised based on an assessment of likelihood and impact.

Worked example of a Cause, Barrier & Effect assessment, based upon lab-grown meat





## ANNEX B – SUMMARY OF THEMES, QUESTIONS AND RESULTING ACTIONS FROM COVID-19 HORIZON SCANNING

<b>Theme</b>	<b>Activity</b>	<b>Next steps</b>
<b><i>Vulnerable groups</i></b> (with a particular focus on household food insecurity).	<p>Analysis informed the Ministerial Task Force on Vulnerabilities and was widely shared.</p> <p>Analysis was included in the Food Strategy interim report. [link]</p> <p>Qualitative research to understand the lived experience of people in household food insecurity during Covid was tabled by the Chair at the Ministerial Task Force. [link]</p> <p>Funding for LAs has been announced for the economically vulnerable. Our qualitative work will be shared with local authorities to help them design their response.</p>	<p>Work with Henry Dimbleby and the National Food Strategy team.</p> <p>Focus on understanding impacts and interventions in Northern Ireland.</p> <p>Strategy Unit/Comms/SERD/Policy workshop to understand risk of use-by date non-compliance.</p> <p>Partner with Defra and devolved administrations on the UKRI/University of Sheffield work to monitor provision of food.</p> <p>Monitor household food insecurity via Food and You 2.</p>
<b><i>Labs and sampling,</i></b> prompting discussion of alternative ways to generate samples.	<p>A paper raised the issue at SRG.</p> <p>A short-term sampling programme has been initiated to fill the gap in samples created as a result of reductions in LA sampling.</p> <p>We are now working with the Environment Agency to join up on wastewater sampling, which could give us another way of detecting norovirus.</p>	<p>Operations Transformation Programme team to explore alternative ways of sampling and using FBO sampling data.</p> <p>Developing Phase 2 of the sampling framework.</p>
<b><i>Business compliance,</i></b> looking at risks to consumer safety raised by new business models, staffing/training issues or prolonged business closure, and latterly, reopening.	<p>Responsibility for analysis and actions taken by RCD.</p> <p>Partner research undertaken by GFS into business compliance and risks.</p> <p>With limited number of official controls e.g. fewer routine inspections, the FSA and LAs issued enforcement priorities guidance on the 24th June.</p>	<p>RCD working with NFCU, SERD, Import &amp; Exports, Defra &amp; LAs to understand and address medium term risks.</p>
<b><i>Substitution and crime,</i></b> looking at risks to food authenticity	<p>NFCU had already conducted significant analysis. A joint paper with the Strategy Unit helped to define and test the model of information flow.</p>	<p>Joining up with the emerging architecture related to local authority delivery in RCD.</p> <p>Specific recommendations taken forward into NFCU business as usual to monitor changes to threat levels and take actions when necessary.</p> <p>Provides further clarity on sampling priorities.</p>

<p><i><b>The world after lockdown,</b> key uncertainties, emerging or ongoing consumption trends, and the impact of recession on businesses and consumers.</i></p>	<p>PESTLE workshop to inform future planning assumptions.</p>	<p>EMT to consider evidence and recommendations in September 2020</p> <p>Strategy Unit to develop scenarios to test strategic thinking and future business planning in October 2020.</p> <p>Strategy Unit and SERD to monitor and feed in economic and social impact in real time.</p>
<p><i><b>Consumer behaviour,</b> changes to consumer hygiene behaviours, changes to purchasing and cooking habits, including the increase of use of online platforms and food sharing apps.</i></p>	<p>Qualitative research on consumers in the food system during Covid-19</p> <p>FSA Covid-19 tracker survey</p> <p>Social media listening</p>	<p>Continue to monitor and report on consumer behaviours through Food and You.</p> <p>Partner with others on cross-Government, civil society post-Covid-19 programmes including the Demos Renew Normal project.</p> <p>Cross-agency workshop on future policy interventions on consumer food hygiene behaviours (including use-by dates).</p>

## **ANNEX C – SUMMARY OF KEY INSIGHTS IDENTIFIED FROM DESK RESEARCH CONDUCTED AS PART OF COVID-19 HORIZON SCANNING**

### **The impact of lockdown**

On the 23<sup>rd</sup> of March the UK went into lock down. This had huge implications for the UK's food supply. Initially there were shelves stripped bare in supermarkets and there was reported stockpiling. However, the evidence actually suggests that the shortages were caused by a large number of people buying slightly more<sup>1</sup> rather than mass stockpiling. With hospitality shut down, an extra 503 million meals would be prepared and eaten at home every week<sup>2</sup> which also explained the increase in supermarket purchasing.

### **Change in business models and the impact on the hospitality sector**

Lock down meant established business models changed fast, with wholesalers opening online retail operations, restaurants converting to takeaways or shutting for the duration. There were issues with diverting food meant for hospitality to retail due to labelling and large packaging.<sup>3</sup> Supermarkets including Morrisons, and Waitrose started to sell products destined for restaurants. While demand for local food boxes such as fruit and vegetable schemes sold from farms direct to the consumer soared<sup>4</sup>. Restaurants joined online platforms such as Just Eat, Deliveroo and Uber Eats. Uber Eats reported that the number of restaurants on its UK platform has almost doubled in the last four months<sup>5</sup>.

The impact of the lock down on the hospitality sector has been massive. There was a collapse in sales as entire sectors including hotels, restaurants, pubs and bars shut their doors as per government instructions. According to the latest UK hospitality tracker sales across the hospitality sector plummeted 87% in the second quarter of 2020, equivalent to almost £30bn in lost revenue. Sales from April and June totalled £4.6bn, which was down £29.4bn compared to the same time in 2019<sup>6</sup>.

### **Restrictions on exports**

Early in the lock down there was a concern that countries would restrict exports as there were reports that countries such as Kazakhstan and Russia were putting restrictions on exports of wheat and Vietnam on rice.<sup>7</sup> While only a handful of countries did this, there were concerns about countries stockpiling which would lead to an increase in food prices. The number of ferry trips to Europe were monitored although this did not develop into a problem but certification at ports did cause delays.

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<sup>1</sup> [Kantar – Stockpiling, a new perspective – purchasing data to 8/03](#)

<sup>2</sup> [Kantar world panel 31<sup>st</sup> March](#)

<sup>3</sup> [Financial Times](#)

<sup>4</sup> [Sustain](#) 6<sup>th</sup> May

<sup>5</sup> [gsrmedia](#) 30<sup>th</sup> June

<sup>6</sup> [boutique hotelier](#) 28<sup>th</sup> July

<sup>7</sup> [The Guardian](#)

### **Lack of seasonal workers**

One of the key issues from the start of the outbreak was access to seasonal workers. Border closures, and illness meant that there were restrictions for many of the EU workers who would usually take up seasonal work in the UK.<sup>8</sup> The UK launched a Feed Britain campaign however there was still a large shortfall in staff. In April the UK flew in 10,000 workers from Bulgaria<sup>9</sup>. This issue was not unique to the UK, with a lack of migrant workers in other European countries such as Spain, Germany and France. As the UK gets a high proportion of fruit and vegetables from Spain this was also a concern.<sup>10</sup>

### **The impact on the UK meat and dairy sectors**

Issues reported in the red meat industry were complex. The lack of hospitality meant less need for more expensive cuts of meat, although there was an increased demand for cheaper cuts purchased in the supermarkets like mince and burgers. This meant that returns on the carcass diminished. There was an oversupply of sheep meaning prices went down. The halt on the Italian leather industry reduced demand for hinds.<sup>11</sup> These issues also led to a of lack of storage space in cold stores<sup>12</sup>.

There was also an oversupply of milk due to lack of demand from hospitality and staff shortages for transport. The price of milk therefore dropped, and farmers had to tip milk away. There were reports of farmers giving milk for free for the cost of transporting it.<sup>13</sup>

### **Concerns about inspections**

Due to the virus, inspections e.g. by Red Tractor and British Lion eggs moved from in person to remote. Scheduled audit visits were also put on hold. This led to some concerns about the lack of physical inspections. Reports of farmers selling raw drinking milk and fishermen selling directly to the public were also raised as concerns in relation to food safety.

An increase in trading on unregulated platforms such as Facebook marketplace was also an issue. The Grocer reported numerous profiles on Facebook Marketplace selling meat, eggs and fish, with often no clear evidence that necessary safety checks had been met. Experts wanted that “the growing use of ‘opaque’ Facebook posts to sell excess foodservice stock was leaving consumers in danger”.<sup>14</sup>

### **Outbreaks in meat plants**

In early May reports of Meat plants around the world struggling with virus outbreaks emerged, as outbreaks of CV19 at slaughterhouses started to occur throughout the world. The US was particularly badly hit but other countries including Ireland, Spain, Australia, Germany, Brazil, Canada and the UK all reported similar issues.<sup>15</sup> The

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<sup>8</sup> [The Guardian](#)

<sup>9</sup> [Farming UK](#) (30<sup>th</sup> March)

<sup>10</sup> [Independent](#)

<sup>11</sup> [Farming UK](#) (3<sup>rd</sup> April)

<sup>12</sup> [The Poultry Site](#) 26<sup>th</sup> April

<sup>13</sup> [Farmers weekly](#) (6<sup>th</sup> April)

<sup>14</sup> [The Grocer](#) 15<sup>th</sup> of May

<sup>15</sup> [Guardian](#) 11<sup>th</sup> May

reason behind the outbreaks were thought to be the working conditions which were cold, humid and crowded, and potentially living conditions if workers also lived in shared housing. There were also reports that low pay could mean workers were more likely to attend work even if unwell.<sup>16</sup> Outbreaks at meat plants in England and Wales in June led to local lockdowns. However, outbreaks were not unique to meat plants, and industry worried that there was an over emphasis on media reporting regarding these plants. In the UK, outbreaks in other food factories such as Walkers crisps and a biscuit factory were subsequently reported, as well as an outbreak on a farm in Herefordshire.

### **Food insecurity**

CV19 has had a profound impact on food insecurity. According to data from the Food Foundation the in the first 3 weeks of lock down the number of adults who were food insecure in the Britain was estimated to have quadrupled<sup>17</sup> . While some 3 million people in total were in households where someone had been forced to skip some meals. While after just a month of lockdown more than 200,000 children had to skip meals because their family couldn't access sufficient food during lockdown.<sup>18</sup>

Food bank charities saw huge surges in demand. The Trussell Trust reported a soaring 81% increase for emergency food parcels from food banks in its network during the last two weeks of March 2020, compared to the same period in 2019.<sup>19</sup> IFAN member organisations report a 175% increase in number of emergency food parcels distributed comparing April 2019 with April 2020<sup>20</sup>

During lock down the government started to provide emergency food parcels for the 1.5 million people identified as vulnerable and the supermarkets were given access to help prioritise delivery slots for the elderly and vulnerable with Bids and Brakes supplying these. Vouchers for families that receive free school meals were provided. However, there were ongoing issues which included not being able to download the vouchers and/or not being able to redeem them in supermarkets.<sup>21</sup> The government had suggested it would not provide vouchers during the summer holidays but this decision was overturned after a campaign by footballer Marcus Rashford<sup>22</sup>.

The evidence suggests that certain groups of people such as families<sup>23</sup> and young people 18-24 were most likely to be affected financially by the CV19 outbreak<sup>24 25</sup> . The number of people aged 18-24 claiming Universal Credit or Jobseeker's Allowance doubled in the UK in the last three months to July.<sup>26</sup> The Institute of social and economic research reported that low earners, single parents and those from BAME communities were more likely to have lost their jobs or been furloughed<sup>27</sup>

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<sup>16</sup> [CEBM](#) 27<sup>th</sup> May

<sup>17</sup> [Food Foundation](#) 14<sup>th</sup> April

<sup>18</sup> [Food Foundation](#) 4<sup>th</sup> May

<sup>19</sup> [Trussell Trust](#) 1<sup>st</sup> May

<sup>20</sup> [IFAN](#) 3<sup>rd</sup> June

<sup>21</sup> [BBC news](#) 7<sup>th</sup> May

<sup>22</sup> [BBC news](#) 16<sup>th</sup> June

<sup>23</sup> [JRF](#) 17<sup>th</sup> June

<sup>24</sup> [Child Poverty Action Group](#) 12<sup>th</sup> May

<sup>25</sup> [BBC news](#) 19<sup>th</sup> May

<sup>26</sup> [BBC news](#) 19<sup>th</sup> July

<sup>27</sup> [guardian](#) 7<sup>th</sup> June

## Consumer behaviour

As everyone ate exclusively in the home figures from Kantar show take-home sales from British supermarkets increased by 13.7% year on year in the 12 weeks to 14 June 2020, covering the full lockdown period<sup>28</sup>.

Consumers started shopping as they did a decade ago, doing one weekly shop - with decreased frequency in visits to the supermarket, but increased spend<sup>29</sup>. Consumers also chose to shop locally and grocery sales at British convenience stores were up 17% year-on-year in the four weeks to June 13<sup>30</sup>.

Demand for online shopping soared. At the start of lock down supermarkets could not keep up with demand. Many have now expanded delivery slots hugely or partnered with online aggregators such as Deliveroo. Market researcher Neilson reported online sales soaring 115% compared to the same period last year and maintaining the 13% share of sales recorded in the previous four-week period to the 13th of June.

Consumers report cooking more from scratch, freezing more food and throwing less food away (<sup>31 32 33</sup>). They also report eating more home cooked food and ordering less takeaways (ibid, <sup>34</sup>). However, consumers also report an increase in snacking behaviour with a higher consumption of confectionary, biscuits, cakes and savoury snacks (<sup>35 36</sup>). Consumers also reported buying more vegetable boxes and getting deliveries from local retailers<sup>27</sup>. Mintel reported that there is a growing interest towards vegan and plant-based foods, 1 in 10 rising to a quarter of those 21-30 say a vegan diet looks more appealing since CV19<sup>37</sup>.

Consistently consumers have showed apprehension about returning to normal life after CV19 and, in particular, eating in restaurants. Data from YouGov<sup>38</sup> Ipsos Mori<sup>39</sup> and the ONS<sup>40</sup> have all reported that around 60% of consumers feel uncomfortable returning to eat in restaurants when restrictions

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<sup>28</sup> [Kantar world panel](#) 23<sup>rd</sup> June

<sup>29</sup> [BBC news](#) 28<sup>th</sup> April.

<sup>30</sup> [reuters](#) 23<sup>rd</sup> June

<sup>31</sup> [WRAP](#) 5<sup>th</sup> May

<sup>32</sup> [adhb](#) 5<sup>th</sup> June

<sup>33</sup> [Hubbub](#) 23<sup>rd</sup> April

<sup>34</sup> [Which?](#) 4<sup>th</sup> July

<sup>35</sup> [Obesity Health Alliance](#) June

<sup>36</sup> [YouGov](#) 30<sup>th</sup> April fieldwork 20<sup>th</sup> and 21<sup>st</sup>

<sup>37</sup> [Food Navigator](#) 16<sup>th</sup> June

<sup>38</sup> [YouGov](#) 22<sup>nd</sup> April (survey 20<sup>th</sup> – 21<sup>st</sup> April) Sample from GB 1652

<sup>39</sup> [Ipsos Mori](#) 2<sup>nd</sup> July

<sup>40</sup> [BBC news](#) 10<sup>th</sup> July