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Food Brexit and chlorinated chicken: a microcosm of wider food problems

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Abstract

This paper situates food safety concerns raised in the Brexit debate since the Referendum and suggests that, although the issue of chlorinated chicken entered public discourse, it represents wider concerns about food safety standards. Food safety has had high resonance in the UK since the 1980s but Brexit shows how it connects to wider concerns also raised about Brexit such as impacts on healthcare, the effects of austerity on food poverty, the limitations of low waged employment, concerns about migration and labour markets, and regional economic disparities. Brexit's impact on the UK food system is immense because food has been highly integrated into EU governance. While food standards can be portrayed as a single narrow issue, the paper suggests it provides a useful lens with which to examine, interrogate and comprehend these wider Brexit politics. The complex realities of food politics and wider food system dynamics undermine any simplistic political narrative of 'taking back control'.

Keywords: Food policy, Brexit, food standards, food safety, international trade

Introduction

Much of what little public discourse there has been about food and Brexit since the Referendum has focussed on one issue, namely food safety standards, typified by 'chlorine-washed chicken'. This paper proposes that food can and should be recognised as providing a useful lens through which to examine wider Brexit politics, the complex realities of which undermine a simplistic political narrative of 'taking back control'. The dynamics of the UK food system cannot be reduced to a battle between the European Union (EU) and national interests. In a food world where multi-national corporations have immense power, for example, post-Brexit food governance is unlikely to be a nirvana. Indeed, Brexit or no Brexit, food already raises numerous questions about the unequal distribution and about how power is exercised and whose interests dominate. Whoever wins or loses, it is already clear that the entire British agri-food system will experience considerable change; more so, if there is an abrupt policy régime change. One thing is certain, questions about the future of the UK's food system, post-Brexit, are not simply a matter of forecasting. Big policy choices will be made, whether the public is consulted or not. In that sense, the chlorinated chicken issue and its resonance with the public – appearing in cartoons, jokes, focus groups – fires a shot across the bows of negligent politicians. Whatever their positions on Brexit, few people want weakened food standards.

Prior to the 2016 Referendum, the dominant Brexit discourse centred on migration, money and control. The only food-related strand to emerge in the public debate

concerned access to fishing grounds. Even there, while partly about the arcane issue of quotas (conveniently forgetting the UK Government sold them), the fishing issue was also at a symbolic level, with the plight of small fishing craft memorably encapsulated by the image of a small boat coming up the Thames to Parliament. Agriculture by contrast – far more important economically and for food security - was a rumbling rather than high profile issue, despite having been the subject for decades of EU-bashing about wine lakes, beef and butter mountains, and allegedly crazy bureaucrats imposing unnecessary regulations.¹ More conspicuously, agricultural subsidies symbolised the UK's financial contributions to EU funds which Brexit proponents had argued could be allocated to the National Health Service. Despite being the largest single EU budget, agri-food was not a conspicuous feature in the contest over whether to vote leave or remain. Spokespeople for, and experts on, agricultural and food industries were barely heard.

Within a year of the Referendum, however, food emerged, illustrating 'everyday' issues that could be problematic including: health standards, security of food supplies, quality controls, institutional infrastructures and animal welfare.² These revealed the many ways in which the UK had become integrated into the EU's internal market and political economy. Food accounts for an estimated 40 per cent of the EU *acquis communautaire*. It rapidly became clear that detaching the UK from the EU's dense web of interconnections would be far more complicated than many Brexiteers had expected. Food consequently became a conspicuous component of Brexit *realpolitik*, in which the British public took a direct personal interest. By late 2018, it was clear that, of all the themes in the Brexit debate, the most problematic for the UK might be security of the UK's supplies of food and medicines. By then even the major supermarket chains were publicly warning about shortages of supplies from the remaining EU member states, on whom the UK depends for about 40 per cent of its food supply.³ And the Government was contracting ferries to stand by to bring in supplies should there be snarl-ups at Dover.

This belated attention should not have been surprising. Far from being politically a marginal 'single issue', food issues connect directly to the lives of ordinary people and many contested political issues concerning the quality of life, sovereignty and control, culture, immigration, employment, trade and international relations. In a series of papers we co-edited for the inter-University academic-civil society Food Research Collaboration (FRC), food was shown to be central to the future of trade between the UK and EU, the setting of standards, the viability and history of the UK's position in international trade, the status of the border between The Republic of Ireland and Northern Ireland, as well as the relationships between Westminster and the Devolved Administrations, animal welfare and environmental protection. As the papers we edited were published, these topics received growing public profile and media coverage, with 20,000 downloads of FRC Briefing Papers and far higher direct Twitter pick-up and considerable media coverage.

Our first detailed overview, published in July 2017, coincided with the opening visit by Dr Liam Fox, UK Secretary of State for Trade to Washington DC, including a meeting the recently-inaugurated President Trump, both hoping to promote a US-UK free trade deal after a quick Brexit. Instead the official PR narrative was blown off course by the eruption of journalists' questions about why the USA authorises the use of chlorinated-washes to try to clean bacterial contaminating off chicken meat, while the EU does not permit that practice, and whether the UK-US deal would open up British consumers to this process. 'Chlorine-washed chicken' became, and remains, one of the single food issues that both symbolises concerns about the future of food standards and became the subject of numerous jokes and cartoons.⁴ It captured the double-edged sword of liberalised trade: cheaper mass intensively produced food products but lower standards.

The changing face of food in EU politics

As the single largest component of the EU's budget, the Common Agricultural Policy (CAP) plays a key role in the enduring rationale for the EU, dating back to the founding 1957 Treaty of Rome and the first major Common Market initiative at Stresa in 1958. Improving agricultural production in the new six state alliance was planned as the key to improving domestic food security. As membership grew, and the Common Market evolved into the EEC/EC/EU (hereafter abbreviated to EU), with its wider remit and structures, food as well as agriculture remained high on the EU's policy agenda and budgetary priorities, reflecting both the power leverage of the agricultural and food sectors and the commitment to avoiding disruptions to consumers' supplies of food. Over time, the EU's agriculture policy focus shifted from being land and farm-centred to becoming more food-focused. Major problems for public health and the environment emerged as a consequence of the post-1945 revolution in food supplies, prices and product proliferation.

Food safety and authenticity scandals from the 1980s, accelerating in the 1990s and into this century, propelled the EU into ever deeper involvement in food policy-making. Food became a key area in which the workings of the EU, in relation to governance, scientific research, technological innovation, competition and standards, all of which were eventually increasingly subject to public and political scrutiny. Non-governmental organisations (NGOs) emerged and formed international alliances to demand improved protection for European consumers and the environment. Regulatory initiatives to protect health, to provide consumers with information, to modify the direction of technological innovation, were the result of high profile public arguments, campaigns and lobbying. From the introduction of E-numbers for approved food additives to interventions over bovine spongiform encephalopathy (BSE) and GM foods, the EU became the political level at which high profile conflicts were fought and decided. The European Commission, Council and Parliament could

not ignore food matters, not least since they threatened the aspiration to frictionless trade within the EU's Single Market.

Those decades, when food policy issues had high salience, meant that their omission from the Referendum debates seemed anomalous, especially given that the EU had had a positive impact in the UK by improving food standards from the low levels that had previously prevailed. The EU responded far more effectively to, for example, the BSE crisis of March 1996 and the GM crisis of the late 1990s than had the UK authorities on their own. Given this history, the neglect of farming and food in the pre-Referendum debates raises intriguing political questions. Was it because politicians had forgotten or because neither the Remain nor the Leave sides saw it as fertile territory, or knew what they wanted? Or was it because those NGOs who might have pushed those issues were cowed by the Lobbying Act, which restricts their political engagement? Or was it because the food industry was unwilling to appear partisan and risk alienating ministers or their customers? We suspect a mix of those factors.

More than chlorinated chicken?

One issue in particular brought food onto and up the post-Referendum Brexit agenda - the possible import of US chlorinated chicken into the UK, as a consequence of a UK-USA trade deal post-Brexit. That issue resonated with deep and widespread concerns of UK consumers about food safety risks; and not without reason. Since the mid-1980s the UK had experienced years of food scandals and had become wary, and often weary, about food adulteration and contamination. While the politics of Food and Brexit was not restricted to chlorine-washed poultry, that issue became a symbol of a wider set of concerns. While consumers' concerns were initially dismissed by Brexiteers on the government benches, ministers had to reverse their early stance and almost over-compensate by (some of them) promising a future nirvana of ever higher standards of animal welfare, biodiversity and food safety once freed from EU shackles. Only right-wing think-tanks such as the Adam Smith Institute and Institute for Economic Affairs defended chlorination as the route to easier 'free trade' or saying there was not a safety problem in the first place and that fears were the chimera of *nanny statism*. Ministers, especially in Defra have tried to compartmentalise the issue by framing it as one of animal welfare; they aspire to detach the issue from wider concerns about food standards and commercial practices.

Given that the UK currently imports 30 per cent of its food (by value) from other EU Member States, and a further 11 per cent from 'third' countries, thanks to EU-negotiated trade deals, it follows that under any version of Brexit in which trade in goods experience greater friction than previously, the security of supplies may be undermined. Trading across frictional borders raises costs, and whenever rates of

flow are reduced, the quality and safety of perishable foods is likely to be damaged. In this context, the category of 'perishable foods' certainly includes salads trucked in from Mediterranean regions, as well as fish, milk and dairy products.

Those considerations imply the need to address the question: *from where the UK will obtain its food, if and when it has left the EU?* Some influential Brexiteers, including some in Mrs May's cabinet, were enthusiastic about the UK becoming less reliant on the EU for our supplies of food. One of their reasons reflects the simple fact that food prices in world markets are often lower than prices within the EU. The CAP does try to ensure that EU agricultural commodity prices are above those in world markets. This goal has been a consequence of two of the CAP's objectives: firstly, the goal of stabilising food supplies and prices and secondly the goal of diminishing income inequalities as between rural and urban communities. Historically, unregulated food and agricultural markets have been notoriously unstable, and a desire to learn from the chaos and dangers of the 1930s was why agriculture took such a central role in the formation of the Common Market. UK agricultural policy had similar motives, enshrined in the 1947 Agriculture Act. The operation of the CAP at the core of the EU has ensured that, in exchange for a price premium, consumers have benefitted from food prices that are far more stable than those characteristic of world market volatility. Consumerists and neo-liberals argued in the 1970s and 1980s that this penalised consumers and led to costly food 'mountains' but they ignored the benefits of stability. A hard Brexit raises the spectre once more of a return, at the very least, to wider fluctuations in food prices and Sterling's exchange rates.

So-called 'Atlanticists', such as Liam Fox and Nigel Farage are amongst those Brexiteers who are enthusiastic at the prospect of replacing EU food imports with food imports from the USA and other low-cost suppliers wherever they may be. US food prices are often below those in the EU, but that is largely a consequence of the size and design of US Federal Government's subsidies to US farmers, which annually amount to more than \$20 billion. Ironically, while many Brexiteers cite the CAP's subsidies as a reason for leaving the EU, in part so that the UK can reduce its agricultural subsidy payments, they seem untroubled by buying heavily subsidised produce from the USA, and ignoring how food is once again a political weapon in the US-China tariff tensions under Presidents Trump and Xi.

Importing substantially more food from the USA is, however, widely and rightly seen as problematic in the UK, because of concerns about weaker US safety standards, as well as financially undermining even the UK's most competitive farms. In several important respects, US food quality and safety standards are lower than those in the EU, and consequently lower than those currently applying in the UK. Several of those differences in safety standards were highlighted by the present authors' paper in July 2017. There we provided four examples of weaker US standards than those in the EU, namely: beef hormones, bovine somatotropin (BST) used in milk production, genetically modified crops, and the use of chlorinated disinfectants to reduce

bacterial contamination of poultry carcasses. Of those four examples, it was the issue of 'chlorine-washed chicken' that captured media attention, not because it posed the greatest risk but because it could be encapsulated in a simple phrase, and was the easiest to explain. The issue subsequently gained significant traction with broadcast media and with the British public. 'Chlorine-washed chicken' emerged as the *sine qua non* of debates about the future of UK-USA trade relations post-Brexit. In July 2017, the International Trade Secretary, Liam Fox, complained that the media were obsessed with chlorine-washed chicken. By June 2019, a Google search for 'chlorine washed chicken UK' produced around 803,000 hits, which had accumulated over the two years since our original report.

While the elevation of this totemic issue up the public Brexit agenda may have been unexpected, it nonetheless posed significant challenges for UK policy-makers. Firstly, it is important to appreciate that chlorinated water is just one of six chemical disinfectants used in the USA. Moreover chemical disinfectants can be used not just on US poultry meat, but also on other types of meat, as well as on fish, fruits and vegetables. Currently in the EU, lactic acid is the only chemical disinfectant allowed for use on bovine meat. Chlorinated water can lawfully be used in the EU, but only to wash leaf vegetables, such as bagged salads, but not for use on meat.

It is important to appreciate why the US authorities permit the extensive use of chemical disinfectants; *it is because the levels of microbiological contamination of their food supply are noticeably higher than is the case, and that could be deemed lawful, in the EU.* Standards of hygiene and animal welfare in US livestock production are far poorer than is deemed acceptable in the EU. The US approach has been *ex post*: to permit microbial contamination, and then to use chemical disinfectants as what they call 'pathogen reduction treatments'. The EU's approach (*ex ante*) is to try to ensure that foods are produced sufficiently hygienically that they do not require disinfection.

Shapiro, representing the Humane Society of the USA, has characterised and criticised US policy, explaining that:

When producers bring a new flock of birds into a shed, standard practice is to leave the manure-laden litter from past flocks on the ground. So every couple months, new birds are living on top of prior generations' waste...Those animals end up in 'defeathering tanks', essentially vats of scalding-hot water, while fully conscious. As a first order of business in those tanks, the birds let loose all their waste. It's the same water that countless other birds will then be put through, spreading feces from bird to bird like a wildfire on a dry day... It's clear that the chlorine is simply an attempt to put lipstick on a pig — or decontaminant on a chicken.⁵

Whereas, Monique Goyens, head of the Bureau of European Union of Consumers, has explained that the EU's:

...farm to fork approach requires a series of steps all along the production chain to ensure food sold to consumers ultimately is safe. In the case of poultry, hygiene stipulations at farm level include the use of dedicated clothing and footwear by farm workers to avoid bringing bacteria into poultry houses.⁶

The significance of the difference between US and EU policies was highlighted by an important paper published in Spring 2018. Scientists at Southampton University reported that applying chlorinated water can pose a threat to human health by providing illusory reassurance, because the treatment does not disinfect the food, it merely blocks the customary detection tests.⁷ It therefore can give the misleading impression that food is safe when it is seriously contaminated. That might help to explain the fact that rates of microbial food poisoning in the USA are significantly higher than those in the UK and EU.

The arguments concerning the acceptability and safety of beef from cattle injected with synthetic hormones as growth promoters, milk from cows injected with a synthetic lactation-stimulating hormone called bovine somatotropin (or BST), and the use of antibiotics in livestock production, as well as GM crops are technically more complicated than those concerning chemical disinfectants. In every one of those examples, there are sound scientific reasons for concluding that the US food safety standards are lower than those that apply throughout the EU and which consequently apply in the UK unless it 'drops' into WTO rules in which case it will default to Codex Alimentarius Commission baseline standards (to which we return below). We here highlight some issues with potential to raise public sensibility on either human or animal health and welfare grounds:

In relation to beef from cattle treated with supplementary growth-promoting hormones, the Scientific Committee on Veterinary Measures Relating to Public Health concluded in 1999 that there was evidence that several of the hormones used in the USA, and other jurisdictions, may pose a risk to the health of vulnerable groups, and for the others there was insufficient evidence to be confident that they were acceptably safe. Since then, those shortcomings have not been remedied.

To provide a marginal increase in milk yields from dairy cows, almost all US dairy cattle are injected with a lactation-stimulating synthetic hormone that in the USA is known as bovine growth hormone, and in the EU as bovine somatotropin (BST). There is clear scientific evidence showing that the use of BST in US dairy herds causes a statistically significant increase in the incidence of udder infections, or mastitis.⁸ Consequently milk in the USA may have a higher 'somatic cell count' than is acceptable in the EU; in non-technical terms, it can contain more pus. The US authorities do not deny that treated cows suffer higher rates of mastitis, but they deem that not to be a problem of 'risk', but merely one of 'herd management'. The farms' herd management tool is the administration of antibiotics to infected animals.

Consequently, there are high levels of residues of antibiotics in US milk and dairy products. In November 2017 it was reported that the sales of antibiotics to livestock farmers had risen by 27 per cent in the USA since 2009, whereas UK farmers had reported a 26 per cent drop.⁹ The EU bans the use of BST, and imports of milk and dairy products from cows treated with BST, on ground of both public health and animal welfare.

Debates about the safety of GM crops, food and especially animals, both in terms of their acceptability as food for people or for livestock and their environmental impacts are profoundly contested. Some, especially in the USA want to portray the relevant science as if it is unproblematically secure and entirely reassuring, while others, more commonly in the EU highlight remaining gaps in data sets, limitations characterising the scope of current EU risk assessments, and evidence of possible hazards and risks. Some Brexiteers have cited opportunities to commercialise GM food production as a reason why the UK should leave the EU. One thing, about which confident predictions can be made, is that if GM foods were introduced into the UK, under the provisions of a UK-USA trade deal, but labelled in accordance with current EU labelling requirements, there would be considerable consumer resistance to buying them. If, on the other hand, the USA succeeded in persuading a future UK government that it should accept all and any GM foods, but without any of the currently applicable labelling requirements, that government would pay a very high political price at subsequent elections. Telling UK shoppers that they could no longer have access to information that had previously been provided and which had influenced their choices, will be remarkably unpopular. Insisting that consumers are less well-informed, in the name of market liberalisation, would be both counter-intuitive and politically unsustainable.

The US authorities routinely insist that all of their standards are based on 'sound science', and that any other jurisdiction with different standards is being 'unscientific', but that is misleading. Firstly, the relevant science is often incomplete, uncertain and equivocal. Secondly, scientific considerations alone never settle policy issues. EU standards typically differ from US standards not because EU scientists put different interpretations of identical data sets, but because they ask different, and more demanding questions, and consequently require different tests and data sets.

The key points to draw from those examples are that:

- There are significant differences between food safety and quality standards between the EU on the one hand and other countries, such as the USA, from which the UK might consider buying more food after Brexit.
- In numerous respects EU (and therefore UK) standards are higher than those in the USA.
- There are good scientific grounds and policy reasons for the EU's adoption of those standards. They could withstand, and in some cases have withstood, challenges at a WTO dispute panel.

The implications of those food examples can be generalised, and not just to issues of animal welfare and environmental protection, to support the judgement that post-Brexit trade deals that would result in lower standards and less safe products will be highly controversial. If Brexit happens and standards of safety and quality of goods and services decline that would almost certainly contribute to the unpopularity of the UK's departure from the EU.

'Taking back control' may be a good rhetorical slogan, but hard to achieve in a global food economy where supply chains are so interconnected. The claim that, on leaving the EU, the UK can cease to be a 'rule taker', and becoming instead a 'rule-maker', and trade freely with countries in all parts of the globe, is a dangerous illusion. If, as an independent country, the UK sets rules covering food safety and standards that do not meet the requirements of our trading partners, we may be able to import foods from anywhere, if their products conform to our rules. But UK producers will not be able to export to countries with tighter standards than the UK, unless they incur extra costs manufacturing products for export that differ from those for domestic sale. If you want to export, your products must conform to the importers' rules. *The suggestion that the UK could substantially increase its exports while adopting a unique set of rules that will not be shared by our trading partners is a fantasy.* In practice, the UK must decide which agricultural and food rules it will take: those of the EU, the USA or the WTO.

The WTO rules, as they relate to internationally traded agricultural and food products, are set by an organisation known as the Codex Alimentarius Commission, (or Codex). Codex was established jointly by the World Health Organisation and the UN Food and Agriculture Organisation in the 1960s, to facilitate international trade in agricultural and food products, by providing recommended minimum safety and quality standards. When the WTO was established in January 1995, Codex standards became *de jure and de facto* minimum standards in international trade. WTO Member States when importing can lawfully exclude products that fail to meet Codex standards, and exporting states could have a legitimate complaint if another WTO Member State refused to accept products complying with Codex standards. Codex standards are decided by unanimity amongst its member states.

Codex has 189 members and given that its members include under-developed countries as well as industrialised countries, Codex standards are typically lower than those applying in industrialised jurisdictions, such as the EU and the USA. WTO standards are therefore even weaker than US standards, which are below those in the EU. Trading 'on WTO terms' would therefore entail accepting products at what are in effect standards that are the lowest global common denominator. If that were to happen food policy in the UK would become more, rather than less, contentious.

While the UK has been in the EU it has exercised considerable influence on EU standards, not just for agricultural and food products, but in many other respects too. As one of the larger and wealthier EU Member States, it has been disproportionately influential in EU policy-making. If the UK leaves and tries negotiating a trade deal with the USA it will be in a far weaker position than it has been as an EU Member State. If, on the other hand, the UK chooses to trade with all-comers on WTO rules, it will be 1 of 189 members, and therefore even less influential than it has been in the EU, or even than it has been at Codex, by virtue of being an EU Member State. It remains to be seen if UK ministers will choose to undermine food safety in the UK in exchange for some anticipated commercial benefits to other sectors.

Wilbur Ross, the US Commerce Secretary, has insisted that the UK would need to accede to US food standards or at least break with EU ones, if the UK wanted wider trade deals. Ross has argued that the UK should not let itself be 'bullied by the EU'. His implicit advice was rather that the UK should accept US conditions, which could be interpreted as allowing itself to be bullied by the USA. One thing we can be sure of is that if, after Brexit, the UK accepts chlorine-washed poultry from the USA, UK producers will also demand the right to use that treatment too, in the name of a 'level competitive playing field'. There is also the possibility that, if the use of chemicals disinfectants is allowed for poultry, the UK might slide further down a slippery slope and permit the use of such disinfectants on other foods such as fruit, vegetables and fish. Debates about: what level of standards to apply after Brexit? Who would set them? And how? are set to be key issues for UK consumers.

Food system restructuring post Brexit

Behind the apparently technical issues of chlorination and hormone use lie important politics, not just of farming, but about the structure and functioning of the food supply chain. UK farming has been both changed, and propped up, by CAP payments and rules. The sums received by UK farmers have varied over time but have generally enabled many farms to survive. Defra's annual estimates of the Total Income from Farming (TIFF) show how reliant UK farming is upon EU derived subsidies.

Although many farmers voted for Brexit, the consequences for English farmers at least are becoming clear, following the publication of Michael Gove's Agriculture Bill and its forerunner, the 2018 *Health and Harmony* Consultation Paper. Subsidies are promised to remain as per the EU until 2022, but then be progressively reduced. Although the policy language is now about higher subsidies for ecosystems support, the pressures on the national budget are likely to constrain that option, and HM Treasury has long favoured a New Zealand style exit from any farm subsidies. We therefore expect that tensions between sectors in food supply chains, especially between farmers, processors and retailers to rise. Incentives to have cheaper

ingredients might over-ride any willingness to pay more in exchange for higher standards.

When the UK joined the Common Market in 1973, the revolution in manufacturing, retailing and mass catering was already underway. Retail Price Maintenance had been abolished in 1964, which began a period of price wars between the manufacturers, who until then had been able to set prices for shops, and the retailers who were concentrating by supermarketisation on a grand scale. With the emergence of a handful of giant retail chains, the UK food sector was able to exert big influence in the EU. Cross-border alliances were formed via buyer groups. In the 21st century, the UK food system was further altered by the rapid growth of the foodservice sector. Eating out – hitherto a ‘European’ culture – expanded, if patchily, across Britain. Today, the UK food economy is dominated by the rivalry of three massive sectors: manufacturing, retailing and food service. Farmers receives only 7 per cent of the gross value added (GVA) from the UK food system. While farming makes £8.4 bn GVA and fishing a paltry £0.8 bn, retailing earns £29.8 bn, catering £32.4 bn, manufacturing £28.8 bn, and even wholesalers makes £12 bn. Meanwhile, the UK food system as a whole has a rising trade deficit. In 2017, the UK’s food trade gap was £24.2 bn in the red.

The discomfort and displeasure that Brexit disruption was already causing to investment and supply chain management was made clear by food businesses in private from 2017 and in public from 2018. The reasons are not hard to fathom. Huge investments in just-in-time supply chains across borders have been made since the 1992 completion of the Single Market. There is little available storage in the UK – raising questions about food security in times of crisis, and the UK’s heavy reliance on sophisticated production and delivery systems. The implications of those arrangements fuelled politically sensitive discussions within, and outside, the Government about security of supplies, stockpiling and continuity of supply, concluding that food supplies could easily be disrupted by a ‘no-deal’ Brexit. When the Food Research Collaboration published its damning report on food security planning in 2018, this was initially denied by Defra, only for it to be acknowledged two days later.

At stake was a political failure of the Government, and indeed HM Opposition too, to clarify their vision for a post-Brexit UK food system. That Brexit disrupted business was clear. Also it clearly undermined the emerging thinking in Wales and Scotland about enhancing environmental and social sustainability. The English Agriculture Bill’s focuses on environmental land management, rather than on foods, which means that there is no clarity about a national (English or UK) food policy. There are significant differences between reorienting supply to meet the food deficit from across the Atlantic, globally, or outer-Europe, or continuing to rely on EU sources. Those will not be changes that could be made quickly. For there to have been next to no discussion of food supply sourcing since the Referendum is extraordinary, given the

importance and vulnerability of supply chains. Perhaps this should not be a surprise, given widespread ignorance about the UK's reliance on an infrastructure of institutions, logistics, legislation, food science, technical support and more. The European Commission is not a massive bureaucracy; there are more civil servants in Edinburgh running Scotland than there are in the entire European Commission. Nonetheless, the EU has created a network of at least 35 pertinent institutions, from which the UK will lose participation following almost all versions of Brexit. These include the European Food Safety Authority, the Veterinary system, the traceability and fraud prevention systems.

Ironically, given its high profile in the run-up to the Referendum, the issue of migrant labour has become less conspicuous three years on. Even Mr Farage admitted as much. After the Referendum, the UK food industry eventually drew attention to its reliance on EU migrant labour. The horticulture sector was quick to point out that it was already suffering because of the closure of the Seasonal Agricultural Workers Scheme (SAWS) and that the 'free' flow of migrant labour underpinned the viability of 'British' horticulture such as strawberries. But catering and manufacturing are, if anything, even more reliant on migrant labour. Some argue that this will encourage long overdue investment in automation and productivity, but the realists suggest that those technologies are at least a decade away from being effective and affordable.

The UK's food supply also relies on many highly qualified people. In particular, legislation requires that before slaughter all animals are checked for their health by a qualified veterinarian, and that post-slaughter their carcasses are checked by a professional veterinarian to ensure they are healthy and safe. Almost all the vets working in UK abattoirs and meat cutting plants have been non-UK EU citizens, and many of them are expected to leave the UK after Brexit, though some indications have emerged from Defra suggesting that the government is considering reducing the role of Vets in monitoring farm activities. This would be another example of weakening current safety regulations.

Conclusion

We have argued that post-Brexit food governance raises important but unresolved questions about the distribution and exercise of power in relation to food and farming, at home and in the countries with which the UK trades. Those considerations include food standards and food security, which have high public salience, as well as others that are less widely debated, such as the future of agricultural subsidies. Important though food safety is – not least to business viability – safety is by no means the only food issue raised by Brexit. Questions about the future of the UK's food system, post-Brexit, are not simply a matter of forecasting, they concern the choices that are to be made. Those choices concern what kind of food system is wanted and who will be empowered to decide from where our food will come, and how safe and well-labelled it will be. Those contested issues remain unresolved, but Defra belatedly instituted in June 2019 a Food Strategy process to be

concluded in mid-2020, led by Henry Dimbleby co-founder of Leon, the organic fast food chain. It is hard to see how an implementable food strategy could be devised in conditions of such over-whelming uncertainty but at last some policy development is underway and it must be judged for how it proposes a transformation to a food system combining sustainability, social justice and food security for the UK.

No legislation is yet in train (at the time of writing). The case we have made here is that, while the totemic issue of chlorinated chicken might have been high profile and not without reason, it has in fact been just one among a more complex web of food issues emerging in the Brexit debate. The resolution of the myriad issues arising from dislocation from the EU suggests that food matters will again surprise politicians, unless due attention is given.

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- ⁵ Paul Shapiro, *Got Chlorine? Your Chicken Might*, The Humane Society of the United States, 18 July 2014. <http://www.livescience.com/46864-chlorine-cleaned-factory-chickens.html>; see also 'Safety and efficacy of peroxyacids for decontamination of poultry carcasses' <http://www.efsa.europa.eu/en/efsajournal/pub/3599>
- ⁶ Monique Goyens, 'What is wrong with chlorinated chicken', July 14, 2014. <http://www.beuc.eu/blog/what-is-wrong-with-chlorinated-chicken/>
- ⁷ Highmore CJ, JC Warner, SD Rothwell, SA Wilks, CW Keevil. (2018) 'Viable-but nonculturable *Listeria monocytogenes* and *Salmonella enterica* serovar Thompson induced by chlorine stress remain infectious', *mBio*, 9, 2, March/April 2018:e00540-18. <https://doi.org/10.1128/mBio.00540-18>
- ⁸ Millstone E, Brunner E & White I, 'Plagiarism or protecting public health?', *Nature*, 20 Oct 1994, Vol. 371, No 6499, pp. 647-8
- ⁹ See https://www.sustainweb.org/news/nov17_us_farms_use_twice_antibiotics_of_uk_farms/