

Food System Impacts of Covid-19 – Research Brief 5

The Dairy Sector



SOME CONTEXT

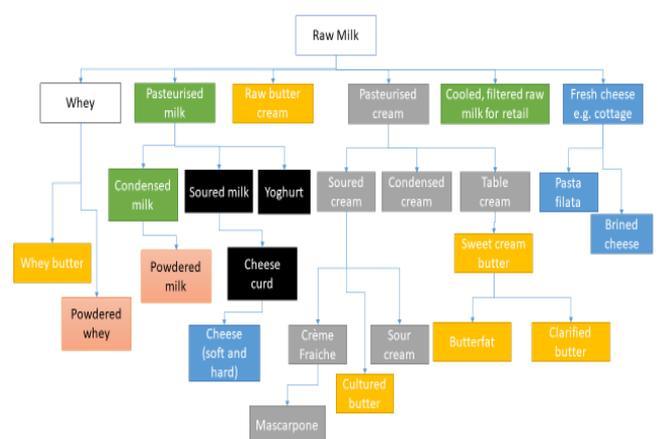
More Than Just Our Daily Pint

The dairy sector is one of the most important sectors in UK agriculture with milk accounting for 16.4% of total agricultural output in the UK in 2020, and a value of £4.4bn.¹ Between 2009 and 2019 the volume of production grew by 12.3% after a period of minimal or modest growth in the 1980s and 1990s.² This increase in production tipped UK trade in dairy products from deficit to a very modest surplus in volume terms, from -172,000 tonnes for all dairy products in 2016 to + 33,000 tonnes in 2020.³ However, this was not reflected in monetary value with a trade deficit of just over a million pounds. Liquid milk is primarily produced and marketed domestically, with imports comprising just 0.8% of milk processed in UK dairies in 2020.

The two largest categories of traded items are yoghurt and cheese, with only around 58% of all cheese consumed in the UK being home produced. Much Cheddar cheese, for example, comes from Ireland. Overall, in 2016 the UK was estimated to be around 77% self-sufficient in its milk production requirements.⁴

There are a number of intersecting value chains for UK milk as opposed to a single supply chain.⁵ The diversity rests in large part on the range of products associated with the simple raw commodity of milk (see Figure 1), but also on the strategies used by different actors in the chain to pursue market share. Some of the products are everyday commodities familiar to most consumers but some less so. For example, about 80% of the liquid milk used in cheese making remains as whey. Once a waste product used for livestock feed or spread on land, whey is now an important ingredient in a range of other food manufacturing sectors such as baked products, confectionery and ice cream. It has even been used to make ethanol for use in pharmaceuticals, perfumes, inks and alcoholic beverages.

Figure 1. Milk: A Single Commodity with Multiple Uses



Industry Consolidation

The dairy sector continues to consolidate, with just 9 companies processing 70% of the milk in 2018. Enterprises processing less than 5,000 tonnes of milk each per annum account for 40% of the total number

of enterprises. However, they process less than 0.4% of the annual milk intake. In the cheese market, around 93% of output in the UK comes from 17 companies. In the butter market, enterprises producing less than 100 tonnes per year account for 57% of the total number of enterprises but only 0.3% of total butter production.

Table 1. UK Distribution of Dairy Companies by Volume of Milk Processed in 2018⁶

Size band ('000 tonnes p.a.)	Companies Processing Milk		Volume of Annual Milk Intake	
	Number	% of Total	Thousand Tonnes	% of Total
5 and under	39	40	53	0
Over 5-20	12	12	140	1
Over 20-50	14	14	479	3
Over 50-100	10	10	710	5
Over 100-300	14	14	2,950	21
Over 300	9	9	10,055	70
Total	98	100	14,387	100

THE IMPACT OF COVID

A Restructuring of Demand

As was the case in other food sectors [see Research Briefs 1-4], the initial impact of the Covid pandemic manifested itself in the restructuring of demand and a change in consumer habits associated with the closure of the hospitality sector and an increase in retail expenditure. What quickly emerged in Dairy, as in other food sectors, was effectively a 'two-tier sector of haves and have-nots', where those supplying retail saw increased demand and struggled to maintain supply, while those exposed to food service and hospitality channels experienced a dramatic slump in demand.⁷

Demand for milk and milk derived products from the hospitality, sector (e.g. coffee shops, cafes and restaurants) virtually evaporated overnight after the imposition of lockdown 1 on the 23rd March 2020. In terms of liquid milk sales, prior to the first lockdown, 88% was purchased at retail, with food service sales accounting for 8%. This figure is estimated to have quickly dropped to around 5%, predominantly due to lower sales in the eating out sector.⁸

Hospitality's loss was, to some extent, retail's gain as various dairy products were implicated in the turn to home-baking and/or scratch cooking. This led, for

example, to an increase in sales of 15.6% in the butter, margarine and spreads category; with block butter adding 36% to its value and 34% to volume in late March/early April.⁹ Increases in retail sales, however, only partially off-set the losses in the food service sector, and overall demand for dairy products was down by an estimated 2 million litres per day compared to pre-lockdown.¹⁰

A Shockwave up the Dairy Supply Chain

The demand-side shock created by Covid quickly reverberated up the dairy supply chain and had an immediate impact on many producers. Those especially impacted were businesses which supplied the hospitality and out-of-home sectors and whose market collapsed overnight. But some farmers who supplied other sectors were also impacted when, amid the general 'chaos and uncertainty' caused by Covid, and a shortage of lorry drivers, some milk went uncollected.¹¹

EXPERT PANEL QUOTE

"There is no pause button with milk production – you have to deal with the situation in real time."

Expert Panel member (July 2020)

This created an immediate and unique problem for the dairy sector. With cows needing to be milked at least twice a day, every day, and with limited storage capacity and associated spoilage issues, farmers who were unable to either sell their milk or have it collected had very few options. Some, with no alternative, were forced to **discard milk**, and more than a million litres of milk are estimated to have been poured down the drain in April 2020, costing farmers more than £7 million.¹² This practice was not only wasteful and upsetting for the farmer, but also, as one Expert Panel member pointed out, 'reputationally damaging for the sector too, at a time when there were still empty spaces on supermarket shelves'.¹³

There were also fears that some farmers would be forced to **cull some of their livestock**. In mid-April 2020, during government and dairy industry

discussions on how to resolve the crisis, industry members raised the prospect of a 'doomsday scenario' of 80,000 cows being culled – out of a national herd of nearly two million.¹⁴ While this scenario, thankfully, never came to pass, there were reported individual incidences of animals being culled. With many dairy farmers in a really precarious position it is also likely that some decisions about herd size and which cows to keep and which to cull for meat would have been brought forward as a result of Covid. *Farmers Weekly*, for example, reported that factory throughputs were 4.4% higher on the year for the six weeks ending 18th April 2020, and suggested that this 'could indicate that dairies were marketing more cows'.¹⁵

Despite efforts to reduce supply, the closure of the hospitality sector inevitably led to a significant oversupply of milk and a reduction in **farm-gate prices**. The price of milk began to fall fairly sharply from around mid-March and reached a 12-year low of 10.8 pence per litre in mid-April.¹⁶ Often with little alternative, many producers were forced to sell their milk at prices that did not cover the costs of production.

Struggling to find a home for milk that would normally have been destined for coffee shops and caterers, milk processor Pensworth Dairy, for example, outlined plans in late-March 2020 to pay farmers just 25% of the milk price and withhold 75%.¹⁷ Similarly, processor Medina Dairy, citing 'unprecedented commercial and financial pressures' as a direct consequence of Covid, when outlining its plans to delay payments from April 13 and drop the milk price by 2ppl from May 1.¹⁸

At the same time, however, processors that supplied the retail sector were benefiting from a significant surge in demand. Muller, for example, announced in April 2020 that it would pay 1ppl *more* for milk from 1 May, although a few weeks later it reneged on this promise and maintained the price originally set for May and June instead.¹⁹

Not all dairy producers were impacted by Covid, but most were, at least to some extent. At the end of April 2020 the AHDB reported that more than 5,200 of the estimated 9,200 dairy farmers in Great Britain (57%) had experienced a milk price reduction over the previous six weeks. Moreover, nearly 500 had had milk collections cancelled and 500 had had payments deferred, while 2,200 had been asked to reduce milk

output and 700 had had the volume they get paid a full price on reduced. In total, the AHDB estimated that the financial hit to dairy farmers during April 2020 was £9.4m.²⁰

RESPONSES

New Routes to Market

In the first few weeks after the imposition of lockdown 1 and the closure of the hospitality sector, the immediate challenge for many dairy producers and processors was to find new markets or new routes to market.

For dairy processors the obvious pivot was to retail where demand had increased, and many were able to make that switch successfully. However, because packaging (and associated packing equipment) varies depending on whether a product is destined for the supermarket shelf or the food service sector, it was not always a straightforward process to quickly and cost effectively switch from supplying one to the other [See also Research Brief 2]. So while many processors *were* able to successfully switch, some were not.



Oliver Hemsley and one of his milk vending machines
Source: <https://www.hollismeadorganicdairy.co.uk/>

A considerable number of producers/farmers responded to the Covid-driven restructuring of demand for dairy products by bypassing conventional distribution systems and pivoting to direct sales online, to home-delivery, and/or to selling milk and other dairy produce via **vending/machines**. One such farmer was Oliver Hemsley, of Hollis Mead Organic Dairy. Oliver, who has a herd of 75 cows near Beaminster in Dorset, began selling milk at his farm, from five purpose built vending machines at the start of pandemic. Such was the popularity of these machines – which each dispense up to 200 litres per day – that he quickly expanded his operation and set

up additional machines at other farm shops and local businesses in the Dorset and east Devon area.²¹

In terms of **online retail sales**, a representative from the dairy industry, and member of this project's Expert Panel, remarked that he had seen these outlets increase massively during the early part of the pandemic, with one customer's sales up 500%. This resulted in many individual businesses having to significantly upscale their ability to process an increased amount of product to meet demand. He also observed that quite a few businesses that had a van delivery system which pre-pandemic had been working with schools, restaurants and pubs, had, with the imposition of lockdown, switched to doing **deliveries to vulnerable and isolated individuals**.²²

Government and Industry Support

Recognising both the scale of the impact Covid was having on the sector, and the urgency with which solutions needed to be found to address the crisis, particularly measures to help processors divert milk into retail and to support affected producers, industry representatives came together 'reasonably well' and engaged constructively with government.

EXPERT PANEL QUOTE

"The industry has come together reasonably well, and by working with the government has ensured a relaxation of competition rules in order to actually understand, for example, where the tightness in the markets are. Processors could also talk about what levels of capacity there were within the industry in order to re-direct products and utilise as much as possible."

Expert Panel member (July 2020)

The Relaxation of Competition Rules

One of the first measures put in place by the government, following concerted lobbying from processors, producers and industry groups, was a temporary relaxation of completion rules. This

measure, which came into effect in mid-April, was designed to allow retailers, suppliers and logistic services to work together to address Covid-related market challenges, minimise waste, and maintain productive capacity. Examples of the kind of collaborative working, the relaxation was intended to enable, included 'the sharing of labour and facilities, cooperating to temporarily reduce production or identifying where there is hidden capacity in the supply chain for processing milk into other dairy products such as cheese and butter'.²³

The Dairy Response Fund

Another government measure put in place to help the dairy sector, was the producer/farmer targeted **Dairy Response Fund**.²⁴ The RABDF (Royal Association of British Dairy Farmers) had been lobbying government hard since early-April for some financial support for dairy farmers whose businesses had been severely impacted by the Covid-driven closure of the hospitality sector,²⁵ and so welcomed the Defra scheme when it was finally launched on the 18th June 2020.

The Dairy Response Fund was undoubtedly of some help to some producers impacted by Covid, but by no means all. Significant concerns were raised about the eligibility criteria (with many of the most affected farmers *not* eligible to apply to the fund); with the application process itself; and with the fact that in many instances £10,000 only partially compensated for lost revenue.²⁶ A small Twitter survey run by the RABDF a few weeks after scheme opened found, for example, that 80% of respondents said they couldn't apply or weren't eligible to apply, and only 9.4% said they had applied.²⁷

Milk Your Moments Campaign

In mid-May 2020, in an effort to 'find a new home for millions of litres of milk due to the closure of the nation's foodservice outlets', the AHDB, in partnership with Dairy UK, Defra, Scottish, Welsh and Northern Ireland Governments, launched 'Milk Your Moments'. The £1 million UK-wide advertising campaign ran for 12 weeks across national TV advertising, social media and billboards outside supermarkets. Its aim was to encourage people to consume more milk in their home by 'inspiring moments of connection', and highlighting the role fresh milk and dairy products could play during difficult times.²⁸

In August 2020, assessing the impact of the campaign, the AHDB stated that Milk Your Moments'

achievements included: **212,000 buyers** purchasing liquid milk who would not have purchased it otherwise, delivering **£6.6M** in additional sales, and contributing to an uplift in total liquid milk sales over the campaign of **9.1%**.²⁹

EXPERT PANEL QUOTE

“There was literally a month of chaos and then it settled down.”

Expert Panel member (July 2020)

A Short Crisis but Not a Catastrophe

According to Peter Alvis, chairman of RABDF, Covid resulted in a ‘period of change and uncertainty’ the likes of which the dairy sector had never seen before.³⁰ The sector’s response to the crisis, however, was for the most part both quick and effective. Many individual businesses demonstrated remarkable speed and agility, reinventing themselves almost overnight, by pivoting to DTC (direct-to-consumer) models or repurposing foodservice stock for retail. The sector also came together in an unprecedented way, collaborating strategically and engaging collectively and constructively with government in an effort to reduce milk production while at the same time stimulating retail demand.³¹

EXPERT PANEL QUOTE

“It is a tribute to the whole industry that the wheels were put back on quickly following the initial cataclysmic shock. This speaks for the resilience, cooperation and collaboration within the industry.”

Expert Panel member (July 2020)

As a result of these individual and collective efforts, and a certain degree of luck that the peak of the crisis coincided with a spell of dry sunny weather that inhibited grass growth and reduced milk production, a crisis was successfully prevented from becoming a

catastrophe. There was a short, extremely challenging period at the beginning of pandemic but the sector as a whole demonstrated considerable resilience and flexibility in managing and mitigating the impacts of Covid, containing many of the issues, and returning the market to a state of relative normality. By mid-July, for example, milk farm-gate prices had recovered from April’s 12-year low, to a six-year high,³² while milk production – which had been successfully reduced by 75 million litres during the peak of Spring’s over-supply issue – increased again, to the point where, by the year’s end, the UK had produced 15.3 billion litres of milk, the highest annual figure since 1990.³³

Covid’s Impact on Individual Dairy Businesses

Viewed through a wide-angled lens the dairy sector’s collective response to the unprecedented challenges posed by the Covid crisis in the spring of 2020 looks impressive. There were a few weeks of significant disruption and confusion, understandably so, but key players mobilised quickly to identify critical issues and necessary remedial actions, and for the most part, supply chains proved remarkably robust and businesses amazingly agile in adapting to the overnight emergence of an entirely new consumer landscape.

Zoom in a little, however, from this broad sector-wide perspective and a more complex and varied picture comes into focus, one that shows that different sub-sectors, and different individual businesses were impacted in different ways and to different extents, and had varying reservoirs of resources at their disposal with which to respond to the crisis. This is not to challenge the narrative of a successful sectoral response but rather to add some individual experience to the story.

CASE STUDY – LYNHER DAIRIES

Lynher Dairies is an independent cheesemaker owned by Catherine Mead and situated in the small village of Ponsanooth in mid-Cornwall. They produce a small range of cheeses all of which are hand-made in open vats using full-fat milk from their own farm and herd of grass-fed Ayrshires or from other select local farms. Their ‘core product’ is the nettle wrapped *Cornish Yarg*, which they have been producing for 30 years, but the dairy came to international prominence in 2017 when their *Cornish Kern*, a hard farmhouse cheese, was crowned Supreme Champion at the 2017 World Cheese Awards.

Covid and the Cheesemaker

The following quotes are from an interview undertaken with Catherine Mead of Lynher Dairies in December 2021.

Early Warning Signs and Initial Impacts

INTERVIEWEE QUOTE

"I think we felt like a tsunami was coming...and then the first week of March, I remember that clearly, we suddenly had a reduction in orders. By the fourth week of March things were hopeless, in fact, worse than that, I was even getting some products sent back, so negative sales.

"We were really, really badly impacted, because we had business in export, and that was clearly going. We had business with the travel trade, with aeroplanes, and that was gone. We were doing lots with the Premier League, that's gone. We did masses of restaurants – gone. We did lots of other food service outlets – all gone. We did Sainsbury's and Tesco's delis – they no longer had a delis. So we actually had, I think, 60% of our business affected."

"But we wasted lots of cheese, we just gave it away. Massive amounts went to charity. We sent it off for processing for free school meals, we sent it to a restaurant that was making takeaway meals for the NHS workers."

Government/Industry Support

"So I chair the Specialist Cheesemakers Association (SCA), [...] and we did some online work and we did some promotions work and so on. Our patron is Prince Charles and he did a huge amount to support us, hooked us up with all sorts of his contacts and he was really helpful."

"I think it would be churlish to say that the government weren't anything other than unbelievably helpful. I mean, we got none of the lump sum payments, we sat outside of that because we're not retailers, were not in hospitality, but we made good use of furlough and that was absolutely invaluable to us in this key period

Responses

"I knew that the biggest problem I had was going to be labour. [...] So I very quickly had to make the difficult decision to make eight people redundant, a third of our production staff, and then two very senior managers... so we really scaled down."

"From a sales perspective, we had a massive amount of stock that we had to try and off-load and find a home for. [...] We worked with Jamie Oliver and did a cheese box and I think that we sent out about 8000 cheese boxes with that early doors, so quite a lot of cheese."

Re-Opening and Lockdowns 2 and 3

"I think it was July 4th when they said we could travel again, and Cornwall went bonkers, it was full to the gunnels. So suddenly we had the most incredibly busy summer and then that carried on through.

"But then lockdown 2 and 3 happened. [...] It wasn't that there was less demand for cheese. It wasn't that people didn't want to eat specialist cheese, it was with simply: how do you get cheese from here to there, you know, and it was just the finding of those new supply routes."

A Rethink and Increased Productivity

"That difficult period also gave us some time to stop think about the business... and so we decided to not go back to some supermarket deli counters. Yarg, for example, doesn't prepack, well and it doesn't show the product it is best, it's not what it's designed to do"

"We also realised we should not have been trying to produce so much cheese and instead should focus on productivity."

"Although it's much smaller I've got such an amazing team here now, who absolutely know what they're doing, who've got so much skill, so much knowledge, and don't need lots of management... and are mutually supportive. They work more closely together and much, much more efficiently. So my productivity has absolutely soared because we've hit that sweet spot"

"And, we've also upped our social media quite a bit, and we've got you know more engagement through newsletters and all those sort of things [...] and our online sales will probably be close to about 8 times greater than they were pre COVID. So as I said, it's become a significant part of our business. Previously it was 1 or 2%, so it's now quite a significant part, although it was 1 or 2% of a much bigger business."

'A Massive Disruptor' and 'Driver for Positive Change'

"Covid was a massive disruptor, and sometimes if you're going to change your strategic direction, you need a massive disruption. Otherwise, if it's sort of OK, you press on, you know in the belief it's going to get better, but it wasn't really going in the right direction. I know that we're better now than we were then, on so many levels. I think I could say that Covid was a driver for positive change. It feels like a more streamlined energetic business now."

A New Business

"2020 was our worst year ever. We kept our heads above water; we did better than break even, which I consider to be an achievement. But what we did do is sort of re-structure, such that this year [2021] will be, potentially, my best year ever."

And the other thing that we've done [...] is open a little shop, you know, really small shop. So we had that up and running in September of last year. People were coming to the dairy to pick-up during lockdown 1 but we didn't have the shop. And then in September we opened the shop, and I think this year we are kind of on target for the shop to do something in the order of 8% by volume, 10% by value."

Common Themes but No Singular Story

There are many common themes and threads in terms of impacts, issues and responses that run across the five food sectors we have focused on in this suite of Research Briefs. The restructuring of demand and changes in consumer behaviour, the pivot from hospitality to retail, the growth of online sales and home delivery, labour supply issues, and Brexit. But what is also apparent is that each food sector and each sub-sector also had its own different experience of Covid, and has its own unique story to tell. Likewise each individual food business whether producer, processor, wholesaler or retailer will have been impacted and have been able to respond in different ways and to different extents. For Lynher Dairies, Covid was a driver for positive change, but other, similar scale, artisanal dairies may struggle to view it in those terms. There is no singular story of the impact of Covid on the UK food system.

KEY RESOURCES

<https://www.rabdf.co.uk/>

Food System Impacts of Covid-19 project, Expert Panel meeting 28th July 2020 , Meeting Notes available at:

<https://sites.exeter.ac.uk/foodsystemsimpactscv19/wp-content/uploads/sites/351/2021/05/Expert-Panel-Meeting-2-27.07.20-Redacted-Notes.pdf>

REFERENCES

- 1 Defra (2021) [Agriculture in the United Kingdom 2020](#).
- 2 Uberoie, E. (2021) *UK Dairy Industry Statistics*, House of Commons Library.
- 3 <https://ahdb.org.uk/dairy/uk-dairy-trade-balance#:~:text=Overview,59k%20tonnes%20lower%20than%202019>
- 4 <https://research.rabobank.com/far/en/sectors/dairy/brexit-and-the-dairy-sector.html#:~:text=The%20UK%20is%20circa%2077,at%20an%20average%20of%2040%25>.
- 5 Thomas, J. (2019) *Understanding Patterns of Innovation within the UK Milk Production Sector*, PhD Thesis, University of Sussex.
- 6 <https://www.gov.uk/government/statistics/milk-utilisation-by-dairies-in-england-and-wales>
- 7 <https://www.thegrocer.co.uk/the-dairymen/did-covid-19-help-change-the-dairy-industry-for-the-better/650098.article>
- 8 <https://ahdb.org.uk/news/just-how-much-fresh-milk-goes-to-foodservice>
- 9 Source: Nielsen Scantrack, which monitors weekly data from national network of point of sale scanners - <https://www.thegrocer.co.uk/category-reports/making-a-meal-of-it-butters-and-spreads-category-report-2020/604844.article>
- 10 <https://www.fwi.co.uk/business/markets-and-trends/dairy-markets/figures-reveal-extent-of-coronavirus-dairy-demand-shift>
- 11 Food System Impacts of Covid-19 project, Expert Panel meeting 28th July 2020 , Meeting Notes available at: <https://sites.exeter.ac.uk/foodsystemsimpactscv19/wp-content/uploads/sites/351/2021/05/Expert-Panel-Meeting-2-27.07.20-Redacted-Notes.pdf>
- 12 <https://www.thegrocer.co.uk/dairy/more-than-a-million-litres-of-milk-poured-away-during-april/604491.article>
- 13 Food System Impacts of Covid-19 project, Expert Panel meeting 28th July 2020 , Meeting Notes available at: <https://sites.exeter.ac.uk/foodsystemsimpactscv19/wp-content/uploads/sites/351/2021/05/Expert-Panel-Meeting-2-27.07.20-Redacted-Notes.pdf>
- 14 <https://www.bbc.co.uk/news/uk-politics-52447520>
- 15 <https://www.fwi.co.uk/livestock/taking-stock/marts-see-cull-cow-values-recovering>
- 16 <https://www.macrotrends.net/futures/milk>
- 17 Pensworth to withhold 75 per cent of milk payments due to Covid-19 outbreak, Farmers Guardian, April 3, 2020
- 18 Medina Dairy producers hit with May 2ppl price drop and delayed payments, Farmers Guardian, April 3, 2020.
- 19 <https://www.foodmanufacture.co.uk/Article/2020/05/01/Mueller-milk-price-u-turn-criticised-by-farmers#>
- 20 <https://ahdb.org.uk/news/the-financial-impact-of-coronavirus-on-dairy-farmers>
- 21 <https://www.bbc.co.uk/news/uk-england-52358248>
- 22 Food System Impacts of Covid-19 project, Expert Panel meeting 28th July 2020 , Meeting Notes available at: <https://sites.exeter.ac.uk/foodsystemsimpactscv19/wp-content/uploads/sites/351/2021/05/Expert-Panel-Meeting-2-27.07.20-Redacted-Notes.pdf>
- 23 <https://www.gov.uk/government/news/dairy-industry-to-join-together-to-manage-milk-supply>
- 24 <https://www.gov.uk/government/publications/dairy-response-fund-2020>
- 25 <https://www.rabdf.co.uk/latest-news/2020/4/7/rabdf-seeks-government-support-in-new-scheme-to-prevent-widespread-dairy-disruption>
- 26 <https://www.specialityfoodmagazine.com/news/industry-voices-concerns-over-dairy-hardship-fund-as-applications-open>
- 27 Food System Impacts of Covid-19 project, Expert Panel meeting 28th July 2020 , Meeting Notes available at: <https://sites.exeter.ac.uk/foodsystemsimpactscv19/wp-content/uploads/sites/351/2021/05/Expert-Panel-Meeting-2-27.07.20-Redacted-Notes.pdf>
- 28 <https://ahdb.org.uk/milk-your-moments-campaign>

29 **Ibid.**

30 <https://www.thegrocer.co.uk/the-dairymen/did-covid-19-help-change-the-dairy-industry-for-the-better/650098.article>

31 **Ibid.**

32 <https://www.macrotrends.net/futures/milk>

33 Defra (2021) Agriculture in the United Kingdom 2020.