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News in brief

'Pingdemic' slows the bounce-back

With over 70% of the UK population having now had at least one vaccination, we're tantalisingly close to pre-pandemic normality.

Coinciding with the summer holiday season, however, this doesn't come with as much relief as hoped, with the 'pingdemic' forcing millions to self-isolate. Hospitality perhaps has been worst hit, with businesses closing due to lack of staff available and/or self-isolation, at a time when reopening offered a chance to recuperate some of the months of lost income. This may seem a long way away from farming, but the effect ripples up the supply chain, closing and reducing capacity in food processing and distribution, and causing backlogs with potential impacts on farmgate prices (see Pig sector update). QMS have produced an online tool on how to meet grading specifications and make the most of price and quality in changing markets (see Management Matters).

Away from the headlines, discussion over the Northern Ireland Protocol rumbles on. The Protocol was agreed in December 2020 to enable goods to be traded between Northern Ireland and the rest of the UK without the need for a hard border to carry out customs checks. However, the Protocol also requires that Northern Ireland abide by various EU trade rules, including checks on goods, especially on livestock, animal products and medicines.

So far, the 'Irish sea border' has caused over 200 suppliers to withdraw from trading into Northern Ireland, as well as heightening tensions around ports, with incidences of violence, threats to customs staff and criminal damage. After the UK unilaterally attempted to extend the 3-month grace period by another 6 months in March, the EU threatened legal action; in the last week this has been paused, giving government until 30th September to establish and put in place new customs measures.

Next month: Organic sector update

Poultry update

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This month's editor:
Anna Sellars

Framework for future Scottish agricultural policy

A policy paper, recently published by NFU Scotland (NFUS) in conjunction with agricultural economist Steven Thomson, SRUC and Dr Andrew Moxey, Pareto Consulting pulls together recommendations from the government's farmer-led sector groups and proposes how they can be used to design and implement future agricultural policy in Scotland. The paper outlines how the sector can meet the challenges of climate change and biodiversity loss, while maintaining food production and can be obtained from www.nfus.org.uk/, a summary of some of the key points from this document are included below.

To meet the challenges will require purposeful action across the industry including other parts of the supply-chain, finance sector, researchers, education providers, advisors, and government. From the government, there is a need for clear and consistent messaging on the direction of policy travel, and appropriate support to aid transition.

Government support should include the provision of information, advice, training and grant-aid for appropriate capital investments and on-going management, including funding to help farmers gather necessary data and to plan for how businesses will adjust over time.

Although funding could be disbursed via a new agri-environment scheme that provides 'public monies for public goods' modifying the existing Scottish framework so that is has multiple payment tiers and increased conditionality requirements offers advantages in terms of how payment rates have to be calculated under WTO rules and avoids the time and effort needed to build a new payments system. A range of policy issues such as degree of commonality across different sectors, eligibility criteria, payment rates and monitoring requirements will all need to be considered within the framework. A single payment scheme should:

- Cover all sectors, to avoid multi-enterprise businesses having to navigate multiple schemes.
- Allow for flexibility, to enable farmers and crofters to choose options best suited to their circumstances, including year-on-year variation in (e.g.) weather conditions.

In the first instance, support should focus on building capacity through helping farmers to gather information and data to understand their businesses (and natural capital assets) better and how to plan for change. This will include:

- Environmental auditing of, for example, soil carbon and ecological features.
- Appropriate advisory support will be essential and may require adjustments to current delivery modes and content.

Thereafter, through transition, funding should gradually switch from its current form of retained CAP Pillar 1 schemes to one increasingly conditional on attaining performance metrics aligned to desired environmental outcomes:

- In the first instance this should be on biodiversity but must include climate change measures introduced through new primary legislation.
- For cattle, existing traceability data could permit the use of metrics such as calving and rearing rates that can be linked to modelled emissions.
- For other sectors, metrics could be based more on management actions, again linked to modelled emissions.
- In all cases, the choice of metrics needs to balance ease of data collection against precision, thereby aiming for tolerable rather than absolute accuracy. Existing data collection methods are likely to be supplemented by greater use of remote sensing and self-reporting by farmers.

Maintenance of a degree of coupled support should be seen as a long-term option in order to maintain activity and a commitment must be given as to how peripheral and disadvantaged support is provided.

In addition, payments must reward attainment to encourage improvement but also sustained performance.

The design of the future agricultural policy will require the joint working between the Integrated Implementation Board (and/or sub-groups of it) and Scottish Government (and Agency) working groups that should be established to develop thinking on - transition, biodiversity tiers, GHG tiers, data, disadvantage support, activity, tenure and new entrants, payment rates, smallholders, advice and innovation, and communications.

The Scottish Government have said the board would consider all proposals put forward, including those made by the farmer-led climate change groups and NFUS.

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World harvest starts, prices rise

Cereal crop estimates around the world are being adjusted as weather events unfold and combines start to roll in major producing regions. UK wheat futures have bounced around but are back close to where they were a month ago at £182.50/t.

In the EU, crop yields are seen up on last year in most countries with exceptional yields in Romania and Bulgaria for instance. The European Commission increased its wheat production estimate to 127.7mt (125.8mt last month) while barley estimates fell 0.9mt to 52.6mt. In wheat, quality has been hit; particularly milling wheat following heavy rain in Germany, Belgium, parts of France and Bulgaria & Ukraine. This looks like good news for UK milling wheat growers with potential for stronger premiums but there could be more feed wheat exports from Germany/Black Sea ports.

Looking to the US and Canada, the extreme heat and drought in the West continues to damage crop prospects there, particularly spring wheat. Prospects for US maize and soyabeans have also been affected by above average temperatures with crop conditions down significantly on last year. On the other hand, Australia could have a wheat crop of over 29mt according to the USDA and be a major wheat and barley exporter.

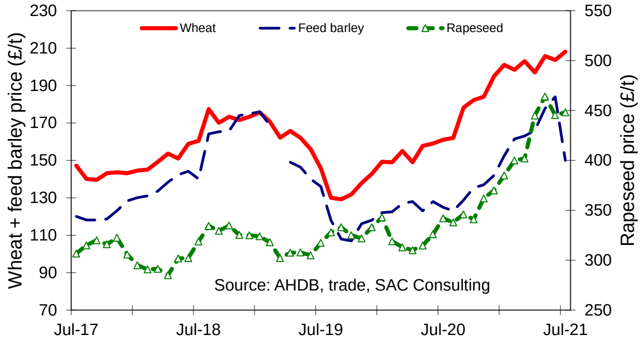
US crop condition report summary (Source: USDA)

	Good/Excellent		
	2020	2021	(change %)
Spring Wheat	70	9	-87%
Maize	72	64	-11%
Soyabeans	72	58	-19%

Global malting barley supply and premiums are currently being assessed with wet weather in the EU and heat in Canada potential risks to quality.

In the UK the harvest has got off to a reasonable start; catchy weather in the south, good weather further north. Winter barley and rapeseed yields so far appear to be better than last year at around average levels. UK barley prices have dropped around £20/t in a few weeks as the first of the new crop barley comes onto the market.

Scottish spot ex-farm grain and oilseed prices



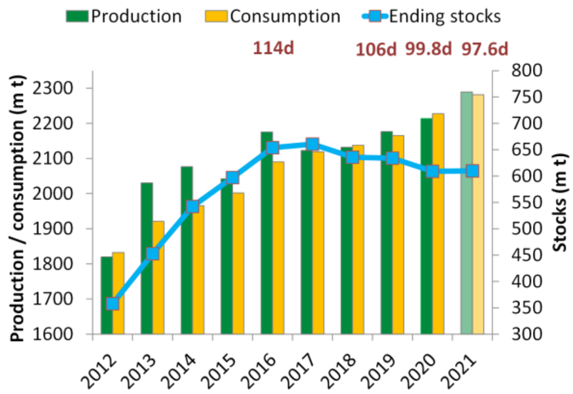
World cereal supply to use tightens

In their latest supply and demand estimate for 2021, the USDA projected a further tightening of overall supply and demand compared to their starting estimates made in May. Compared to last season the USDA see 2021 world grain; output +76mt (+71mt in May), grain use +54mt (+38mt in May) ending stocks +1mt (+7mt), stocks to use down 2.1 days. This assessment is increasingly supportive of new crop prices. These figures tell us is that so far world demand is stronger than originally forecast and stocks are tightening. The final results will depend on what is actually harvested, and the next few weeks will be critical to that.

World cereal supply and demand estimates

2021 forecast: Crop+76mt, use+54mt, stocks +1mt

Stocks to Use -2.2 days to 97.6 days.



Source: USDA

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Indicative grain prices week ending 30 July 2021 (Source: SACC/AHDB/trade)

'* Before oil bonus, # Ex-farm England spring brewing max 1.85%N, ~ nominal

£ per tonne	Basis	Jul '21	Harvest '21	Nov '21	Mar '22	Nov '22
Wheat	Ex-farm Scotland	205.00	177.00	180.00	184.00	172.00
Feed barley	Ex-farm Scotland	155.00	140.00	148.00	154.00	140.00
Malt. barley- distil	Ex-farm Scotland	200.00				194.00
Malt. barley- brew	Ex-farm England#			185.00	195.00	
Oilseed rape*~	Delivered Scotland		445.00	455.00		410.00

Outlook remains positive for beef

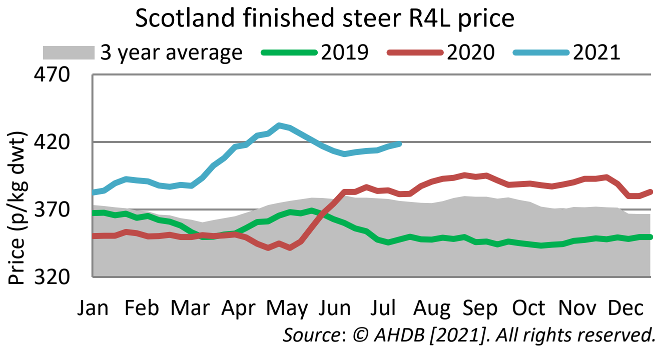
Beef prices have been in a positive position for the last 12 months and the outlook remains good for the coming months. Given the inflation in inputs we are experiencing, a positive trade for cattle which is welcomed by all. The trade remains the right side of "the magic" £4 per kg mark. However, is £4 still magic? With feed, fuel and fertiliser all well up on the year, margins are reduced but by far the biggest cost for finishers is the purchase of the store animal. The store market is on fire at present as demand outstrips supply, it's great to see such confidence from finishers. This competition for stores is putting further pressure on finisher margins, all things considered, £4 would now be seen as reasonable, not magical.

Cull cow values are in a very strong position. Cows are in exceptional demand due to the good weather and the country's seemingly unlimited demand for burgers and BBQ meat, the European championships, Olympics and a reduction in lockdown restrictions coupled with good weather have really got BBQs going. The demand for BBQ meat has been made stronger with National BBQ Week (which ran for two weeks this year, between 5th and 18th July, in celebration of its 25th year). All the big supermarkets ran BBQ inspired promotions encouraging shoppers to fire up the barbecue. The cull cow price recently sits at between 330 and 360p/kgDW, which is significantly more than an in spec bullock was making 18months ago.

Many farmers have taken advantage of the high cull cow price, with a high number of cows already killed, we normally see cow price reduce as supply increases in the autumn. However, the demand for beef is high and supply will be limited, it is likely that in the coming weeks prices will remain strong. Grass supplies are limited in many parts of the country and with harvest underway, it is likely that supply of prime cattle will be limited in the coming weeks, the price should remain strong.

Pandemic vs Pingdemic

Agriculture has come through the Covid pandemic in reasonably good shape. However, there is a new and



emerging issue that is likely to have a negative impact on the sector. The track and trace system has been of huge importance to the country to avoid huge spikes in covid cases. However, in recent weeks, as lockdown restrictions continue to lift, more and more people are being pinged by track and trace, forcing them into isolation. The meat processing has been very exposed to covid throughout the pandemic due to cool conditions and workers in close proximity to each other. This leaves the sector very exposed to the pingdemic and self-isolation protocols. Labour shortages in the haulage sector are adding to the problem with issues with collection direct from farm and delivery of end products to retailers. Producers should stay in contact with their abattoir or market representative to avoid disappointment.

Remember food security

We saw empty shelves in supermarkets in the early part of the pandemic but thanks to hard work right along the supply chain, shelves were filled and consumers were supplied with what they wanted. Only a matter of months, we find ourselves on the brink of another potential food security issue, yet we hear daily from politicians all over the world of a need for agriculture to step back from production and instead deal with the climate and biodiversity emergencies. While these issues certainly need addressed, keeping a plentiful supply of food to the masses is essential to life as we know it. As we head towards COP 26, it is important that the positives of sustainable red meat production are acknowledged and understood before we sleep-walk into a major issue.

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Scotland prime cattle prices (p/kg dwt) (Source: Drawn from AHDB and IAAS data)

Week Ending	R4L Steers (p/kg dwt)			-U4L Steers			Young Bull-U3L		Cull cows	
		Change on week	Diff over N. Eng.		Change on week	Diff over N. Eng.		Diff over N. Eng.	R4L	-O3L
3 Jul 21	413.9	0.6	4.4	413.2	0.1	5.7	410.0	6.9	329.8	303.4
10 Jul 21	416.6	2.7	8.5	416.0	2.8	7.4	410.3	4.0	333.9	308.6
17 Jul 21	418.6	2.0	11.3	416.0	0.0	6.8	412.2	6.8	336.5	305.7

Sector Focus: Pigs

Hard times continue for the pig sector

2021 continues to throw up serious challenges for pig producers with little light at the end of the tunnel. The turn of the year saw prices continuing to fall against pressure from imports, Brexit and Covid effects on export markets as well as reductions in processing. This was combined with rising input costs caused mostly by increasing feed prices and the backlog of pigs in processing. These effects are shown clearly in the latest AHDB figures looking at producer margins up to Q1 in 2021, at which time producers were estimated to be losing £26 per pig with prices 29 pence per kg (p.p.kg) below the cost of production. Since then prices have risen by nearly 20 p.p.kg, reducing the deficit although with costs remaining high, producers are still losing money.

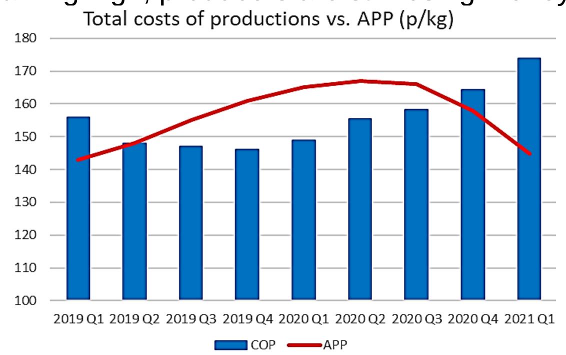

Figure 1. GB APP vs. Cost of production Jan 2019 to Mar 2021, (Source: © AHDB Pork [2021]. All rights reserved.)

The GB All Pigs Price (APP) reached 164 p.p.kg in late July, only 4 p.p.kg back from the same week in 2020. This could come under pressure with pigmeat in the EU, particularly Germany, well below this price.

Pingdemic threatens supply chain

Another concern is the "pingdemic" impact on processors, putting increasing pressure on staffing levels and throughput over the summer, meaning up to a quarter of staff are absent in some plants according to the British Meat Processors Association (BMPA). In addition, the Settled Status deadline at the end of June has seen a number of workers from the EU leaving. Finding replacement staff is becoming a big problem throughout the pig sector. The last month has seen weekly numbers of pigs slaughtered start to fall and slaughter weights beginning to creep upwards suggesting that pigs are remaining on farm longer.

Another fear is that with British Pork currently in demand from consumers with increases in sales both in volume and value over the past year, the reduction in processing volumes will affect the ability to supply, with retailers turning to cheaper imports instead. While weaner values have held up recently, this could change if there is a backlog in pig movements. Cull sows continue to trade at low values throughout the UK (around 60 p.p.kg (AHDB)), as per turn of the year; the cull sow market will be placed under more pressure if more producers decide to exit.

Scottish producers have also to deal with the main processing outlet in Scotland believed to be applying a significant discount to top grade pigs. This is due to the loss of the Chinese market following the voluntary suspension of its export licence due to a Covid outbreak in the plant. This has led to more pigs being marketed elsewhere for more money and reduced throughput at the plant.

Spring also saw the announcement of a £715,000 hardship fund for producers from the Scottish Government, particularly those affected by the temporary closure of the abattoir at Brechin. This led to a backlog of pigs on farms with farmers incurring extra feed and housing costs, as well as a reduction in prices in alternative markets and out of spec. pigs.

Harvest sees feed prices ease slightly

This year has also seen higher feed prices, following last year's poor harvest. The new harvest will bring some respite with new crop prices below the old crop price. Falling futures prices also give some hope that feed costs may be lower for the year ahead with November 2021 LIFFE wheat currently around £175 compared with £191 in April (AHDB) - this is still however relatively high historically. Protein prices have also held up with Soya retaining its recent high values at £360-365 for the autumn. With straw from last year all tidied up, the short crops being seen in the field may well see straw values at high levels. Harvest will also mean that many producers will be able to use their own grain and straw again, helping reduce feed bills and relieve some of the pressure on cashflows following the difficult year so far.

ASF in Germany & Chinese output

Further afield, African Swine Fever (ASF) has been confirmed in domestic pigs in Germany for the first time. As well providing a reminder to remain vigilant, this will cause upheaval and uncertainty to German pig markets. Given the scale of the pig sector in Germany this could also impact on the rest of the EU and UK, putting pressure on prices.

Across the world pigmeat production continues to rise with the USDA estimating 2021 output to be 105.1 million tonnes. This increase has been mainly driven by the recovery in production in China following its ASF outbreak. Despite this China is expected to increase imports with the Philippines (in the midst of its own ASF outbreak) also looking to import more pigmeat as domestic production is still well below pre-ASF levels.

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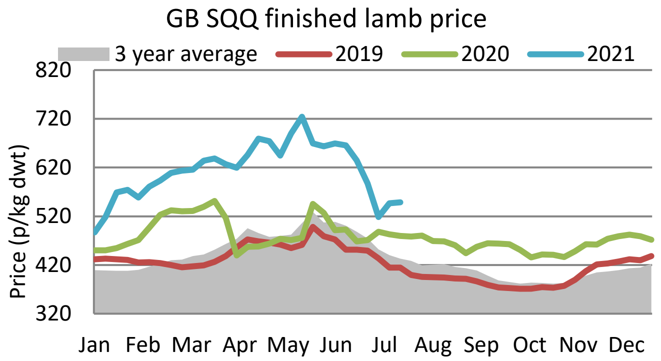
Sheep

Festival generates price rise

Lambs being sold deadweight have seen a price rise, at the end of July largely due to increased demand from the Muslim festival Qurbani, which took place between the 20th and 23rd July. For the week ending 17th July, this SQQ rose to 548.5p/kg, showing an increase on the year of 69p/kg (~£15/hd). Live markets have also witnessed a growth in price with the week ending 21st July having a SQQ of 260.7p/kg, showing a rise of 44p/kg on the year.



The recent heatwave has meant many producers have prioritised conserving winter forage, and preparing for harvest rather than selecting lambs, which has reduced the throughput slightly.

Breeding sheep and stores

Early sales of breeding sheep have started, with many more in the weeks to come. These early sales have shown exceptional values for gimmers. With one market reporting over 2,000 Suffolk gimmers averaging £194.75 and over 500 mule gimmers averaging £170 which is phenomenal trade. Older ewes who have been early weaned are also showing a premium, with the exception of hill ewes, who are generally very lean.

With lambs being weaned across the country, some have started trading store lambs. The short keep stores are showing a real premium, with many making over £100, long keep lambs are showing a lower value, albeit still strong at ~ £60-75/head.

Pedigree tup sales have started, with both Charolais and Suffolk's going under the hammer in Scotland so far, excellent trade has been reported, with a high of 200,000gns at the Suffolk sale and an average of £4,825, with 92% clearance.

Cull ewes have dropped over the last month, largely due to the quality and condition coming forward, with many being sold at weaning, these are generally leaner.

Export opportunities

Global supply of lamb is reported to be limited. Largely due to a tight supply, processing restrictions and availability of frozen storage. Shipping costs are very high, making it less than favourable for New Zealand exporters to bring product into the UK. However, these high shipping costs, combined with our current high price makes our sheep products at a premium for our European markets.

Looking at the Australian export figures for June they were 37.5% higher than 2020 and 26% higher than the five-year average, with the main buyers being the US and China. The Australian lamb price as of 21/07/21 is 693c/kg DW (370p/kg on today's exchange 26/07/21). This is compared to the UK price on the same week of 548.5p/kg.

For cull ewes, China, Malaysia and the US have imported 30% more mutton than 2020, but their mutton supplies are low as they rebuild their flocks, which potentially offers the UK product an opportunity.

Slight uplift in wool price

The backlog of wool from the 2020 clip is now cleared. This has been aided greatly by online trading of wool. The price is currently higher than last year, although the rise is not significant.

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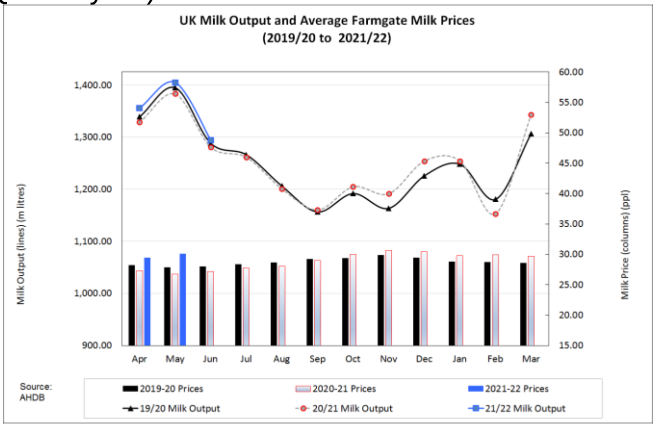
Week ending	GB deadweight (p/kg) 16.5 – 21.5kg				Scottish auction (p/kg)				Ewes (£/hd)	
									Scottish	Eng&Wal
	R3L	Change on week	Diff over R2	Diff over R3H	Med.	Change on week	Diff over stan.	Diff over heavy	All	All
3-Jul-21	**516.1**	-70.7	-4.9	0.5	**249.60**	-5.2	6.8	2.2	104.17	93.38
10-Jul-21	**544.9**	28.8	-1.8	2.0	**249.80**	0.2	-3.0	1.4	87.86	86.72
17-Jul-21	**548.7**	3.8	-1.4	2.8	**254.00**	4.2	7.0	2.6	86.66	83.98

Deadweight prices may be provisional. Auction price reporting week is slightly different to the deadweight week.Source: AHDB and IAAS

Production growth & rising prices

- *Milk output has risen during spring 2021. Output for the first three months of 2021/22 is up 62.45m litres on 2020/21.*
- *Several UK milk buyers are lifting farmgate prices for August 2021, despite higher milk output.*

UK monthly milk output has continued to rise during June 2021; AHDB estimates indicate that production for the month increased to 1,294.54m litres (before butterfat adjustment). This equates to an increase of 13.67m litres compared against June 2020. Cumulative UK milk output up until the end of June 2021 stands at 4,055.15m litres (62.45m litres up on Q1 last year).



AHDB reports indicate that the UK average milk price increased between April and May 2021, with prices for May averaging 30.11ppl, compared with 29.41ppl for April 2021. At 30.11ppl, the average price for May 2021 is up 3.40ppl on a year-on-year basis.

Prices for dairy commodities are following a similar trend to last month; prices for butter and SMP have eased back further between June and July, whilst prices for bulk cream have crept upwards. The lift to cream prices suggests that liquid processors should be seeing improved returns from the market.

UK dairy commodity prices (£/ tonne)	July 2021	Jun 2021	Jan 2021
Butter	3,230	3,320	3,060
SMP	2,110	2,150	2,040
Bulk Cream	1,508	1,433	1,237
Mild Cheddar	2,980	2,980	2,940
UK milk price equivalents (ppl)	**July 2021**	**Jun 2021**	**Jan 2021**
AMPE (2020) *	31.59	32.46	30.10
MCVE (2020) *	33.43	33.62	32.07

On the world market, powder prices have been holding up well (EU SMP ~ US $3,188/t) but a recent dip in powder prices via the GDT platform may suggest they have peaked. Expansion to milk output from New Zealand and the US may ease the pressure on some product prices, but price levels continue to be supported by demand from Asia and the east.

Farmgate prices move up: August 2021

Price announcements by UK milk buyers for August 2021 are listed as follows:

- Fresh Milk Company (Lactalis) – FMC has confirmed a 0.25ppl price increase to take effect from 1st August. This is the third price increase in as many months. The latest price increase for August 2021 takes the standard litre price up to 29.75ppl. Following the price increase for July 2021, 29.50ppl remains as the minimum price guarantee up until the end of September 2021.
- First Milk – FM has confirmed a further 0.50ppl price increase for August 2021, as reported in last month's bulletin. This is the fourth milk price increase in consecutive months. See milk price table below for details.
- Arla Foods amba – Arla has confirmed a hold on prices for August 2021. The manufacturing standard litre price holds at 33.20ppl, whilst the liquid standard litre price holds at 31.95ppl.
- Arla organic supplies – Arla's organic milk prices also hold during August. The manufacturing price holds at 41.56ppl whilst the organic liquid standard litre remains at 39.99ppl.
- Coop – Members of the Cooperative Dairy Group (CDG) will receive a 1.06ppl increase from 1st August 2021. This takes the liquid standard litre up to 31.45ppl for Müller suppliers in this pool.
- Tesco – Members of the Tesco Sustainable Dairy Group (TSDG) will receive a 0.53ppl price increase from 1st August 2021. This takes the liquid standard litre up from 32.13ppl to 32.66ppl for Müller suppliers. Arla suppliers receive the same 0.53ppl increase which takes their price up from 31.88ppl to 32.41ppl.

Annual Average milk price estimates for August 2021 (ppl)	
Milk Buyers – Scotland	**Standard Ltr***
Lactalis (No profile or seasonality) [1]	29.75
First Milk Liquid [1, 2]	29.99
First Milk Manufacturing *(4.2% Butterfat & 3.4% Protein)* [2]	31.00
Müller - Müller Direct - Scotland [1, 3]	28.75

1 *Liquid standard litre – annual av. milk price based on supplying 1m litres at 4.0% butterfat, 3.3% protein, bactoscan = 30, SCC = 200 unless stated otherwise.*
2 *The FM member premium is set to remain at 0.50ppl from April 2021.*
3 *No monthly supplementary payment included in the price estimate. Includes 1.00ppl Müller Direct Premium and additional 0.25ppl haulage charge for Scottish suppliers.*

£21.3m for southwest dairy project

A new digital dairy project (the Digital Dairy Value Chain) is to be developed in the south of Scotland and Cumbria. The project will be led by SRUC at the Barony campus, near Dumfries with support from several partners. Funds will be used to develop a world class dairy research facility, delivering advances in product manufacturing processes and sustainable dairy production. It is expected that around 600 jobs could be created across the region.

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Meating the grade

Close to 40% of sheep and 30% of beef cattle in Scotland are still failing to meet market specifications; the two most common reasons for which being either over fat or overweight, resulting in needless loss of income.

With the Covid pandemic changing both how customers shop and what cuts of meat they are looking to buy, it is important to keep up-to-date with what processors and retailers are looking for. With customers looking for leaner cuts of meat, having to trim off excess fat results in loss of margin for both processors and retailers and certainly in the case of beef, overweight cattle produce bigger sirloins than the customer is willing to pay for and from a processors perspective, they don't fit neatly in the given size of tray, which again the average customer finds visually unappealing unless it is marked down in price.

At the time of year when everything is happening on farm, it is difficult to keep up the 'Who, What, Why Where and When' to get the best price for prime stock and even harder to find time to make sure other family members and staff know what markets and processors are looking for (and what they won't pay for). So, before you head for the shedding gate, to help improve with livestock selection and managing your stock prior to slaughter, click into the QMS 'Meat the Grade' online tool to see how different fat classes impact on the size and quality of key cuts of meat and the Weight and Consistency section demonstrates the impact that different carcase weights have on the size of steaks and how they would look packaged on a supermarket shelf.

For those unfamiliar with handling cattle prior to sale, the online tool provides practical information on clean and dirty livestock, dressing specifications and why livestock will be condemned, and could provide the basis of an on-farm training course for staff.

New Business Opportunity - Aires

'Staycations' have become part of our everyday language due to the ongoing Covid pandemic. While many businesses have benefited from opening their properties and fields to Airbnb and camping guests alike, the popularity of campervans has taken its toll on rural areas not used to or equipped to deal with the numbers seen. In many areas this has created tension, particularly where lack of awareness of the country code and the daily activities of rural communities, such as farming, has led to incidences of obstructive parking and waste.

With the Covid restrictions easing and EU and US visitors no longer having to self-isolate on arrival in the UK, the problem could get significantly worse especially given the marketing success of the NC500 route.

Rather than fuming quietly or risking life and limb challenging the unwelcome visitors, why not turn it into a business opportunity by creating an Aires?

The concept of Aires originated in France where the traditional 'Aire de service' is essentially a French motorway service area which often has approved parking bays for motorhomes, with fresh water and waste facilities being available for a small charge.

Given that, while functional, an overnight stop at a motorway service station is fine on the way to somewhere more picturesque and tranquil, the Aires concept has been developed into 'French Aires'. Often run by local councils, they are essentially gravel area or car-parks often marked out in bays. They are often on the outskirts of villages and offer waste disposal facilities and fresh water for a small charge. Most places expect visitors to move on after 24 hours, but some allow stays of up to 4 days.

The Aires concept is starting to catch on in Scotland. In June, Highland Council became the first UK local authority to temporarily relax licensing regulations (up until 31st December 2021 or until such times as physical distancing requirements have been removed). This has enabled landowners with suitable sites to facilitate simple and low-cost motorhome stopovers, without the need for planning permission on the assumption that it was considered safe and reasonable.

As part of Highland Council's Visitor Management Plan, as a means of encouraging landowners and local communities to set up a 'Highland Airigh' (Sheiling) Motorhome Stopover Site to counter the financial impact of the Covid pandemic, Highland Council have produced a Landowners Guide. The rules differ depending on the number of motorhomes anticipated each night. The Guide also provides details of practical aspects to consider and useful links for further information.

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Quality silage for sheep

Concentrate feeding

The aim of pregnancy feeding strategies is to fill the winter feed deficit and be as low cost as possible whilst optimising ewe performance. QMS* found the average 2019 Scottish upland producer fed 36kg of concentrate feed per ewe to a cost of £10.22/ewe. This is a substantial cost but also an opportunity.

Silage quality

Compared to conventional silage/hay and concentrate feed systems, the production of high-quality silage from leafy, high digestibility grass (Table 1) provides the opportunity to meet more of the pregnant ewe's nutritional demands from forage meaning less concentrate is required. This is the opportunity and is the focus of the latest FAS Technical Note (TN).

Table 1. Impact of growth stage at cutting on silage quality and yield

Silage quality	Very high	High	Moderate	Low
Growth stage	Leafy	Lengthening of stem	Flower heads emerging	Most of crop headed
Yield (tDM/ha)*	4.6	5.5	6.2	7.4
Ear emergence (%)	0-10	10-25	25-50	100
D-value (%)	69+	69-66	66-63	<63
Energy ME (MJ/kg DM	11+	11-10.7	10.7-10	<10
Crude protein 'CP' (%)	11-16	11-16	10-14	<11

Value of high-quality silage

Rationing in the TN outlines that feeding high quality silage (11.5 ME) can significantly delay the feeding of concentrates and the rate fed. Taking twin bearing ewes as an example, supplementation need only start 4 weeks pre-lambing compared to 6 weeks on moderate quality silage (10.5 ME). This realised a 50% reduction in concentrates from 25.4kg to 12.4kg per twin bearing ewe worth £3.25/ ewe (Table 2).

Table 2. Total pre-lambing concentrate feed requirements and cost per ewe on differing silage qualities

	Concentrate per ewe (kg)			Cost per ewe (£)*		
Silage ME	9.5	10.5	11.5	9.5	10.5	11.5
Singles	28.4	15	2.4	7.1	3.75	0.6
Twins	41.2	25.4	12.4	10.3	6.35	3.1
Triplets	46.4	33.2	20.7	11.6	8.3	5.18

*Concentrates at £250/t.

When modelled for a 1000 head ewe flock scanning 200% (Table 3), it was calculated that to produce low quality silage (9.5 ME) or hay would mean 39.2t of concentrate feeding is required for late pregnancy feeding at a cost of £9,803. Feeding moderate quality (10.5 ME) silage, total concentrate requirements are reduced to 24.7t costing £6,186. Whilst producing very high-quality silage (11.5 ME) for late pregnancy feeding can halve concentrate requirements compared to that of moderate quality silage with just 12t required at a cost of £3,072 or £3.07 per ewe.

Table 3. Total pre-lambing concentrate feed requirements and cost per ewe on differing silage qualities

	Ewe numbers (hd)	Total (t)			Total cost (£)		
Silage ME		9.5	10.5	11.5	9.5	10.5	11.5
Singles	140	4.0	2.1	0.3	994	525	84
Twins	630	26.0	16.0	7.8	6,489	4,001	1,953
Triplets	200	9.3	6.6	4.1	2,320	1,660	1,035
Total	970*	39.2	24.7	12.0	9,803	6,186	3,072

*3% barren rate. Concentrates at £250/t.

Feed budgeting

It should be considered that feeding high quality (11.5ME) silage prior to 4-8 week pre-lambing depending on litter size will exceed requirements and could lead to ewes gaining condition (potential benefit/risk of metabolic problems, large lambs). Whilst producing high quality silage comes with increased production cost with lower yields at cutting. Table 4 shows target stages to feed high quality silage over moderate quality.

Table 4. Optimal silage – moderate 10.5 ME (orange) or high quality 11.5 ME (green) to reduce concentrates whilst balancing practical silage production.

	Winter feeding	Weeks' pre-lambing			
	Up to 8 weeks pre-lambing	8	6	4	2
Singles					
Twins					
Triplets					

When modelled for the 1000 head ewe flock it was found that producing 55% of total silage as high quality (11.5 ME) was optimal for a farm feeding silage from 1st January to turn at lambing in April. This requires 22.2ha cut as high quality silage based on 4.6tDM/ha and 13.7ha cut for moderate quality with a higher yield of 6.2tDM/ha.

For more information: FAS TN748 Strategic silage production for sheep systems.

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*Quality Meat Scotland Cattle & Sheep Enterprise Profitability in Scotland 2020 Edition

Controlled Environment Agriculture

What is CEA?

There are a range of definitions for Controlled Environment Agriculture (CEA) but it is essentially a method of growing crops in conditions where some or all aspects of the growing environment (e.g. light, growing medium, temperature, humidity etc,) are controlled, with the aim of increasing efficiency and yields along with reducing costs. This is not a new technology – it is known that hydroponic techniques were used in the Hanging Gardens of Babylon and by the ancient Egyptians – but recent advances in digital technologies along with the pressures of climate change and global population growth, have brought a renewed interest to this sector.

There are four main types of modern CEA systems:

- **Indoor Farming:** Natural lighting is replaced by LED lighting to provide 24 hour plant growth, along with controlling other aspects of the crop production environment. This system is often seen using disused factories, shops, offices and other buildings in urban and inner-city areas, close to their customer base.
- **Vertical Farms:** Crop production takes place in large trays that are stacked horizontally meaning that high yields can be produced from a small land area. This can be in shipping containers to purpose-built towers and are increasingly highly automated, using robotics, sensors and AI.
- **Greenhouses:** A traditional way of controlling some aspects of the environment for certain crops but still generally relies on sunlight and can require a lot of land to be financially sustainable. However, new materials and digital automation mean that they can be used to create a hybrid system combining traditional & new technologies.
- **Protected Crops:** Outdoor crops with some form of protection such as polytunnels or canopies, as seen in the soft fruit sector. These offer some protection from weather and help encourage early ripening but provide limited control over other aspects of the growing environment.

Growing methods

There are several growing approaches using a range of growing mediums and feeding methods, including:

- **Hydroponics:** the most popular method where the roots of the plants are provided with a constant supply of water contain the prescribed nutrition for the crop. This method is suitable for leafy greens, herbs, tomatoes and strawberries etc. with an estimated water saving of between 70-90%.
- **Aeroponics**: the plants are grown without soil, with the roots suspended in the air and periodically sprayed with a water/nutrient solution. Not suitable for all crops but has the potential to save even more water than Hydroponic systems.
- **Aquaponics:** This combines aquaculture and hydroponics, with 'waste' water from the fish rearing system used to provide nutrients to the growing crop before being recycled back to the fish. This has the potential to provide two crops, fish and plants, but requires a higher degree of management and control.
- **Fogponics or Mistponics:** A growing method similar to Aeroponics where the plants are suspended in an enclosed structure into which a fine mist of water and nutrient droplets are sprayed onto the roots and the rest of the plant allowing better distribution and faster absorption.

Is this the future of farming?

These CEA systems are expensive to build at scale and they are currently only suitable for growing certain crops, so in countries where these crops can be grown efficiently at a field scale CEA is probably limited to very high value and niche crops. However, in regions where crop production is more challenging, then there is a strong argument to utilise these growing systems. But as new growing techniques and technologies are developed by an increasing amount of researchers and start-up businesses, it is quite possible that in the future some farms in Scotland will be using a CEA system in their business or employing hybrid techniques combining CEA and traditional crop production methods.

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Key Economic Data

General Indicators	
Base interest rate	0.1% (0.75% Mar '20)
ECB interest rate	0.00% (0.00% Sep '18)
UK (CPI) inflation rate	2.5% (target 2%)
UK GDP growth rate	-1.6% (Q1 '21)
FTSE 100	7,011 (28 Jul '21)

Price indices for May 2021 (Defra 2015 = 100)			
Output Prices		Input Prices	
Wheat	169.5	Seeds (all)	114.8
Barley	148.8	Energy	123.9
Oats	126.3	Fertiliser	114.0
Potatoes	130.7	Agro-chemicals (all)	143.5
Cattle and Calves	119.0	Feedstuffs	129.4
Pigs	114.8	Machinery R&M	116.7
Sheep and Lambs	172.3	Building R&M	125.5
Milk	122.9	Veterinary services	114.9

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