Farm Advisory Service

National Advice Hub
T: 0300 323 0161
E: advice@fas.scot
W: www.fas.scot

May 2023

News in brief

Let them eat Quiche!

With the coronation of King Charles III on the 6th of May heralding the dawn of a new Carolean era, the nation is being encouraged to support the egg industry by having a Coronation quiche as part of their celebratory lunch. Featuring a subtle combination of Cheddar cheese, tarragon, spinach and broad beans also known as fava beans; the proof will be in the eating as to whether it will rival Queen Elizabeth's choice of spicy Coronation chicken. For film aficionados, the fava bean link might prompt some to enjoy the quiche with a nice Chianti.

With the ongoing conflict in Ukraine and the resultant disruption to cereal markets, cereal traders are intensely monitoring growing crops around the world with fingers crossed that their predictions of supply exceeding demand will win out thereby reducing pressure on crop availability for next winter. However, beef and sheep nutritionist Karen Stewart's article says lessons can be learned from the dairy sector with regards making better quality silage as a means of reducing the need for bought in concentrates and boosting net margins.

In the beef sector, while cattle prices continue to go from strength to strength, as producers still need to be vigilant with regards livestock health, the new Bovine Tuberculosis controls will help to protect Scotland's status of being officially Bovine TB free since September 2009. However, with the national breeding cow numbers continuing to fall, Lesley Wylie looks at how a resultant fall in prime cattle could be mitigated.

As the pig, poultry and dairy sectors continue to struggle with high energy prices, Iain Boyd's article this month on energy self-sufficiency options discusses ways in which businesses can seek to future proof their energy needs and control their costs of production and Mark Bowsher-Gibbs looks at what is trending on the global stage in 2023.

Next month:

- Carbon update
- Diversification

Contents

This month's editor:
Christine Beaton

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2023 Single Application Form

The submission period for 2023 Single Application Forms (SAF) opened on the 15th of March 2023 and will close at midnight on Monday 15th May 2023.

Tuberculosis controls tightening

While Scotland was recognised as being officially Bovine Tuberculosis (TB) free (OTF) by the European Commission in September 2009; maintaining OTF status is crucial to the continuing success of the Scottish cattle industry.

From the 18th of May, farmers bringing cattle into Scotland will be subject to tighter controls in order to reduce the risk of spreading Bovine Tuberculosis.

The new pre-movement testing requirements apply to cattle coming to Scotland from a TB high incidence area, including those coming from a low incidence TB area that have been in a high incidence TB high incidence area in any time of their life.

Eligible cattle, as above, will require a clear pre-movement test within 30 days prior to the movement to Scotland if tested after 18 May. This requirement was previously 60 days. Additional changes also mean that a negative TB test in a herd under movement restrictions will no longer be accepted as a qualifying pre-movement test, even if the test allows these restrictions to be lifted.

A new definition for isolation will also be introduced, and compensation will be reduced for cattle which are not properly isolated. This will strengthen the protection of the main herd against onward spread of infection from any reactors or suspect reactors.

Further information and guidance on Bovine TB is available on the Scottish Government website.

New Scottish Agricultural Minimum Wage Rates

- From the 1st of April 23, the minimum hourly rate has been increased by 92p per hour to equal the UK Government's National Living Wage of £10.42.
- For workers who undertake an SCQF Level 4 or 5 or equivalent in Agriculture / Horticulture, the minimum hourly rate will increase by 58 pence per hour to £6.53.
- Workers who hold a Scottish or National Vocational Qualification in an agricultural/horticultural subject at SCQF 6 or above; an apprenticeship certificate approved by Lantra Awards (formerly ATB Landbase); or a certificate of acquired experience issued by ATB Landbase, NTO are entitled to an additional sum of £1.55 per hour.
- The overtime rate for all workers remains at 1.5 times the agreed hourly rate, with a minimum payment of £15.63 per hour
- Where it is necessary for a worker to keep and feed a dog (or dogs) to enable them to do their job then they must be paid an allowance of £8.00 per working dog up to a maximum of four dogs
- The daily rate for accommodation off-set for accommodation provided by an employer other than a house is to increase to £9.10
- Provisions regarding Stable Income Arrangement, Benefit and Bereavement Leave remain unchanged.

Further information on the Scottish Agricultural Wages Order No 70 can be found here.

PSF – Carbon Audits and Soil Testing

Under the Preparing for Sustainable Farming scheme, tutorial videos are now available to help business to apply for carbon audits or soil analysis. The step-by-step guides are available on the Scot Gov Preparing for Sustainable Farming support page.

UK Asia Trade Deal

The UK has signed a deal to join a trade pact with 11 Asia and Pacific nations. Joining the group will boost UK exports by cutting tariffs on goods such as cheese, cars, chocolate, machinery, gin, and whisky. However, the government's own estimates show being in the bloc will only add 0.08% to the size of the UK's economy.

Key dates

Date	Action
15 May 23 Midnight	Deadline for IACS Single Application Form (SAF) & BPS supporting documents. This includes Greening, Young Farmers Payments and applications to the National Reserve. BPS 2023 entitlement transfer window opens.
31 May 23	Deadline for making certain changes without penalty to a BPS application already submitted before midnight on 15 May.

christine.beaton@sac.co.uk

World market outlook

UK nearby wheat prices have dropped £12/t in the last month and £25/t in the last 3 months. This reflects bearish global factors and the slow pace of UK cereal exports and rising domestic grain stocks.

The Black Sea remains an important determinant of global wheat prices. Russia's threat to block the grain export deal with Ukraine has combined with local import bans from Ukraine's neighbouring EU states to put Ukraine grain exports at risk. Potentially reducing grain supply on the world market and supporting prices. Whether these issues are short lived or not remains to be seen. That aside, large cereal crops in Australia and Brazil have boosted nearby supply coupled to high stocks in other exporters have kept export competition strong and undermined prices. Market attention is increasingly turning to new crop potential for direction.

World harvest estimates for 2023

In their latest estimates, the International Grains Council (IGC) see a large increase in cereal production in 2023 (+55mt), a smaller increase in usage (+28mt) with stocks still set to decline marginally (-3mt). The big changes include a large increase in maize and coarse grain production and a fall in wheat output. A huge increase in soyabean output and rising soyabean stocks are expected to see a strong rise in oilseeds stocks.

World cereal supply and demand estimates

(m t)	Wheat	Coarse grains	Total grain	Soya-beans
Production				
2022	803	1,449	2,252	370
2023	787	1,504	2,291	401
Change	*-16*	*55*	*39*	*31*
Usage				
2022	793	1,471	2,264	366
2023	794	1,499	2,293	389
Change	*1*	*28*	*29*	*23*
Stocks				
2022	284	300	584	49
2023	277	304	581	60
Change	*-7*	*4*	*-3*	*11*

Source: IGC

Looking at global crop conditions, currently there are no major problems and spring sowings are going well, but three to four months of key growing conditions remain in the Northern Hemisphere.

US - drought in the southern US Plains – but wheat area up 9% and conditions good in main regions further north with maize sowings going well.

Europe - dry winter and spring – but crop conditions ok so far, time remains for rain

UK - crops in good conditions, dry winter but wet March means soil moisture levels good.

UK export focus in 2023

In their March UK cereal S&D estimate, AHDB increased UK cereal opening stocks for the new season 2023/24 by between 45% (barley) and 189% (wheat). Irrespective of UK cereal crop yields in 2023, the market will start the season well supplied and with the highest opening stocks since 2016.

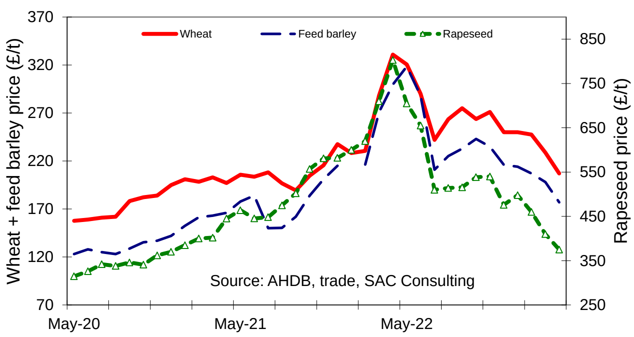
UK cereal opening stocks (source AHDB)

(m t)	'2022-23	'2023-24	*Diff. (mt)*	*Diff. (%)*
Wheat	857	2,475	*+1,618*	*+189%*
Barley	928	1,346	*+418*	*+45%*

While local factors could be over-ridden at any time by wider global weather and political events, it looks likely that the UK will have to achieve a strong level of exports next season for both wheat and barley.

- High stocks mean the UK will have to remain export competitive most of the time next season for both wheat and barley.
- Increased harvest price pressure expected - sell ahead grain you can't store past harvest.

Scottish cereal prices



julian.bell@agrecalc.co.uk

Indicative grain prices week ending 21st April 2023 (Source: SAC/AHDB/Trade)

£ per tonne	Basis	May '23	June '23	Harvest '23	Nov '23	Nov '24
Wheat	Ex farm Scotland	207	209	200	204	200
Feed Barley	Ex farm Scotland	177	179	170	174	
Malt. dist. Barley	Ex farm Scotland			225		
Oilseed Rape	Delivered Berwick	382		390	398	

Beef

Prime Cattle Price Continue Upwards

April saw a continued rise in the beef price, with demand continuing to outstrip supply. For week ending April 15 prices quoted for an R4L animal were 504p/kg deadweight.

Supplies continue to tighten

Cattle numbers continue to be tight and are set to tighten further in the coming weeks, as many sheds are now emptied.

As we have alluded to previously, Scottish slaughter data shows a downwards trend, with QMS reporting for week ending April 15 an 18% reduction (compared with the same week last year) in kill numbers in Scottish abattoirs. This is no doubt bolstering finished price.

Recording Breaking prices

Record-breaking prices with store cattle surging past £3/kg and a £5/kg base price from processors has led to some positivity among beef farmers. However, finishers have had to pay more for forward cattle compared with last year, meaning more money, is tied up in fewer cattle.

Many of the cattle bought recently for slaughter in May and June will need to gross over £2,000 per head to leave a reasonable margin, according to finishers.

A fall in cereal prices over recent weeks will have been welcomed as finishers restock after an expensive winter.

With tightening supplies, out of spec cattle are once again being rewarded, with a blind eye being turned to weight limits in order to maintain supply.

The outlook for beef remains positive for the coming months, as tight supplies and strong competition continue to support firm cattle prices.

Store Cattle

Wet, colder weather continues to slow down stock turnout to grass; with forage stocks diminishing, the shine has been taken off lighter cattle in the store ring. Despite this, markets are still reporting increases week on week.

Short-term stores remain a flying trade and very much in demand. With store cattle prices at record levels, many have been sold earlier than normal to take advantage of the prices. It is expected that the availability of heavier stores will reduce further in the coming weeks.

As we move into summer, the weather will be a crucial decider in demand levels and subsequent pricing.

Cull Cows

Cull cow trade continues to exceed all expectations, driven by UK demand for manufacturing beef as consumers look for cheaper beef options. Beef mince is affordable and versatile and is now rivalling chicken on value.

With a drop in milk prices, more dairy cows may come forward which will support consumer demand as we move into BBQ season and a number of bank holiday weekends.

With breeding cattle sales kicking off, it will be interesting to see where the demand for breeding heifers is after the last six months of increased cull cow sales.

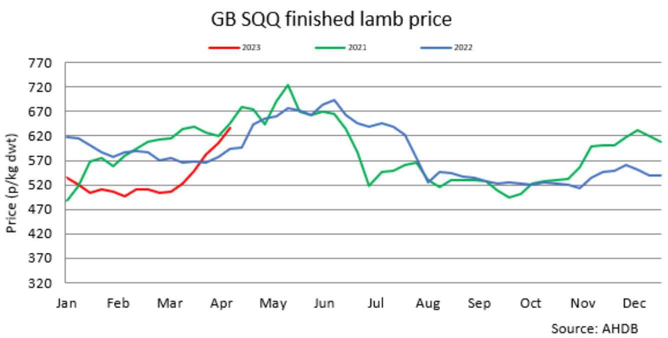
sarah.balfour@sac.co.uk

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

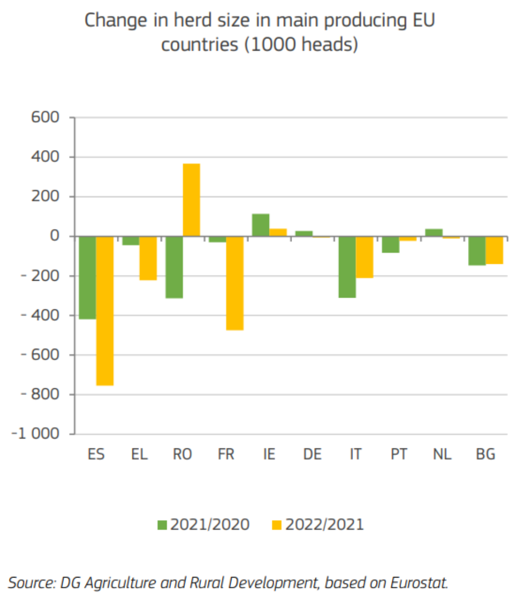
Week Ending	R4L Steers (p/kg dwt)			-U4L Steers			Young Bulls -U3L		Cull cows	
		Change on week	Diff over North Eng.		Change on week	Diff over North Eng.		Diff over North Eng.	R4L	-O3L
01-Apr-23	**503.0**	503.0	7.7	**505.3**	4.1	3.8	496.2	7.5	438.4	408.6
08-Apr-23	**504.4**	1.4	6.4	**506.3**	1.0	7.0	498.9	5.7	438.7	410.6
15-Apr-23	**504.1**	-0.3	6.7	**506.2**	-0.1	5.7	500.4	5.4	440.5	413.2

Lamb - The Golden Nugget For April

In April, we witnessed prime lamb rise ~£1.50/kg DW, with the heightened demand driven by Ramadan, Eid-al-Fitr and Easter.



Various industry forecasts, predict the UK lamb price to remain high due to the declining flock in Europe combined with the high European lamb price. It is estimated that the European sheep flock has decreased by 1.5 million head, with production reduced by 1.2%. The largest flock decreases are seen in Spain (ES) and France (FR) as demonstrated in the graph below. This shows the third consecutive year that the European flock has declined by over 1 million head of sheep. However, flock growth has been seen in Romania (RO) and Ireland (IE)



Lamb Value

The European value of lamb is high with France at €8.44/kg DW (15/04/23) and Spain at €7.25/kg DW (15/04/23). However, the Irish price is lower at €7.05/kg DW (15/04/23). With this competitive Irish price and a good supply of lamb, their exports have risen substantially so far this year, with 20% year on year rises of exports in February and March. As an equivalent, the GB lamb price for the same week showed as €6.88/kg DW, while the NZ lamb was €4.24/kg DW.

Beef and Lamb NZ have updated their 2022-2023 outlook recently. NZ has had a poor trading season so far, with low slaughter prices due to high inflation impacting the demand of sheep meat. The main market for the NZ product is China, where 85% of their mutton is exported to, but due to Covid reinfections, the demand is currently low. NZ farmers have also had to deal with extreme weather events such as drought and cyclone Gabrielle plus inflated costs, poor returns, and a growing environmental agenda. With a decreasing national flock, the end price for sheep meat is expected to improve. In NZ, it is estimated 175,000 hectares of farmland has been sold for forestry in the last 5 years.

With tight global supplies of sheep meat, a favourable currency and a growing export market following the disruption of Brexit and Covid, the short term future looks bright for the UK sheep industry. The price difference between the European and UK lamb is what makes or breaks the export trade, with recent weeks seeing very little exported. With religious festivals now past, the price will drop slightly, making our product more attractive to the European buyer.

The currency to keep an eye on is the Euro:US dollar, with the US dollar currently very strong. The dollar drives the export market; a devaluation of the euro against the US dollar could mean an increase in purchasing agricultural inputs and in turn deepen inflation.

Kirsten Williams; 07798617293

Week ending	GB deadweight (p/kg) 16.5 – 21.5kg			Scottish auction (p/kg)			Scottish Ewes (£/hd)	E&W Ewes (£/hd)
	R2	R3L	R3H	Stan.	Med.	Heavy	All	All
01-Apr-23	**587.6**	36.4	-4.3	-1.3	**278.10**	7.8	18.4	9.5
08-Apr-23	**609.2**	21.6	-4.2	0.6	**287.10**	9.0	20.1	9.8
15-Apr-23	**640.7**	31.5	-3.3	-1.2	**308.80**	21.7	22.3	11.1

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

Agricultural and Sustainability Trends in 2023

Aside from the tumultuous trading conditions agriculture has faced through 2022 farming remains committed to the agenda to reduce greenhouse gas emissions and attain the goals set for 2030 and beyond. And while we focus on those goals here, mitigation efforts continue in the global arena too.

Consider first, the demands of a growing world population reaching 10 billion by 2050 with a per capita food consumption growth of between 8-12% over the same period.

Assuming current levels of production efficiency and the continuation of current deforestation rates, the 'business-as-usual' outlook in meeting this demand makes for hard reading and would see emissions increase by 15 to 20% over the next 30 years. Additional agriculture is already heavily skewed toward methane and nitrous oxide elements, producing 45% and 80% of global emissions respectively.

All of this is hard to address given the socio-economic landscape. Globally one in four people are farmers, that's more than 2 billion people employed in agriculture needing to engage in reform and 75% of those are on farms of 2 hectares or less, which nonetheless, produce 30-34% of the total food supply.

Against this backdrop, what are the evolving trends to watch out for in 2023?

- *Feeding a growing global need*

By 2050 the FAO estimates we will need to produce 60% more food to feed this population of 10 billion. Even attaining that, some 300 million will still be exposed to food scarcity. Developing countries will have an increasing role to play in the global economy and food demand. As an example, countries like the Philippines and Columbia are currently setting records for U.S exports and developing countries will continue to account for most of the growth in U.S agricultural exports.

- *Artificial intelligence*

According to business intelligence research, global spending on smart technology and connected systems in the ag space is projected to triple in revenue by 2050. That includes Artificial intelligence (AI) and machine learning. AI spending alone is predicted to grow at a compound annual growth rate of 25.5% between 2020 and 2026, eventually reaching £3.2billion. Synthetic data is often used to validate AI models. Synthetic data is based on real-world data and created by a model that uses the parameters of real-world datasets.

A 'digital-twin' in a system that emulates real life can be particularly helpful in agriculture, where variables like soil types and weather conditions must be understood for real-world applications. Synthetic data is a powerful tool and current predictions are that by 2030 synthetic data will outpace real data in AI models.

- *Precision Agriculture*

2023 trends in digital agriculture will include exciting updates in the precision ag space to support crop monitoring and targeted nutrition plans. Decision support systems will be increasingly data driven, optimising crop nutrition plans and utilising key performance sustainability indicator data sets in inform decisions around metrics such as carbon footprint, phased release fertilisers and climate change impacts on modelling.

- *Big Data*

The internet of things (IoT) is a key driving force in agricultural advancement. It's a general term for the billions of smart devices that contain small chips and sensors. The proliferation of these affordable, smart devices that are connected to the internet is transforming the efficiency of farming at field level.

One of the key benefits of IoT in agriculture is the ability to apply analytical tools to transform collected data into actionable insights to crop performance and climate patterns. Smart agriculture systems using IoT include remote sensors, robots, drones, and computer imaging. IoT and agriculture are evolving into a global smart agriculture market that is expected to be worth almost £12.8billion in 2025.

- *Sustainability*

Agri-food companies and consortiums will continue to grow their agenda to quantify their impact on sustainability. Scotland is leading in this field and heavily involved in researching and building ecosystem markets to meet net-zero targets and reverse biodiversity decline.

The outcomes and monetarised trades will create new and closer natural capital partnerships between farmers supply on the one hand, and consumers demands on the other, and inevitably will integrate functionality with the developing carbon market values.

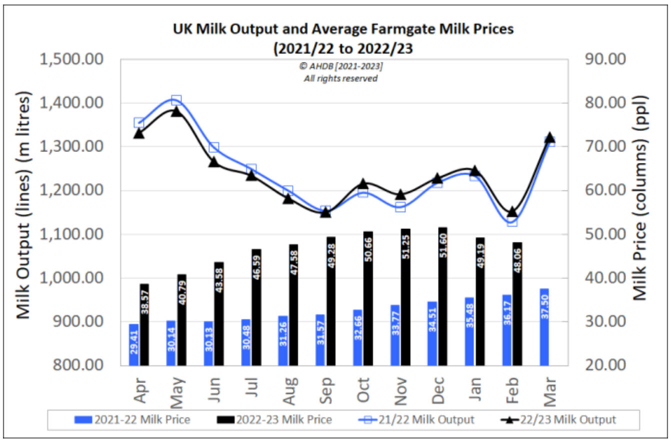
mark.bowsher-gibbs@sac.co.uk

Milk prices reduce further during May

- *A high proportion of UK milk buyers reduced farmgate milk prices during April 2023. Further price reductions have been announced for May 2023 – see below.*
- *Most UK farmgate milk prices for May 2023 are now within the range 38.00ppl – 42.00ppl, depending on the type of supply contract.*

AHDB milk production data shows that UK milk output for March 2023 is estimated at 1,321.81m litres (before butterfat adjustment) – an increase of 11.20m litres on a year-on-year basis. This means that cumulative UK production for the 2022/23 milk year stands at 14,904.65m litres (before butterfat adjustment). This suggests that UK output for the 2022/23 milk year will be a mere 7.86m litres lower than that of the 2021/22 production year. After such a slow start to production in the first half of the milk year, it has been quite a recovery during the last six months.

The UK average milk price for February 2023 is estimated at 48.06ppl – down 1.13ppl from the January 2023 average price (49.19ppl).



Farmgate prices: May 2023

Farmgate milk prices continue to reduce quite significantly as the country moves towards the period of peak milk production during May. With the value for AMPE reducing to 31.81ppl during April (see table, right) and prices reducing across the board for dairy commodities, further reductions to farmgate prices may well follow after the month of May. AHDB data shows that the value of cream income to a liquid processor has reduced from 16.53ppl to 8.83ppl between September 2022 and April 2023, reinforcing the downward price trends. For many dairy farmers, the farmgate milk price for May 2023 will now be approaching or below the cost of production.

Announcements for April & May 2023 are as follows:

- Arla Foods amba – The Arla milk price reduced by 6.00-euro cents from 1st April 2023. The manufacturing standard litre price reduced by 5.31ppl to 39.64ppl. The liquid standard litre price reduced by 5.10ppl to 38.08ppl.
- Arla Direct milk price – 5.31ppl price cut from 1st May 2023. The manufacturing standard litre price reduces to 37.09ppl. The liquid standard litre reduces by 5.10ppl to 35.60ppl.
- Tesco – The Tesco Sustainable Dairy Group (TSDG) milk price is to increase by 1.01ppl from 1st May 2023. The price increase results from a decision by the retailer to revert back onto the Tesco cost of production tracker for milk pricing. The increase takes the liquid standard litre price up to 43.51ppl. The milk price will increase to 43.26ppl for Arla TSDG members.
- Sainsburys (SDDG) – The SDDG will reduce by 0.99ppl from 1st May 2023. This takes the liquid standard litre price down to 42.91ppl for Müller suppliers. The farmgate milk price for Arla members of SDDG will reduce to 42.79ppl.
- Co-op – Farmgate prices are reducing by 0.82ppl from 1st May 2023. This takes the liquid standard litre price down to 42.15ppl for May 2023.
- Müller Direct – Prices are set to reduce by 2.50ppl from 1st May 2023. This takes the liquid standard litre price for Scottish suppliers down to 39.75ppl.
- Müller Lidl – reduction of 2.50ppl to the Müller-Lidl fixed price contract from 1st May 2023. This reduction is in line with the reduction to the Müller Direct milk price and takes the liquid standard litre price down to 40.00ppl.
- First Milk – reduction of 3.40ppl from 1st May 2023. See Milk Price table, below.
- Fresh Milk Company – reduction of 2.20ppl from 1st May 2023. This takes the liquid standard litre price down to 37.30ppl. See table below.
- Yew Tree Dairy – reduction of 3.00ppl to A volume litres from 1st May 2023. This takes the liquid standard litre price down 39.00ppl.

Annual average milk price estimates for May 2023 (ppl)	
Milk Prices – Scotland	**Standard Ltr***
Lactalis / Fresh Milk Co. (No profile or seasonality) [1]	37.30
First Milk Liquid [1, 2]	38.00
First Milk Manufacturing *(4.2% Butterfat & 3.4% Protein)* [2]	39.29
Müller - Müller Direct - Scotland [1, 3]	39.75

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 2023.

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.

UK dairy commodity prices (£/ tonne)	Apr 2023	Mar 2023	Oct 2022
Butter	3,920	4,060	5,860
SMP	2,020	2,230	2,980
Bulk Cream	1,518	1,610	2,807
Mild Cheddar	3,550	3,670	4,860
UK milk price equivalents (ppl)	**Apr 2023**	**Mar 2023**	**Oct 2022**
AMPE (2021)	31.81	34.55	51.27
MCVE (2021)	37.56	39.27	53.95

alastair.beattie@sac.co.uk, 07771 797 491

Becoming Energy Self-Sufficient

The energy crisis

Energy price hikes, insecurity in global energy markets and a desire to be sustainable have resulted in many farmers looking at options to be more energy self-sufficient. Wholesale energy prices have fallen from their peak in 2022 but farm bills remain stubbornly high. Matching renewables to meet onsite demand can offset these costs and potentially generate additional income streams. These inflated energy prices can also help significantly lower the payback periods.

Renewables after incentives

Ideal renewable sites should be high yielding with low construction and connection costs. Viable farm scale projects will meet as much onsite demand as possible to help offsets expensive energy bills.

Depending on the development, additional income options might include leasing land for large-scale wind and solar, power purchase agreements (PPA) or selling surplus electricity to the grid. Smart export guarantee (SEG) payments are often lower than the purchased price of electricity, so using the generated power to first offset bills is usually the best option.

There are some funding and support options available. Business Energy Scotland offer a SME Loan of up to £100,000 interest free, plus cashback grants for various renewable heat and energy efficiency measures. Home Energy Scotland can provide support for domestic properties and banks and financial institutions often offer favourable rates for green projects.

Farm scale options

It is important to assess your farm energy demand and discover what technology options would best suit your business. Firstly, improving energy efficiency and making best use of your existing systems and grid connection saves money and ensures you are investing in the right type and scale of technology.

Renewable costs are site specific and vary significantly depending on the type and scale of technology. Grid connection may be a limiting factor due to constraints across large parts of the network. Therefore, if you are exporting to the grid, it is imperative to speak to the network operator at an early stage to understand connection options and costs. Connections below 50kW (on a three phase site) are generally more straightforward and lower cost.

Depending on your site specifics, various forms of technology may be suitable. For example:

- Solar PV

  Often the most straightforward option. Small to medium scale roof mounted schemes usually classify as a permitted development and make good use of existing vacant roof space. Shed roofs should be structurally sound, south facing, and unobstructed.

- Wind

  One of the most common and well established renewables but getting planning consent may be contentious. The land around turbines can still be used for agricultural purposes.

- Hydro

  Small scale, run of river schemes work well, but need a high head, plenty rainfall, and a suitable catchment area to provide a good yield. Gaining consent can be difficult and environmental impacts need careful consideration.

- Biomass

  Biomass can help to meet your heat demands and offset fossil fuel use. However, fuel costs need taken into consideration and current high prices, especially for processed fuel such as pellets, mean that it needs careful consideration to balance any savings with high capital costs.

- Heat pumps

  Heat pumps still require electricity to operate, but less than would be required for direct electric heating. Ground or water source are more efficient than air source. They can be retrofitted to existing buildings and can also contribute to cooling requirements if you have cold stores.

- Energy Storage

  Storage options have become more viable at the farm scale due to high electricity prices. Storing your own renewables if you have a poor export contract or additional income from emerging grid balancing services may provide opportunities. Potential storage options can include lead-acid, lithium, or flow batteries, which all have different costs, lifespans, and applications. Green hydrogen created from renewable electricity is another potential way of storing large amounts of energy for multiple uses.

Exploring your options can provide energy security, generate economic benefits, and offer green marketing opportunities for farming.

iain.boyd@sac.co.uk, 0131 603 7527

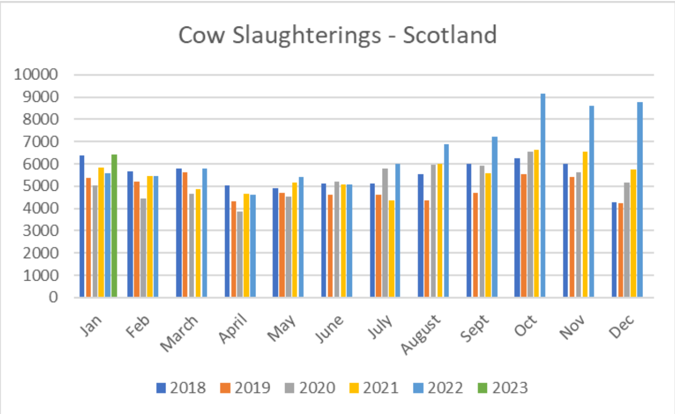
Sector Focus: National Beef Herd

Falling Beef Cow Numbers – Should we be worried?

As discussed previously in the monthly beef outlooks, the higher number of cows being culled has implications going forward for the critical mass of beef in Scotland.

The graph below illustrates the seasonality of cull cows in Scotland and the movement in numbers culled each month over the last five years.

With the input cost increases and high cull cow prices, it is of little surprise that we ended 2022 having culled 23% more cows than the previous four year average (80,539hd vs. 65,369hd). However, this does not take into account cows that were slaughtered out with Scotland, so the total cull rate is likely to be even higher



Source: AHDB

Muddy waters where replacements are concerned

The January 2023 figures from QMS and BCMS show beef-sired females over 30 months on Scottish farms to be 3.3% less than in January 2022. This is to be expected with the higher cull cow price and producers clearing out some of their older cows.

What this does not tell us is are there a larger number of 24-30 month beef sired females on farm than a year ago being kept to replace these older ones that have been culled?

The change in beef-sired females 24-30 months year on year table from Iain MacDonald at QMS clearly shows that the drop in 24-30 months beef-sired females in October 2022 has been a significant contributor to the drop in beef sired females over 30 months in January 2023.

If the trend follows for the next quarter, we expect April 2023 over 30 months females to be down again on the year, with 9.5% less 24-30 month females on farm in January 2023.

y/y change in beef-sired females aged 24-30 months in Scotland		
2021	Jan	-5.2%
	Apr	-1.6%
	Jul	+2.0%
	Oct	+3.3%
2022	Jan	+0.3%
	Apr	+8.6%
	Jul	-1.3%
	Oct	-8.4%
2023	Jan	-9.5%
Source: BCMS; QMS calculations		

Less breeding stock means less cattle – or not?

Prime cattle numbers are already tighter in supply, with QMS and BCMS quoting cattle 12-30 months down 3.3% on the year and attributing a large proportion of that to the volume of cattle that continue to go south of the border from the store sales.

If the contraction of the breeding herd that we are currently experiencing continues, the longer-term availability of prime cattle looks to remain tight.

However, with national average calving percentages of 86% and rearing rates of 80%, there is potential to increase calves produced without increasing cow numbers.

By increasing the rearing rate to 90% or above, the reduction in prime cattle availability in the coming years could be stopped.

While this would require improvements to herd fertility through appropriate nutrition & health planning, and selection of maternal traits in breeding females; the financial benefits to the suckler enterprise could be significant.

Lesley Wylie, Beef Specialist, SAC Consulting
lesley.wylie@sac.co.uk

Targeting Forage Quality this Summer

With the cutting of silage over the next couple of months, planning for winter forage starts now.

Dairies are well accustomed to making well-preserved, high-powered silage to target for their milking cows and these principles can be applied in beef and sheep systems too.

Plan what forage is likely to be required, if you normally feed a lot of concentrate, is there an opportunity to make better quality silage to reduce the reliance of so much bought in feed?

View making good quality silage is an investment

Table 1: savings that can be made from making better quality silage for 400kg steer gaining 1kg/day

Silage Quality	Poor	Average	Good
Dry Matter ME MJ/kg	9	10.2	11
Silage (£40/t) kg	20	23	27
Concentrates (£300/t) kg	4.8	3.5	2
£/kg gain	**2.24**	**1.97**	**1.68**

ME = metabolisable energy measured in Megajoules per kilogram of dry matter (MJ/kgDM ME)

Over 150 days for 100 cattle, the diet cost difference between the rations above for poor and average silage is a staggering £4,050.

Wrongly assuming that your silage is 'average' when it is actually 'poor', would result in cattle only gaining 0.8kg/day, meaning that they would not only stay on farm an extra 38 days, but it would wipe £3,338 off their gross margin.

Managing Silage

Taking a note of the yield from each field and analysing each batch separately will help assess how grass is performing and where areas for improvement can be made for the following year.

Mark up bales stacks or on the side of the pit wall where different batches start and stop to make analysing and feeding out decisions easier.

When siting bales make access to different stacks easy so that they can be fed to the right stock based on their quality rather than where they are on the farm.

Short of silage – Who gets priority?

With increasingly unpredictable seasons and weather patterns, managing silage stocks can be challenging. If you have a range of silage qualities and/or your forage budget shows that you are going to be running low, targeting forage quality to stock on your farm can help to maintain productivity levels.

The table below shows what stock categories take priority over others:

	Silage quality
Pregnant Ewes	
Lactating cows	
Growing stock	
Finishing stock	
Dry stock	

Regardless of whether you make good silage or poor silage, the worst thing is not knowing what you have. Without that knowledge, feeding and managing animals correctly is difficult and will be far more costly in the long run.

Having your silage analysed and getting your rations checked by a livestock nutritionist can save your business both time and money.

Karen.stewart@sac.co.uk

Key economic data

General Indicators	
Base interest rate	4.25% (3.5% Feb 22)
ECB interest rate	3.0% (2.5% Feb 22)
UK (CPI) inflation rate	10.1% (target 2%)
UK GDP growth rate	0.1% (Q4 '22)
FTSE 100	7,797.19 (28 April 23)

Price indices for February 2023 (Defra 2015 = 100)

Output Prices		Input Prices	
Wheat	204.1	Seeds (all)	123.0
Barley	202.3	Energy	200.6
Oats	193.2	Fertiliser	220.0
Potatoes	138.2	Agro chemicals (all)	176.2
Cattle and Calves	147.1	Feedstuffs	179.2
Pigs	158.9	Machinery R&M	130.5
Sheep and Lambs	132.4	Building R&M	156.6
Milk	196.2	Veterinary services	120.1

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