

Agribusiness NEWS



Farm
Advisory
Service

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

July 2022

News in brief

Prices rising, growth faltering

Prior to Brexit, the Coronavirus pandemic, and the Russian invasion of Ukraine, we lived in an ever developing global economy with little regard for food security as any 'hiccups' with national supply were usually readily smoothed over by importing from other nations. Food security was not a topic of conversation debated around the kitchen table.

With a headline Consumer Prices Index (CPI) of 9.1% in May, up from 9.0% in April, we are once again seeing the highest rate of inflation since the early 1980s. And while the latest quarterly Economic Commentary from the [Fraser of Allander Institute](#) at the University of Strathclyde has reported that with Producer Price Indices (PPI) inflation rate for business inputs running at 22% indicating that businesses are absorbing some of the costs rather than passing these on; the Institute has revised their growth estimates downward to 3.8% for 2022 and 0.5% for 2023; worryingly a survey by the Office for National Statistics (ONS) found that half of adults surveyed are buying less food due to rising prices.

With food security now a global concern and some supermarkets are refusing to stock certain products due to rising prices, technical efficiency will be key to maximising profitability going forward. With this in mind and following on from the launch of 'Preparing for Sustainable Farming, this month's edition highlights the importance soil sampling, the launch of the Beef Strategy 2030 which sets out key objectives for the beef sector to achieve a strong future for the industry, and how other countries are tackling seeking to achieve Net Zero by 2045.

While the enterprise and sector articles largely paint a positive picture with regards prices and demand, with harvest and autumn sales just around the corner, attention to deal now will boost profits later. Last but not least, in a changing world, hemp has some surprising new uses.

Next month:

- Northern Ireland Protocol Update
- Food Trends

Contents

Policy Briefs 2

- BPS Advance, Beef Strategy 2030, Food Security and Women in Agriculture

Cereals and Oilseeds 3

- Demand Destruction, Harvest Pressure

Beef 4

- Stores need to keep 'Mooving'

Sector Focus - Soils 5

- Testing, Testing, Testing

Sheep 6

- Downs and Ups

Milk 7

- Retailers rally on July milk price

Sector Focus 8

- Potatoes progressing

Management Matters 9

- Achieving Net Zero

New Beginnings 10

- Hemp reborn

This month's editor:

Christine Beaton



The European Agricultural Fund
for Rural Development
Europe investing in rural areas



Scottish Government
Riaghaltas na h-Alba
gov.scot

Policy Briefs

Advanced BPS & Greening Payments

Rural Affairs Secretary Mairi Gougeon has confirmed that, subject to the approval of the Scottish Parliament, in an effort to support Scotland's farmers with cash flow and the cost of living crisis, farmers and crofters will now receive their annual advance payment for the Basic Payment Scheme (BPS) and Greening in September,

Under the advance payment process, businesses will be paid a percentage of their calculated 2022 BPS and Greening payments; while still to be agreed, it is expected to be at least 95%.

It is anticipated that advanced payments could deliver around £262m (62% anticipated expenditure) to 13,500 (77%) of businesses between 19 September and 1 December 2022. With over 95% anticipated expenditure to have been delivered by end February 2023.

Women in Agriculture

The Scottish Government has announced a £100,000 a year funding package for three years for the [Women in Agriculture Training Fund](#) to support the personal development of women, providing them with additional skills to progress their careers and employment opportunities in Scottish agriculture beyond their current role.

Courses eligible for funding can include business skills; environmental and sustainability; health and safety; plants and animals; vehicles, machinery, and equipment. 100% funding is available for training up to the value of £500 per course. Courses with higher training fees will be considered on a case per case basis.

Women and girls resident and working in Scottish agriculture; are keen to join the industry and/or are on a full-time or part-time agriculture course are eligible to apply for grant funding.

Agriculture Strategic Research Programme (SRP)

The Scottish Government have announced a £200 million funding package to be delivered over a five year period. The Environment, Natural Resources and Agriculture Strategic Research [\(SRP\)](#) Programme will provide funding for projects which aim to boost food security in Scotland and address the biodiversity and climate crises will benefit from support funding e.g.

- Research into vertical farming systems.
- How to reduce climate change emissions from farming and livestock.
- Vaccine research into animal diseases.

Safeguarding Food Security

Amidst concerns around food security, new analysis of the red meat industry in Scotland highlights the Scottish livestock sector's important contribution to the UK's overall levels of self-sufficiency in red meat, and a rebound in the value of export sales in spite of the challenges caused by leaving the European Union's single market.

Despite the rise of alternative proteins, the [Red Meat Industry Profile report](#) highlights that that demand for beef, lamb and pork remains on an upward trajectory, and that with the Scottish Government firmly focused on achieving Net Zero by 2045, emissions per unit of output are likely to be reducing.

Also, the findings of the [Food Security and Supply Taskforce](#) which was set up in March to respond to any potential disruption to food security and supply, resulting from Russia's illegal invasion of Ukraine, have been published. Key findings and recommendations for the agricultural industry include:

- Finding: While there is greater strain on the food supply chain than has been seen for many years - immediate supplies of food and animal feed in Scotland are secure.
- Recommendation: Supporting improved cash flow for individual businesses and farmers.
- Recommendation: To encourage the UK Government to look at how the "fair dealing" powers in the Agriculture Act 2020 might be used more broadly to ensure fair treatment of agricultural producers.

Beef Strategy

The return of the Royal Highland Show last week gave Quality Meat Scotland ([QMS](#)) the opportunity to release their Beef Strategy 2030 which sets out key objectives for the beef sector to achieve a strong future for the industry.

With invaluable industry input and consultation, the strategy looks to build on current strengths and address some of the weaknesses and threats and to deliver the vision that by 2030, the Scottish beef supply chain will comprise profitable, sustainable, and resilient businesses built on a skilled workforce.

The Scottish beef industry will seek to continue to deliver high-value, quality beef and beef products to domestic and international customers, produced to world-leading animal health and welfare standards in a way that has reduced the sector's carbon emissions by 75% from 1990 levels.

christine.beaton@sac.co.uk

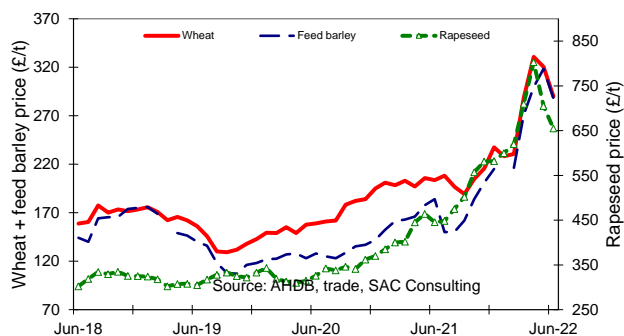
Cereals and Oilseeds

Demand destruction, harvest pressure

UK grain prices have dropped significantly in the last month with Nov '22 LIFFE wheat futures down 11% / £35.25/t to £282.50/t in the last month. On a global basis a number of factors have been at play:

- (i) Harvest pressure as the combines roll in large exporters – and no major new crop losses have been reported recently – though heat in the US is a current worry.
- (ii) The withdrawal of buyers at high prices – developing countries in particular may need the grain but they just can't afford the recent high prices. The upside is that as soon as prices dip, there is a spate of buying interest, putting a floor in the market.
- (iii) Demand destruction – loss of demand in livestock and industrial sectors as margins weaken. Livestock margins are suffering as people reduce meat purchased. Ethanol- the US uses over 136mt of maize for ethanol, but with mid-term elections coming Joe Biden won't cut ethanol mandates to keep votes in the Midwest.
- (iv) Some hope that ways will be found to export Ukraine cereals – whether through a lifting of the Black Sea blockade or better land routes, though this is unlikely to make much difference as crop areas are down already

Cereal and oilseed prices (Scotland)



Source: USDA, IGC

Good prospects for UK and Scottish harvest

Growing conditions have generally been pretty favourable across Scotland and the UK. It has been quite dry in many areas and there may be pockets where yields have been affected but most areas have continued to receive light, if erratic, rainfall.

In their latest estimate (May) Coceral place UK cereal production in 2022 is up 5% - 1.14mt higher at 23.84mt vs 22.70mt, with the gains mainly in wheat, with barley output down. If achieved, this will make little difference to the UK's net position as a moderate net cereal importer.

In Scotland, winter and spring cereal areas are expected to be little changed in 2022 meaning that the actual level of yield and quality achieved for both feed and malting markets will be an important driver of local prices.

Ukraine in numbers

Based on the latest estimates from USDA (June WASDE), the table below shows the disruption to both production and exports of grains from Ukraine relative to the world situation. This shows that the loss of both grain production and exports from Ukraine make up more than the expected fall in world production and trade. So yes, the war in Ukraine has a huge part to play in the current supply and demand situation. And the world has not been able to make good the losses in Ukraine from other regions.

Grain prodn., exports & stocks– Ukraine vs World

	mt	mt	Ch. %	Ch. Mt
Production				
World	2,281	2,254	-1%	-27
Ukraine	87	53	-38%	-33
	3.8%	2.4%		
Exports				
World	445	429	-4%	-16
Ukraine	48	21	-57%	-27
	10.8%	4.9%		
Closing stocks				
World	616	605	-2%	-11
Ukraine	13	19	43%	6
	2.2%	3.2%		

Source: USDA, wheat, and feed grains

Where next? – production of grains in Ukraine is already forecast 38% lower in 2022 so that's 33mt of grain that have gone from the world balance sheet. If export volumes can be increased from Ukraine, whether by sea, road, or rail then there is potential for a small increase in supply, but this will only make limited difference as stocks are just 6mt higher in 2022 vs 2021.

Cereal and oilseed prices – as at 29/6/22

£ per tonne	June '22	Hvst '22	Nov '22	Nov '23
Basis: Ex farm Scotland / Delivered OSR				
Wheat	290	275	280	250
Feed barley	280	250	255	225
Malt. dist. barley		280-290		
Oilseed rape*~	760	670	680	640

Source: SACC, AHDB, Graindex

julian.bell@sac.co.uk, 07795 302 264

Beef

A welcome lift in prices

The finished beef price has lifted in June to 453p/kg deadweight, a lift of around 8p from May. A tightening in numbers coming forward will have played a part in this. With most finishers concerned about margins with the high feed costs this lift in price will be welcome but may not be enough to fully compensate for the increased input costs. Breakeven prices for finishers are estimated to be in the region of 470-500p/kg. Whilst there is a reluctance in the trade for the price to lift much more, availability of cattle and consumer demand will ultimately decide where the price will settle.

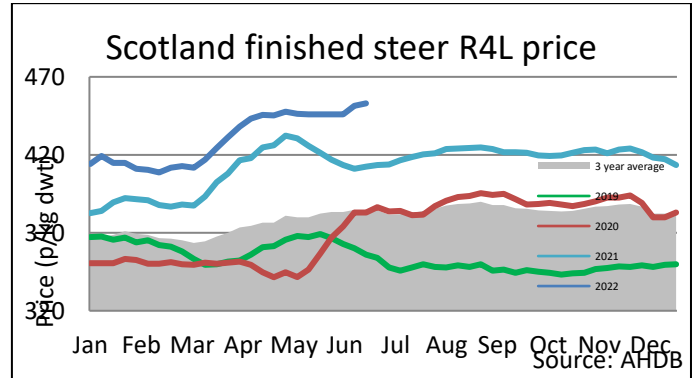
The cull cow trade lifted again in June to 405p with some quotes around 410p/kg deadweight. The continued demand for manufacturing beef and less cull cows currently available has created a good bit of competition. In most years, the cow availability starts to increase as we head into the autumn, with scanning and housing, with this increase in numbers the price tends to dip so if there are still cows out there ready to kill, get them away at this high trade.

Store Cattle – Keep them moving!

In line with the time of year, the numbers of stores being traded has dropped dramatically and those being sold have experienced a drop in value compared to this time last year of around 5%. If the beef price does not lift much more, it may be that finishers either will not restock at the same level and so demand may drop on these stores, or they may try to pay less for the stores to try to restore some of their margins lost due to the increase in feed prices.

There is an anticipation that more stores and weaned calves will be forward for sale this autumn as breeders look to reduce their wintering expenses. Whilst short keep cattle look to remain a good trade, there is a concern that some of the lighter stores with a lengthy finishing period ahead of them may drop in value at the end of the year.

Farmers with some of these lighter cattle would be advised to keep them moving and ensuring good weights for age to maintain a reasonable trade on them.



Cow numbers in decline?

Data from QMS and BCMS shows that suckler cow numbers in Scotland have declined by 2.5% from 2018-2021. This is a long term trend from the 1990's and it is expected that further reductions in cow numbers will occur over the next year with the pressures on herd profitability from increased input prices and high cull cow values.

Around the World – Beef from Brazil

While cow numbers in Scotland are in decline, the Brazilian beef exporters association (ABIEC) released its beef report for 2022 which states it is looking to increase beef production by 35% by 2030. This would involve an increase in the kill number of over 8 million cattle from 2021 to 2031. The report states that this increase is required to meet domestic and export demand (39% of beef exported from Brazil goes to China).

The report also lays out a plan to increase productivity in the beef sector in Brazil through increasing intensity of grazing and increasing carcass weights.

Worryingly, reports from Brazil's institute for space research show that deforestation of the Amazon rainforest for the first four months of the year was 1,954km², an increase of 69% on the first four months of 2021. This highlights the difference in a Country and it's Governments' priorities in terms of agriculture and climate.

lesley.wylie@sac.co.uk , 01307 464033

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
04 June 22	446.0	-0.1	-3.3	444.0	0.2	-5.0	442.7	-0.4	403.7	375.7
11 June 22	451.3	5.3	-1.4	451.0	7.0	3.2	447.8	-0.8	405.1	376.3
18 June 22	453.0	1.7	2.8	453.4	2.4	2.2	444.8	-1.0	408.7	381.9

Sector Focus : Soils

Soil Testing: Benefits and Limitations

Without a doubt, soil testing has come to the forefront of UK agricultural policy over the past few years. With the roll out of mandatory testing in England and Northern Ireland and the recent release of the Scottish National Test Programme, farm soil analysis is increasingly commonplace.

Benefits of Soil Testing

Soil testing is a valuable farm management practice which has the potential to improve production efficiency, reduce costs, and improve water quality. Understanding the nutrient status of our soils enables targeted nutrient and lime application.

Soil testing can also be used beyond its traditional role in nutrient budgeting for more holistic management of soil health and resilience.

Soil testing includes any analysis which provides information about the physical, chemical, and biological properties of soil. This analysis can include tests for pH, various nutrient levels, cation exchange capacity, soil organic matter, microbial mass, and soil texture.

The soil parameters analysed should be chosen based on the context and goals of each individual farm. pH analysis is particularly relevant in Scotland, where almost half of all farms in the FAS Soil & Nutrient Network are adversely affected by low pH levels.

Practical Considerations

Most of the cost and labour involved in soil testing is related to sample collection and transport. Generally, soil samples are collected by walking in a "W" pattern through a field, stopping every few paces to take a sample with a corer or auger.

Sampling should be done at least six months after fertiliser or lime application and six weeks after manure application. Each field should be tested every 3-5 years, so sampling a few fields each year is a good strategy to spread costs.

Levels of Testing

Basic tests of pH, P, K, and Mg are sent back with fertiliser and lime recommendations which support nutrient budgeting. When interpreted correctly, soil analysis can help reduce bought in fertiliser requirements and optimise soil conditions for crop yields.

Limitations

While basic soil tests are useful for nutrient management plans, they provide limited information

about soil health and function. For example, crop micronutrients are not considered in the legal minimum soil test. Furthermore, common chemical tests ignore physical and biological aspects of soil health, which also affect crop growth and nutrition.

Laboratory soil organic matter tests are good indicators of more holistic soil health. Decomposing organic matter is the backbone of a healthy and diverse soil ecosystem.

Organic matter stores carbon, improves soil structure and fertility, and increases water holding capacity. Soil organic matter is measured in the lab by burning dry soil and recording the percentage of mass lost.

Soil Carbon

Organic soil carbon is one component of organic matter which has gained special attention over the past few years. Soil carbon measurement for carbon accounting requires deeper soil samples and an additional measure of bulk density. Importantly, farm soil carbon increases over decadal timescales, so management-related sequestration will likely not be detectable until at least 5 years from the initial test.

Soil Health

Other key physical and biological indicators of soil health, such as earthworm count, decomposition rate, and infiltration rate, can be assessed on-farm with just some wellies and a spade! For example, the visual evaluation of soil structure (VESS) test developed by SRUC can be completed on farm in less than 20 minutes.

Effective Soil Management

Gathering information through soil testing is just the first step in effective soil management. Next steps include:

- expert advice,
- manure analysis,
- nutrient budgeting,
- soil aeration, and
- well-timed nutrient and lime application.

Importantly, one soil test is just a snapshot in time. To get the most out of soil testing, analysis should be repeated every few years to readjust management and monitor trends in soil health.

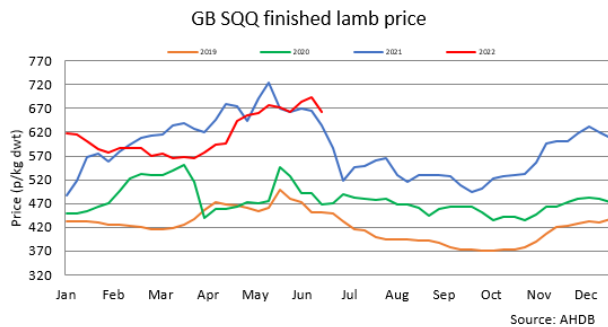
Kaia.Waxenberg@sruc.ac.uk

Sheep

Trade decreases

The typical seasonal decline of the lamb market has started, which often happens after the Highland Show. Market signals are reporting strong trade both domestically and globally, which is perhaps why the price remains above the previous years.

Given the cost of creep feed, many have chosen not to offer it this year and rely on grass alone. This may result in a slower throughput of spring born lambs, which should aid in sustaining the price. However, this may mean later in the season, a large volume will come to the market at the same time, causing an excess, which could drive the price down.



EU market

UK lamb is currently valued lower than some countries in the EU, for example,

Week ending 18/06/2022	
	£/kg DW
Great Britain	~6.72
France	~6.82

*currency exchange euro to pound 0.862

This makes our product favourable, leading to a strong export market. AHDB has reported that total UK exports in April 2022 were 2.5% higher than March and 33% higher than April 2021. From the 6.9 tonnes exported, France took 3.6 tonnes, which possibly reflects the number of countries using France as a port for importing UK product.

Exports are outweighing imports so far this year, with the most noticeable increases of product coming from Australia and Ireland. Interestingly, the Irish price is holding well,

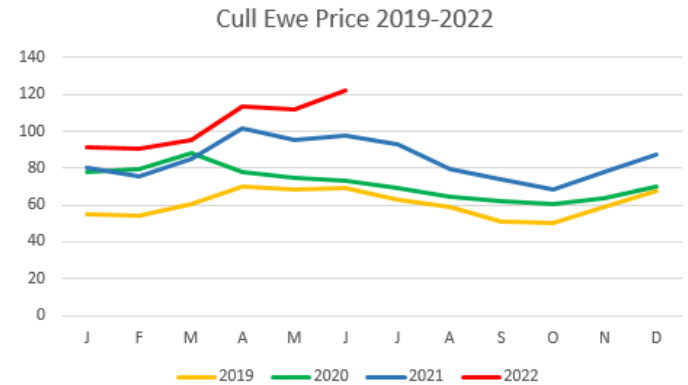
Week ending 18/06/2022	
	£/kg DW
Northern Ireland	6.58
Ireland	6.89

*currency exchange euro to pound 0.862

Eid-al-Adha – the Muslim festival Eid-al-Adha (Qurbani) will be from 9th – 13th July this year. This festival is of huge significance to the sheep meat industry with a large volume of sheep meat being consumed during this period.

The slaughter of the animal should occur within the 3-day festival, meaning it is a small marketing window for the sector. There are also strict guidelines for the animals, including, being sexual mature and minimal mutilations e.g., not castrated.

This will no doubt encourage a rise in the market, especially that of cull animals, where phenomenal prices are already being witnessed and is rising week on week.



[Kirsten Williams](mailto:Kirsten.Williams@ahdb.co.uk); 07798617293

Week ending	GB deadweight (p/kg) 16.5 – 21.5kg				Scottish auction (p/kg)				Ewes (£/hd)	
	R3L	Change on week	Diff over R2	Diff over R3H	Med.	Change on week	Diff over stan.	Diff over heavy	Scottish All	Eng&Wal All
04-Jun-22	682.6	2.4	0.1	0.8	338.00	5.5	-4.8	15.4	118.29	120.88
11-Jun-22	690.5	7.9	0.5	-0.6	329.00	-8.0	12.4	13.9	127.84	119.56
18-Jun-22	660.2	-30.3	1.0	1.1	311.10	-17.9	5.7	6.3	121.29	114.45

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

Standard weight 32.1 - 39.0kg; Medium weight 39.1 - 45.5kg; Heavy 45.6 - 52.0kg

Retailers rally on July milk price

- UK milk output for 2021-22 is down by 42.10m litres against 2021-22.
- By June 2022, several retail aligned milk prices were lagging behind non-aligned farmgate prices, prompting many aligned farmers to seek out new supply contracts elsewhere.
- Some retailers have applied substantial 'booster payments' to their July milk price to help bring aligned milk prices back in touch with the market.

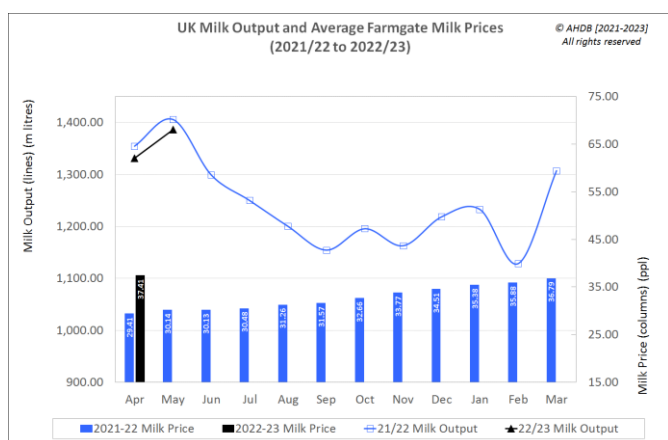
The latest milk production statistics from AHDB for May 2022 indicate that output for the month is estimated at 1,390m litres (before butterfat adjustment), up 4.5% on the revised figure for April 2022 of 1,330 m litres but 1.1% lower than May 2021. The UK average farmgate milk price for May 2022 was 40.39 pence per litre (ppl). This represents a 5.0% (1.94 ppl) increase on April 2022 and a 34% increase on the same month last year.

South of the border, two milk buyers have recently announced a farmgate milk price of 50ppl (Pensworth for August 2022, and Freshways for September 2022). This is a considerable lead over the prices listed in our milk price table (right) for July and demonstrates the potential for further increase to Scottish price levels.

- First Milk: FM milk price will increase by 1.40ppl from 1st July 2022.
- Graham's Dairies: 4.00ppl increase confirmed from 1st July 2022. This takes the liquid standard litre price up to 44.00ppl for July 2022.
- Tesco: After initially announcing a 0.76ppl increase for July 2022, Tesco has added a further 3.65ppl to the July 2022 milk price. This takes the price for Müller Milk Group suppliers up from 41.59ppl to 46.00ppl. The milk price for Arla TSDG suppliers will move up from 41.34ppl to 45.75ppl.
- Sainsburys (SDDG): having initially announced a 1.26ppl increase for July 2022, Sainsburys have added a further 4.30ppl booster payment to the July 2022 milk price, making the total increase a massive 5.56ppl. The price increase means that Müller members of the SDDG will see their price move up to 46.00ppl for the liquid standard litre, whilst Arla members will see prices move up to 45.88ppl. It remains unconfirmed how long Sainsburys will pay the booster payment.
- Co-op: 2.17ppl increase confirmed from 1st July. This latest price increase takes the liquid standard litre price for July 2022 up to 43.35ppl.

Annual average milk price estimates for July 2022 (ppl)	
Milk Buyers – Scotland	Standard Ltr*
Lactalis / Fresh Milk Co. (No profile or seasonality) ¹	45.40
First Milk Liquid ^{1,2}	42.01
First Milk Manufacturing (4.2% Butterfat & 3.4% Protein) ²	43.45
Müller - Müller Direct - Scotland ^{1,3}	45.75

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.



Farmgate prices: July 2022

There are some big price increases for July 2022:

- Arla direct supplies: 4.32ppl price increase confirmed for July 2022 increasing the liquid standard litre for direct suppliers from 39.12ppl to 43.44ppl.
- Müller: Müller Direct suppliers will receive a 4.50ppl increase from 1st July 2022. This takes the liquid standard litre price up to 45.75ppl for suppliers in Scotland. Müller's organic milk price is also set to increase by 4.50ppl for July 2022.
- Fresh Milk Company: 3.90ppl increase confirmed from 1st July 2022. This takes the liquid standard litre price up to 45.40ppl. The manufacturing standard litre price up by 4.04ppl to 47.21ppl.

Dairy wholesale prices rising

UK dairy commodity prices (£/ tonne)	June 2022	May 2022	Dec 2021
Butter	6,020	5,890	4,660
SMP	3,380	3,310	2,750
Bulk Cream	2,734	2,579	2,054
Mild Cheddar	4,740	4,650	3,600

UK milk price equivalents (ppl)	June 2022	May 2022	Dec 2021
AMPE (2021)	56.43	55.10	44.70
MCVE (2021)	54.09	53.14	40.98

© AHDB [2021-2022]. All rights reserved

World milk production: March 2022

The table below provides an overview of the position on global milk production at the end of March 2022:

	Cumulative Production (31 March 2022) (bn litres)	% Change from 31 March 2021
UK	14.905	-0.70%
EU-27	139.672	+0.10%
US	99.422	+0.80%
New Zealand	18.504	-4.00%
Australia	6.719	-3.20%

© AHDB [2021-2022]. All rights reserved

S e c t o r F o c u s : P o t a t o e s

Crop development update

As AHDB no longer produces planting estimates for the GB potato crop following the wind-up of AHDB potatoes; information is therefore poor, particularly for the ware crop. The general feeling is that planted area for seed is roughly static for 2022 and ware area may be slightly down.

Planting conditions across Scotland were, overall, very good. With only a handful of days lost to rain, most planting operations ran uninterrupted. Some seed producers reported additional late orders as ware growers added an extra field or two to their acreage following the good run of planting.

Emergence was even and rapid for most crops, with only one or two problem fields. Root systems will have developed well (provided seedbeds had good structure), which bodes well for yield potential.

Weed control appears to have been excellent for most fields – early dry conditions suppressed germination of weed seedlings, and rainfall shortly after application of residual herbicides improved their efficacy.

Until mid-June, temperatures were a little low which has slowed crop development slightly. Most crops had not reached canopy closure by 21 June (the longest day), which is a key target for maximizing capture of solar radiation.



Dry and dull conditions

Rainfall across the potato growing regions of Scotland has been very variable. Localised short bursts of heavy rain have helped in some areas, but most soils are a little dry. Rainfall has been below average, particularly for easterly coastal regions. Irrigation began in early June for high value ware crops, and rain guns are still a common sight across Scottish potato fields.

Sunshine hours appear to be down slightly in many areas, which is another factor slowing crop development.

Disease risk and quality

Although it is too early to predict crop quality with confidence, disease pressure is low overall. Dry weather in June has suppressed late blight and blackleg development. Dry conditions also reduce the risk of powdery scab, as soil inoculum will not have had the opportunity to build up on root systems.

Common scab risk is high as tubers are initiating in dry conditions. Seed treatment and irrigation (in ware crops) may help mitigate this, but if dry conditions persist, we expect common scab to be an issue this year, as it was in 2021.

Flights of problem aphids have occurred earlier than the average and in greater numbers. This is of relatively little concern to ware growers, but seed growers are paying particular attention to their aphicide programmes and have made an early start to roguing. Inspections have started for the most advanced seed crops, but the bulk of first inspections are expected to begin next week (4 July).

Yield potential

In summary, planting for the 2022 crop proceeded very well. Crops have emerged uniformly, with low weed and disease pressure, but dull and dry conditions have slowed development somewhat. Although there is a long way to go yet, yield potential looks slightly above average. However, if dry conditions persist water stress may depress yields.

EU mainland crop

The NEPG (North European Potato Growers) have released planting estimates for 2022 ware potatoes (seed and starch excluded) in Belgium, Germany, France, and the Netherlands. After a fall of about 5% from 2020 to 2021, ware area has recovered some ground and sits just above the five-year average.

Area EU 04 potatoes (excl. starch and seed production)

Crop Year	5-year average	2021	2022	% Change
Belgium	94,866	89,649	92,558	+ 3.24
Germany	182,332	183,060	185,800	+ 1.50
France	149,478	153,100	156,162	+ 2.00
Netherlan	76,048	71,388	72,816	+ 2.00
Total EU	502,723	497,197	507,336	+ 2.04

Source: NEPG

As in GB, high cereal prices and land rentals are causing growers to question the viability of potato production. Crop development is forward in many regions, with high temperatures and low rainfall causing some crop stress.

SRUC Potatoes Team

Management Matters: Net Zero

A challenging goal

The evidence is overwhelming: humans are seriously damaging the climate. Without urgent action, life on earth will become ever more difficult, if not impossible. While targets have been set to limit the rise in emissions driving climate change; the tricky bit is persuading people to take the actions necessary to deliver these targets.

Target for Scottish agricultural emissions

The plan is for Scotland to be carbon neutral by 2045 – so called 'Net Zero'. In 2019, Scottish agriculture accounted for nearly 16% (7.5mt CO₂e) of Scottish emissions with a target of reducing this by nearly a third to 5.3mt by 2032. Although the industry cut its emissions by 13% between 1990 and 2019; it highlights the size of the task now facing Scottish farmers. A recent Ricardo report reviewing a number of studies, highlights the difficulty in achieving the 2032 target with uncertainty of uptake of mitigation actions by farmers a key factor. So how are other countries nudging farmers to do the right thing?

New Zealand's polluter pays approach

New Zealand has a big problem because farming accounts for nearly half (48%) of the nation's emissions, but it also underpins most of the country's export earnings. Meeting NZ's international climate change commitment without wiping out the economy is a tough circle to square. The agricultural industry has just presented a plan that involves taxing farmers to encourage actions that cut emissions. The government is currently assessing whether to adopt it from 2025. If it does not, farmers will join the whole economy Emissions Trading Scheme which will result in a higher emissions tax.

The proposal is to use a standardised carbon audit to calculate each farm's emissions tax. Importantly, the tax bill is based on net rather than gross emissions, so the incentive is to sequester carbon (mainly through tree planting as soil carbon is deemed stable under grazing) as well as adopt actions that minimise emissions per se (e.g., improve lamb growth rates). The other big idea is to tax methane separately from nitrous oxide and carbon dioxide owing to its short-term nature. At emission prices modelled for 2025, the cost will account for £5,700 (2.2% of "profit") for South Island hill farms rising to £10,700 (5.5%) in 2030 given an assumed lift in emission prices.

Northern Ireland approach

Northern Irish agriculture accounts for 27% of the region's total emissions with methane the most important gas thanks to the big cattle and sheep

population. A KPMG report calculated that meeting emission reduction targets could not be achieved with currently available actions, so a big cut in livestock numbers would be necessary. So, like New Zealand, Northern Ireland is planning to treat methane differently and take sequestration into account when calculating each farm's carbon footprint, though not by introducing an emissions tax. Both modifications challenge the internationally agreed approach to setting emission reduction plans.

Challenging the status quo

Methane is a very potent greenhouse gas, but its warming effect only lasts around 12 years in the atmosphere. Whereas the warming effect of nitrous oxide and carbon dioxide last hundreds of years. If the revised warming coefficient metric GWP* were used, the drop in Scottish cattle and sheep numbers since 1990 will have lowered the industry's warming effect by more than the current estimate. The good news is that the IPCC now recognises the limitation in the calculation used to date, suggesting a revision is possible. For countries where ruminant numbers have risen in recent years, however, the revision will amplify the warming impact of their ruminant livestock industries, so some will resist change.

Adopting a net approach to calculating a farm's emissions makes practical sense. Most farms have room to plant trees and hedgerows, so recognising sequestration will help persuade farmers do so. The problem is that a net approach is inconsistent with how emissions are calculated at the national level. In short, currently a farmer planting trees does not benefit the agricultural sector based on the territorial calculation used to produce the national inventory. Resolving this inconsistency between national and farm level emissions measurement is important. Yet even if the measurement of emissions is revised, Scottish farmers will still need to act smartly this decade to lower emissions.

Which approach will deliver?

The big question is: could the taxing (stick) approach being considered in New Zealand be more effective in driving the on-farm change needed to meet emissions targets, than the carrot approach likely to evolve here and the EU? Lowering direct support across the EU and England will not only free up funding for on-farm climate change actions, but also allow market forces to work. For Scotland, attaching conditions to area and coupled payments appears the preferred approach. For Scotland, attaching conditions to area and couple payments appears likely to become the core approach.

Kev Bevan, 07368 825877

New Beginnings : Hemp

Growing' opportunities for hemp

As industries and economies accelerate decarbonisation, there is an increasing drive towards renewable materials, and consumer interest and demand in natural products and the origins of products.

Once an old favourite for rope production hemp offers a natural source of a vast array of product and co-product opportunities, including construction materials, textiles, plastics, bio-composites, feed, food and supplements, CBD (dual purpose varieties), among many others not yet fully explored.

Benefits to farm businesses

- Improved soil structure
- Water management & erosion control
- Absorption of pollutants
- Effective buffer strips
- Great break crop in arable rotations
- Low input crop, so reduced inputs (& cost)
- Can utilise existing equipment & farm infrastructure
- Could support diversified incomes streams without taking land out of agricultural production.

Recent figures from the ABC Handbook that gross margins for hemp compete with oats, oilseed rape and linseed already, without yet widely established processing for higher value markets.

Gross Margin	(£ per ha)
Hemp	£596 (+)
Wheat	£634-916
Barley	£610-653
Oats	£551-695
Oilseed rape	£461-877
Linseed (flax)	£475-642

Source: ABC Handbook (2021)

Production & Market Establishment Risks

Recently hemp has been successfully grown in the Scottish Borders, Dumfries, and Galloway, as well as up the East coast of Scotland. While there is a limited (but developing) processing capacity, particularly in Scotland; lack of proximity to processing plants is affecting viability (due to generally bulky and low value crops). However,

interest and investment for higher value fibre products and other potential uses may support the economic viability of production and processing.

Hemp vs. Trees for fibre products

A key opportunity for hemp may lie in the fast turnaround for production of construction and fibre materials versus other natural sources e.g., timber.. In addition, we have seen in the last winter how drastically long-term tree stocks can be decimated in increasingly volatile winter storms.

Carbon sequestration & capture potential

With Net Zero targets in mind, hemp may also offer some potential for carbon sequestration and capture, although few and only preliminary studies have been carried out to date. An Australian study estimates that 1.69-2.45 tonnes of CO₂e (Carbon dioxide equivalent) could be sequestered per hectare per year. This is in addition to 9-13 tonnes of CO₂ absorbed by the crop per hectare per year. However, it is important to note that:

- 1) Actual long term soil carbon sequestration will depend on how the land is managed after the hemp harvest; and
- 2) Only 'embedded' carbon in the harvested crop can be considered 'sequestered' if it is held in a 'permanent' form (for 100+ years – IPCC).

If either of these two conditions were to result in carbon capture or sequestration, hemp could offer potential for the creation of carbon credits – providing yet another incentive for production.

Hemp Climate Benefits:

1. **Climate mitigation:** offsetting fossil fuels (& emissions) → decarbonised products & industry; benefits to agricultural rotations & soils.
2. **Climate adaptation:** increased rotation resilience & farm profitability, reduced fossil fuel dependence.
3. **Potential carbon sequestration:** offsetting capture and creation of carbon credits (further studies required).

anna.sellars@sac.co.uk, 07717 71756

Key economic data

General Indicators		Price indices for October 2021 (Defra 2015 = 100)			
		Output Prices		Input Prices	
Base interest rate	1.25% (0.25% Dec 21)	Wheat	222.3	Seeds (all)	122.0
ECB interest rate	-0.5% (0.00% Sep '18)	Barley	242.3	Energy	194.9
UK (CPI) inflation rate	9.1% (target 2%)	Oats	208.4	Fertiliser	280.6
UK GDP growth rate	0.8% (Q1 '22)	Potatoes	138.2	Agro-chemicals (all)	158.4
FTSE 100	7,179 (30 Jun 22)	Cattle and Calves	135.6	Feedstuffs	156.5
		Pigs	125.3	Machinery R&M	122.8
		Sheep and Lambs	159.7	Building R&M	153.2
		Milk	155.2	Veterinary services	117.8

© SAC Consulting 2022 SAC Consulting is a division of Scotland's Rural College (SRUC)
This publication is funded by the Scottish Government and EU as part of the SRDP Farm Advisory Service