Farm Advisory Service

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News in brief

May 2019

Look to growing world markets

Postponing the UK's EU exit date until 31st October has given welcome relief from the "B" word. It also gives some time to re-focus on what will be more important in the long run – future market opportunities. There is a big world market out there which is going to keep doing its thing (growing!), irrespective of our own internal machinations.

Some recent developments have highlighted the scale of the opportunities for UK and Scottish produce and know-how. The potential in China is clearly staggering as their increasingly wealthy consumers move up market seeking out higher quality, higher value and safer foods from around the world. This opportunity has suddenly been brought to the fore by the spread of African Swine fever which could cut Chinese pork production by 30% raising prices both there and the EU. China's pork shortfall of between 3mt and 10mt is expected to stimulate a large increase in imports of pork but also other proteins such as beef and salmon. China is also a large and growing market for dairy products. It is therefore vital that we remain outward looking and seek to understand and supply the global markets for what we produce.

The potential for protein

Much of the developing world is seeking to increase the volume of meat and seafood consumed which offers opportunities at the higher end for our meat and seafood exports. Closer to home a growing number of consumers are looking to eat less protein from animals and more from plants, particularly pulses. Our livestock sector is also seeking to source more protein locally and pulses can fit the bill. In fact the Scottish salmon industry is a growing market for UK grown field beans with further increases likely as salmon exports rise. In this month's Sector focus article we examine pulse market potential on page 9.

Next month …..

- Modern apprenticeships
- Open banking

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Julian Bell

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Europe investing in rural areas

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Scottish Government
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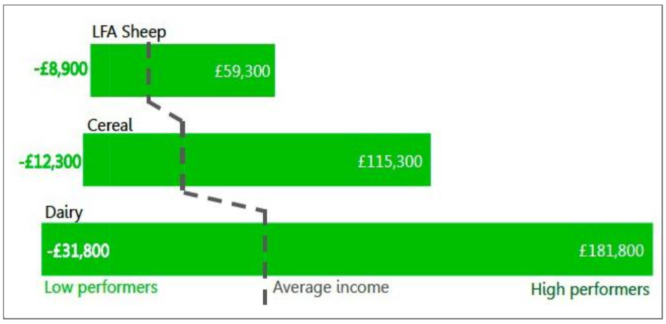
Scottish Farm Business Income

- *Scottish farm incomes increased in 2017-18 but farms are still reliant on subsidies to be profitable*

According to the latest Farm Business Income figures, the average farm income has risen from £16,800 in 2015-16 to £35,400 in 2017-18, which is also a six year high. Although this is good news and shows the industry is recovering, 60% of farms in the survey were making a loss without subsidy, with the average business making a loss of -£7,400 without support. This once again highlights the importance of farm subsidies.

Source: Scottish Government

Compared to the previous period, the average income of *dairy farms* increased the most, mainly due to a 22% increase in the average farmgate milk price. In 2017-18 there were also significant differences in income between high and low performing dairy farms, with lower performing dairy farms losing on average -£31,800 while high performing dairy farms had an average income of around £181,800.



Source: Scottish Government

Lower performing *cereal farms* were on average making a loss of -£12,300 and high performing cereal farms generated an average income of around £115,300. Without subsidies, cereal farms, on average, had a very modest positive income of £1,300.

Lower performing *LFA sheep farms* were losing on average -£8,900, while high performing LFA sheep farms had an average income of around £59,300. Without subsidies, LFA sheep farms were, on average, making a loss of -£27,400. LFA beef farms also had low income and were reliant on subsidies.

Contract farming and diversification helped offset losses from farming activity. For example, farms that were renting out buildings or holiday homes or had built small wind farms to generate electricity, had incomes that were around £19,600 higher compared to those that have not diversified.

The full report is available at: https://www2.gov.scot/Topics/Statistics/Browse/Agriculture-Fisheries/Publications/FBI

Note: Farm Business Income (FBI) is the measure of farm income, or profit, in Scotland. FBI represents the total income available to all unpaid labour and their capital invested in the business. FBI figures are based on annual audits of nearly 500 commercial farms in Scotland called the Farm Business Survey (FBS). The Farm Business Survey does not include information on small farms or pig, poultry and horticulture sectors.

Single Application Form

For those that have still to complete their Single Application Form (SAF) it is worth noting that SGRPID have continued to carry out mapping updates, which may have resulted in changes being made to your land parcels. Although in most cases these are minor changes to the field parcel areas or exclusions, it is important to check that all your field parcel boundaries and any changes are correct.

If any of the mapping changes are incorrect, for example an exclusion area has increased incorrectly you will need to submit a Land Maintenance Form (LMF) to rectify the change. This can be downloaded from the Rural Payments and Services website at: https://www.ruralpayments.org/publicsite/futures/topics/your-business/forms/pf06-land-maintenance-form/

The Single Application Form (SAF) 2019 must be submitted by 15th May 2019.

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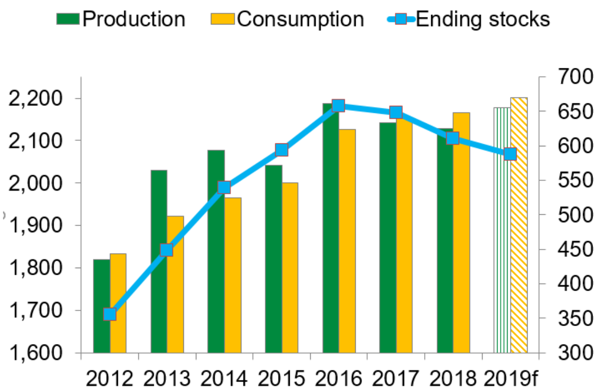
Good crop conditions, prices fall BUT!

World grain prices weakened as global crop estimates for both 2018 and 2019 harvest rose. With the wheat harvest set to commence in the US in the next few weeks, new crop conditions are increasing in importance. International Grains Council raised their estimates for world grain production in 2019/20 by 3mt to 2178mt and cut use forecasts by 3mt to 2201mt to push ending stocks 8mt higher to 588mt.

BUT compared to last year the IGC estimates still represent a decline in grain stocks with stocks-to-use set to fall to the lowest level in 5 years to reach 97 days (of supply) in 2019. Strong growth in world grain production is expected in 2019 (+50mt) led by increases in the EU, Russia and S. America. This is enough to slow but not stop the decline in stocks given demand rising 36mt in the third year in a row where grain demand exceeds production.

There are a number of potential issues which could impact on cereal harvest. While crop condition in northern, central and Eastern Europe is generally good, subsoils are dry meaning regular rainfall will be needed. More severe dry conditions have left cereal crops in the south, poor, particularly Spain. The US and Canada have suffered a very cold and wet/snowy winter and spring which is expected to delay sowings unless temperatures rise soon. However, crucially moisture levels should be positive for US/Can cereal yields IF the crops can get sown in good time.

World grain supply and demand estimates

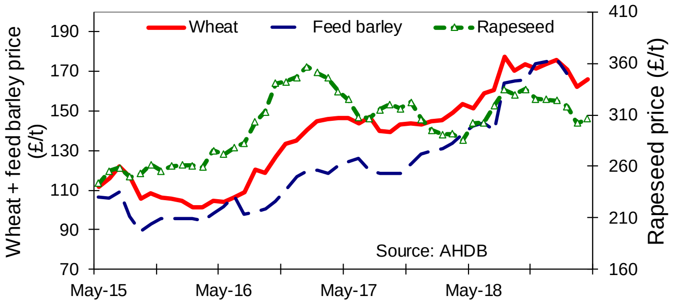


Source: IGC, USDA, SAC Consulting

In the UK and Scotland, spring sowings have been timely and into good seed beds and winter cereals are in good condition aside from some disease.

- *World expected to see larger grain harvest in 2019 – yet stocks still set to decline*
- *Time remains for adverse weather to affect harvest yields and prices*

Scottish spot ex-farm grain and oilseed prices



Brextension leaves UK export in limbo

The UK's exit from the EU has been postponed twice from the planned date of 29th March; first to 12th April and more recently to 31st October 2019. An earlier exit is possible but only if Mrs May miraculously secures agreement for her EU withdrawal deal. While discussions to seek cross party agreement with the opposition Labour party are ongoing, little progress has yet been reported.

While this removes the imminent threat of a change in trading relationships, it now moves the new potential exit date to slap bang in the middle of the otherwise busy post-harvest grain exporting season. This change effectively puts on hold most forward export trading to the EU of new crop cereals as traders are unwilling to take on the risk of tariffs and other restrictions in the event of a no-deal. This in turn puts UK new season grain at a disadvantage and closes off market options. This is one factor leading to a particularly sharp price fall (+£20/t) between old and new crop prices in the UK market this year. Given normal yields the UK could have a sizable surplus of wheat (2mt+) and barley (+1mt) for export. Being unable to book export trade may continue to depress UK prices post-harvest until the Brexit outcome becomes clear(er!).

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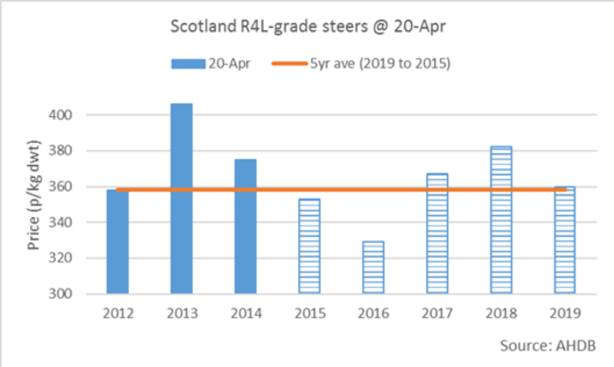
Indicative grain prices week ending 18 April 2019 (Source: SACC/AHDB/trade)
'* Before oil bonus, # Ex-farm England spring brewing max 1.85%N, ~ nominal

£ per tonne	Basis	Apr 2019	May 2019	Hvst 2019	Nov 2019	Mar 2020
Wheat	Ex-farm Scotland	165.00	166.00	148.00	149.00	155.00
Feed barley	Ex-farm Scotland	148.00	149.00	128.00		
Malt. barley - distil	Ex-farm Scotland			168.00		
Malt. barley - brew	Ex-farm England#		157.00		157.00	163.00
Oilseed rape*~	Delivered Scotland			302.00		

Slow but steady

The last few weeks have seen the prime cattle price firm and is now comparable to recent years – the below chart reflects on the price at 20th April (or the closest week ending date) over the past eight years.

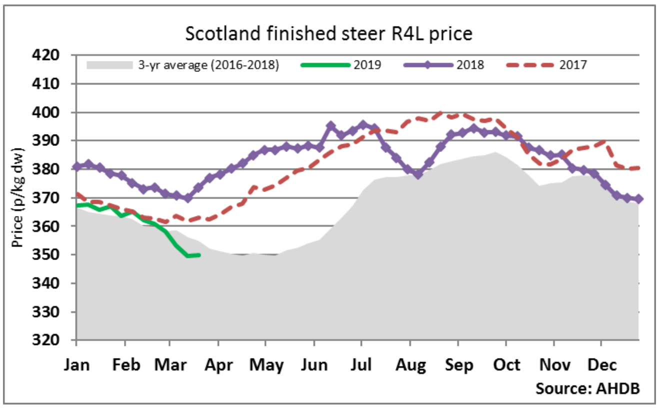


Admittedly this does not show the sustained low price since autumn or the significantly higher costs of winter. Also note that these are the reported averages which includes both commercial and scheme cattle.

The Scotland base price is over 350p while scheme cattle are upwards of 15p above. That premium still works even if at 15-20kg dwt lighter carcase, to gross a comparable £1,300/hd. Scotch premium is marginally higher on the Northern England average but retains a steady 14p over further south. No remarkable change is expected over the next few weeks post Easter.

Grass cattle see strong demand

Recent weeks have seen large consignments at growing store cattle sales, which has been meet with keen trade. Heavier cattle have lifted marginally but there is £20-50/hd more on 350-400kg cattle since the start of April, depending on the sale. Buyers return to the mart well ahead with field work and through the thick end of lambing and calving. Proportionately this is a big lift, nearing 20p/kg liveweight, albeit similarly lower on the high point of last spring. With grass available it does show commitment.



Could this be a game changer?

Large finishers are having serious words with processors about price sustainability and the need to better share the risk of market volatility if the sector (retailers through to store cattle sellers) want the benefits of professional finishers selecting and delivering a consistent 20 to 70 (depending on the size of finisher) cattle per week every week of the year.

The suckled calf producer maybe the engine but these professional finishers are the sectors 5-star fuel of the 21st century. Large finishers are turning over enough cattle that they can deliver economies of scale, deliver liveweight gain at a lower price and know what cattle work for them and whose are worth paying that extra few pence – hence commercially incentivising future breeding.

Any business needs to manage risk. And managing volatility while requiring a high level of working capital is a prerequisite to finishing cattle. We are also in unprecedented times, as the newsfeed continually reminds us. Nonetheless, forgiving the exceptional price correction in spring 2014, which was a kick-back from 'horsegate' and accepting that some volatility is due to processors signalling for leveller supply, the reality of major volatility is still difficult to contend with in practice without more joined-up partnerships (official or unofficial).

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Scotland prime cattle prices (p/kg dwt) (Source: drawn from AHDB 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
06 Apr 19	**352.5**	0.9	-1.9	**349.6**	1.0	3.6	345.2	9.1	277.1	254.0
13 Apr 19	**356.1**	3.9	2.2	**353.4**	3.8	4.6	352.7	16.7	283.3	259.1
20 Apr 19	**360.7**	4.6	2.2	**360.5**	7.1	9.9	355.3	12.8	287.4	265.3

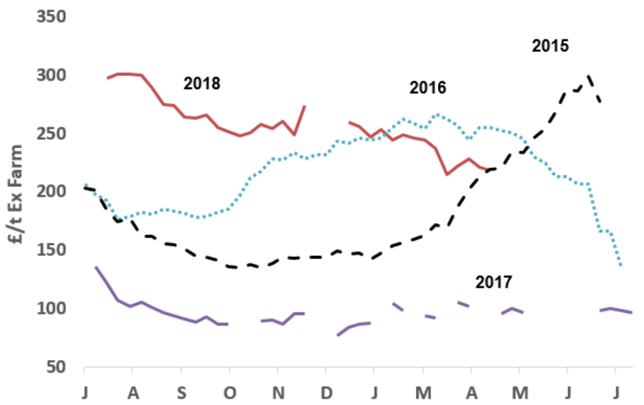
The finished cattle base price quoted by a buyer may be significantly different from the national average deadweight price presented above as these are averages of both commercial and premium cattle, reflect variation between processors and any bonus payment differences.

Market price update

- *The GB Weekly Average Prices for the week ending 13th April was £202.88/t for free-buy and contract purchases, and £218.39/t for free-buy purchases.*
- *Compared to the previous reported figures on 6th April, contract and free-buy purchases were up by £3.92/t and free-buy purchases were down by £2.54/t.*

Crop Year 2018/19	13 Apr	6 Apr	30 Mar
Average Price (£/t)	202.88	198.96	202.93
AVP change on week (£/t)	3.92	-3.97	9.34
Free-Buy Price (£/t)	218.39	220.93	228.13
FBP change on week(£/t)	-2.54	-7.20	6.21

GB Weekly Average Free-Buy Price (2015-2018 crop years)



Trading Season July - July Source: AHDB

Source: AHDB

On the whole, the UK potato market has remained fairly steady in recent weeks. The free-buy market has quietened over the past month although prices continue to remain high. There continues to be strong demand for Scottish ware crops south of the border, particularly for bold stocks with good baker content.

In Scotland, Grade 1 Maris Piper is trading between £180-360/t ex farm. This wide variation in market price depends on quality, location and interest among growers to move material. Grade 1 whites including; Cultra, Harmony, Michelle, Safari, Saxon and Estima are trading around £180-230/t ex farm. Lower quality grade 2 whites are trading around £140/t ex farm. There are reports of some King Edwards stocks trading around £330/t ex farm.

In England, Grade 1 Maris Piper is trading around £260-330/t ex farm. Exceptional quality piper is being purchased for around £395/t ex farm. Grade 1 whites including; Electra, Estima, Lanorma, Nectar and Saphire, are trading around £230-260/t ex farm, with particularly good stocks with a high baker fraction being purchased for £320/t ex farm. Grade 1 King Edwards are trading around £280-350/t ex farm. Salads including Maris Peer and Gemson are trading between £270-350/t ex farm.

The bagging trade is reported to be “quiet” with steady demand and orders over the past few weeks. In the east of England, chipping Piper is trading between £300-340/t ex farm, Agria £300-380/t ex farm, and Markies £300-380/t ex farm. In the west of England there are no reports of any chipping stocks being purchased or sold. In the south of England Chipping Agria is trading around £300-320/t ex farm, Sagitta around £320/t ex farm, and Markies around £270-280/t ex farm. Reports also suggest that in the south of England quality frying stocks are becoming harder to source.

Planting well underway

Potato planting across much of the UK is now well underway and growers are making good progress with favourable weather conditions. Across much of Scotland there is a hive of activity with growers taking advantage of the near-perfect planting conditions. Soil temperatures have remained slightly low in recent weeks due to the low overnight temperatures, but the BBC 7-day weather forecast indicates that daytime temperatures will rise to highs of 18°C, over the bank holiday weekend and into the following week.

The ideal planting conditions are expected to see one of the earliest planting seasons to date which is a positive sign for crop yield. However, the main concern for many potato growers is the low level of water in extraction reservoirs in many areas particularly East Anglia. Whether this is serious enough to limit planted area is unclear at present but without heavy rain crop yield and quality could be limited later in the season by irrigation restrictions.

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Last year makes it feel poor

Matching last year was probably a bit of a reach but there was expectation of a significant rise. Setting aside the exceptional start to 2018 the market has now, at least, surpassed the previous 3-year average price. So, while hoggs maybe nearly £25/hd lower on the year (for the same carcase) they are £10 up on the previous three years (2015-2017) price average.

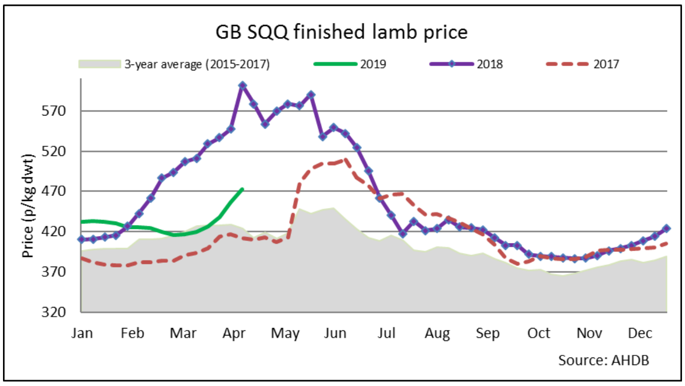
Hoggs could gross £100/hd by week ending 19th April provided they were in specification and not more than 45kg liveweight. While Ramadan starting on the 5th May should extend the good run for both hogget and cull ewes. After which, the sheer drop in supply is likely to insulate farmgate price.

Meanwhile, although still back £10 on the year, cull ewe prices are recovering to average £71. As always, this covers a multitude of types from lean hard hill breeds to fit Suffolk and Texel ewes topping over £130/hd.

- *As expected, overly fat hoggs remains a big problem*

It has been a good year nonetheless for store lamb finishers. Those hoggs bought 6 months prior for £55/hd at 32kg are likely to average £95/hd at 42kg now. At an average of only 55g DLWG, keep costs should have been low considering the winter. Less fluke and fewer mortalities make this look even better this year.

It may feel premature but attention must now turn to getting lambs finished off grass as quickly as possible. Trade might be fine this season but, as a risk management tool, a bird in the hand looks preferable. Market conditions over the next few months are likely to be similar (exports maybe slightly reduced). Similarly, lighter or tail-end lambs will have a place targeting next Easter and Ramadan, being the 12th April and 23rd April respectively. The greatest risk looks to be during that intervening period especially between July and



January. There is a natural increase in the volume of sheepmeat exported when supply is greatest and price at its lowest. This coincides with a period of significant uncertainty.

Oversupplied commodity, so why should retailers establish closer ties?

Unlike the rather binary capitalist headline above, consumers are far more nuanced. And retailers know this. Consumers may be fickle – it is a broad church of buying habits and moral standards – but there is an underlying ethos. Whilst price remains hugely important, it is not the only selection criteria. In marketing terms, what is the value proposition?

And it means producing something marketable, that tangible intangible is exactly the type of magic ingredient sought by all retailers. It is no surprise then that some major retailers have started broad pilot lamb producer schemes similar to direct milk contracts. Retailers want to be seen to be part of the solution. Could proactive producer groups present a similar readymade offering to be seen as a willing part of the solution too?

No easy feat for fiercely independent farmers but what is the alternative? A base commodity approach, competing with the cheapest alternatives. Such opportunities presents challenging but exciting potential. To rely on the status quo is to singularly talk about stripping out costs.

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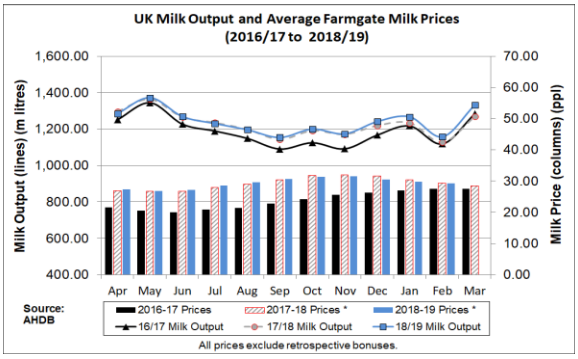
Week ending	GB deadweight (p/kg) 16.5 – 21.5kg				Scottish auction (p/kg)				Ewes (£/hd) Scottish	Ewes (£/hd) Eng & Wal
	R3L	Change on week	Diff over R2	Diff over R3H	Med.	Change on week	Diff over stan.	Diff over heavy	All	All
06 Apr 19	**462.6**	19.8	-0.5	7.4	**210.8**	5.7	6.2	15.5	69.21	71.16
13 Apr 19	**476.7**	14.1	-1.9	4.2	**212.0**	1.2	0.5	17.3	71.10	72.54
20 Apr 19	**471.1**	-5.6	-1.6	0.6	**210.9**	-1.1	5.5	20.1	67.98	70.99

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

UK output hits 14.87bn litres in 2018/19

UK monthly milk output for March 2019 is estimated at 1,332.13m litres (before butterfat adjustment). This is 64.13m litres (+5.06%) above milk output for March 2018. Cumulative UK production from 1st April 2018 to 31st March 2019 is estimated at 14,877.04m litres. This is 164.51m litres ahead of last year's total, when the cumulative total for the milk year was 14,712.53m litres. No further update is available for the UK average milk price. The latest figures show the average milk price for February 2019 unchanged at 29.28ppl.

- *Cumulative UK production for 2018/19 is up by 164.51m litres (+1.12%) on last year*



Price reductions for May '19

With UK milk output well up on last year and supplies exceeding demand levels, several (but not all) milk purchasers have instigated reductions to farmgate milk prices for May 2019.

- Co-operative – The Co-operative Dairy Group (CDG) is to reduce by 0.45ppl from 1st May 2019. This takes the liquid standard litre price down from 30.01ppl to 29.56ppl.
- Tesco – The Tesco Sustainable Dairy Group (TSDG) will see prices reduce by 0.34ppl from 1st May 2019. This takes the price for Müller Milk Group suppliers down to 31.27ppl. Meanwhile Arla Direct suppliers will see prices reduce by the same margin to 31.02ppl.
- First Milk – First Milk has confirmed a hold on prices going into May 2019 (see table below).
- Lactalis (Fresh Milk Company) – 0.37ppl reduction from 1st April 2019 (see table below).

Annual Average milk price estimates for May 2019 (ppl)	
Milk Buyers – Scotland	**Standard Ltr***
Lactalis (No profile or seasonality) [1]	27.13
First Milk Liquid [1, 2]	27.75
First Milk Manufacturing *(4.2% Butterfat & 3.4% Protein)* [2]	28.68
Müller - Müller Direct [1, 3]	26.75

1 *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 *FM prices include 0.25ppl Member Premium.*
3 *No monthly supplementary payment included in the price estimate. Includes 0.50ppl Müller Direct Premium.*

- Müller - No change for May 2019. The standard litre price remains at 26.75ppl.

Lactalis fixed price adjustment

- *Lactalis guarantee on milk price up to end of June 2019*

The price announcement from Lactalis came right at the end of March, by which time the April edition of Agribusiness News had already gone to print. Nonetheless, it is worthy of noting that whilst Lactalis has reduced the farmgate milk price by the equivalent of 0.37ppl from 1st April through adjustments to protein and bactoscan bonuses and a cap on the volume bonus at 1.20ppl, the company has guaranteed that there will be no further price cuts up until the end of June 2019. In the midst of increasing domestic milk supplies and growing uncertainty around Brexit and foreign trade, a guaranteed minimum price, even in the short term, is to be welcomed.

Output growth slows product demand

- *UK milk output is ahead of last year, particularly during Q1 in 2019*
- *High output coupled with the spring flush and uncertainty around Brexit has resulted in buyers (e.g. retailers) holding off*

With demand for milk easing, UK dairy product prices continue to soften. Between January and March 2019, the UK has produced 127.43m litres more milk compared to the same period in 2018.

A similar picture can also be seen on a global scale. Although production across the EU-28 has slowed since the beginning of 2019, EU cumulative production for 2018-19 year remains 0.20% ahead of last year.

UK dairy commodity prices (£/ tonne)	Mar 2019	Feb 2019	Oct 2018
Butter	3,510	3,680	4,100
SMP	1,670	1,690	1,380
Bulk Cream	1,510	1,610	1,840
Mild Cheddar	2,840	2,880	3,000
UK milk price equivalents (ppl)	**Mar 2019**	**Feb 2019**	**Oct 2018**
AMPE (2014)	28.27	29.30	28.34
MCVE (2014)	30.81	31.42	32.66

Source: AHDB

Production in New Zealand is 4.90% up on the previous year with cumulative production between June 2018 and January 2019 standing at 15,563m litres compared with 14,833m litres last year.

Date for your Diary

ScotGrass 2019 will be held at SRUC Crichton Royal Farm, Glencaple Road, Dumfries DG1 4TA on Wednesday 15th May 2019.

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Management Matters: Woodland carbon credits Felling licence change

Woodlands, carbon, climate change & construction

A significant motivation behind current government initiatives to plant more trees is that they are one of the few currently effective forms of capturing carbon from the atmosphere, Carbon capture in some form is likely to be needed to meet the Paris international climate change commitments. More recently a private market has developed to pay landowners to capture carbon by planting trees and this can offer a significant capital payment for the right schemes.

Trees sequester carbon dioxide as they grow – very roughly one cubic meter of timber represents the capture of the equivalent of one tonne of CO2, which is stored in the trunk, roots, branches and needles. It is estimated that UK forests currently accumulate 21 million tonnes of CO2 annually. When trees are harvested this is removed from the forest but remains stored in the timber products, perhaps for 75 years or more when used for construction. The production one tonne of concrete releases about 160kg of CO2 into the atmosphere. Steel releases 1.24 tonnes of CO2, brick 400kg, while a tonne of wood has absorbed 1.7 tonnes.

Housing is a major market for timber and housing starts in the UK are at their highest level since 2008. A modern timber frame house stores about 19 tonnes of CO2 and the proportion of housing starts using this technique is rising steadily. In 2016, 83% of housing starts in Scotland were timber frame and in England the figure rose to 22.8%. An increase in the use of timber frame construction is good news for the environment.

There is now an active market in voluntary carbon credits. Businesses can offset their carbon emissions by helping to fund woodlands that would not otherwise be created. The potential carbon sequestration of each woodland is independently validated. The process is guided by the Woodland Carbon Code and projects meeting the standard are recorded on the UK Woodland Carbon Registry (https://www.woodlandcarboncode.org.uk/). As at March 2018 there were 156 validated projects covering 5,257 ha with a potential lifetime carbon sequestration potential of 2.5 million tonnes CO_2.

Carbon payments to those creating the woodlands vary with the type of the woodland and the duration of the contract. Recent examples undertaken by SAC Consulting Woodlands team are detailed in the following table.

Woodland carbon code projects

Scheme	Duration (years)	Payment per net ha £
4.4 ha native broadleaf	60	£1224
17 ha native pinewood	50	£797
44 ha spruce woodland	40	£526

Source: SAC Consulting

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Changes to the regulations associated with felling trees

With the introduction of the Forestry and Land Management (Scotland) Act 2018 and associated Regulations on April 1st 2019 there have been various changes to the felling licence regulations. Firstly a 'Felling Licence' is now called a 'Felling Permission'. Most of the conditions are the same as previously under felling licences and can be found at https://forestry.gov.scot/support-regulations/felling-permissions.

There are some significant changes, however, with three of them highlighted below:

- Windblown trees used to be exempt from the need for a felling licence. This is no longer the case under a Felling Permission. This is to ensure that windblown areas are restocked.
- For broadleaves the minimum restocking density is now 1600 trees/ha rather than the previous 1100 trees/ha. For small scale restocking projects using tree shelters to protect the broadleaves this will increase the cost of restocking by about £1500/ha.
- If using an agent to apply for Felling Permission for you, you will now need to complete an agent's mandate form specifically for felling permissions.

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Sector Focus: Legume Crops

Improving markets and increasing interest

Grain legumes are often seen as a low income crop in arable rotations, with higher value break crops such as rape given preference. However, pulse prices are improving due to crop and weather issues and rising demand for locally-grown legumes for both feed and food. Spring bean margins have increased in 2019, and despite the dip in 2018 production due to the dry summer and uncertainties around Brexit, exports to the EU rose, within which the UK is by far the largest field bean producer. Higher value feed markets, such as protein substrate for salmon feed, as well as more options for products destined for human consumption (with a premium of up to £100/t), offer better returns.

Feed options

Table 1: Average feed values of peas and beans, with barley and soya for comparison (SAC Feedbyte)

Feed	Metabolisable Energy (MJ/kgDM)	Crude Protein (% DM)	Starch (% DM)	Relative feed value (£/t) Barley at £167/t Rapeseed at £220/t
Peas	13.5	26.0	44	206
Beans	13.3	29.0	39	204
Barley	13.2	11.5	57	-
Soya	13.8	56.5	2	284

Both peas and beans are a good source of energy and protein and are comparable in energy to that of barley. They also have quite a good level of starch which provides a good source of fermentable energy to the rumen. They can be fed whole to sheep at an inclusion rate of up to 15% of the concentrate for lambs and 25% for ewes. Rancidity can be an issue in ground peas and beans in storage particularly when stored for a prolonged period so they should be used reasonably quickly to avoid this as it also effects palatability.

Legume and cereal mixes can be harvested together and either used together or gravity separated and blended as necessary. Separation and processing for feed (e.g. rolling) can be done on-farm given the right equipment, with the mixed feed tested for feed value and topped up with nutrients to meet diet requirements as needed.

Whole crop silage can be problematic due to the protein content of legumes maintaining a lower pH than is required for effective anaerobic digestion; SRUC is currently researching opportunities for whole crop silage of pea and spring barley mixes. Other research projects such as ReMIX, OKNetEcofeed and, previously Legume Futures, are researching home-grown proteins as feed.

Food market options

Consumer trends also indicate market opportunities for UK grown legumes according to research conducted in Portugal on European pulse market trends between 2013 and 2017. During this time the UK saw a 19% growth in pulse product launches and 39% in the EU. While high-protein products have previously been aimed at a fitness market The Grocer highlights the expansion into high-protein snacks foods to meet demand from the more health-conscious everyday consumer, such as crisps alternatives, energy/cereal bars and ingredients for smoothies. Pea and bean flour also have potential for flour alternatives in a gluten-free market which grew 73% between 2013 and 2017.

The increase of 196% in vegan and vegetarian consumers during the same time period also offers scope for innovative plant protein products. Increased awareness among all consumers about the origins and environmental impact (deforestation, water use and air miles) of soya used in many products is also creating impetus for a more locally-sourced and environmentally friendly alternatives.

British companies such as Hodmedod's, based in Suffolk, sell a range of over 60 products, using fava beans to create accessible products from a widely home-grown and largely exported product, as well as creating markets for traditional and previously out-of-favour crops, such as carlin peas.

The main barrier for this is ability to process specialist and niche products, such as dehulling, milling or canning. Many processing plants are purpose built for particular crops, and struggle to accommodate smaller quantities of more niche crops; furthermore, while canning might produce an easy-to-sell product, the cost of canning for lower volume crops is often prohibitive.

2019 market outlook

- *Lower UK pulse area expected in 2019 but a bounce back of yields could support output.*
- *Peas and beans are currently valued at £220-£359/t for human consumption, depending on variety. Maple and tic beans are niche and undersupplied.*
- *A growing interest in non-soya proteins supports growth in the pea and bean market.*
- *In a no-deal Brexit, beans and peas would face tariffs of just 3.2% and 0% respectively, compared to tariffs of 6-50% for wheat (based on the current wheat price and variable according to tariff rate quotas). The UK also exports largely to non EU markets i.e. N Africa.*
- *Cleaning and upgrading is also possible to convert feed grade into food grade products and legume crops count towards greening payments to producers.*

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Brexit Delay Implications

Brexit delay

The UK's exit from the EU has now been extended by EU agreement until 31st October from previous deadlines of 29th March and 12th April. The UK can leave earlier if; (i) the UK parliament agrees the EU withdrawal deal (EU exit on the first day of the following month) or (ii) the UK fails to participate in EU elections (EU exit 1st June 2019). Neither option looks likely at present. Government discussions with the opposition Labour party are ongoing but little progress yet been made. The UK is also currently preparing to participate in the EU Parliamentary elections on 23rd May.

On the one hand this delay gives longer for UK agriculture to adapt to whatever changes may occur in trading relationships with the EU and third countries. On the other hand, the extension simply extends the uncertainty. For some sectors this could result in a no-deal scenario at a busy period for export trade e.g. post-harvest for cereals/seed potatoes and finished lambs. Already this is curtailing UK forward exports.

No-deal preparation

Third country bi-lateral deals
The UK government is seeking to replace bilateral trade deals with around 40 countries that the UK enjoys as an EU member before departure from the EU. Currently the UK has reached agreement with seven countries or trade blocs. The additional time until October may help other large deals to be agreed with key markets such as Canada, Korea (whisky) and Japan (malting barley).

Animal Health
On 10th April there was a positive announcement from DEFRA on animal health in the event of a no-deal. The EU have now listed the UK as an approved 3rd country meat and livestock exporter. This makes UK meat and livestock products and live animal exports permissible in a no-deal situation. While additional veterinary inspections and tariffs would still apply at least exports could continue where economically feasible. For full details see the government announcement: https://www.gov.uk/government/news/uk-listed-status-application-approved-to-assure-animal-and-animal-product-movements-in-a-no-deal-brexit.

Plant health and breeders rights
The arable sector is now urgently seeking similar EU recognition for UK plant exports such as seed potatoes and crop seeds, so EU exports can continue come the end of October if there is no-deal (all be it with additional phytosanitary checks and possible tariffs). The timing of any agreements is dependent on the EU authorities who have stated that the UK cannot apply for third country certification until after EU departure. At present it is understood that any such application could take some time to process. Therefore the movement of the potential departure date to the start of the traditional EU export period could cause difficulties if not resolved quickly. For the latest information check with SASA who recently published further guidance: http://www.sasa.gov.uk/eu-exit-guidance/potato-eu-exit-guidance.

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Key economic data

General Indicators		Price indices for February 2019 (Defra 2015 = 100)			
		Output Prices		**Input Prices**	
Base interest rate	0.75% (0.50% Aug '18)	Wheat	143.95	Seeds (all)	104.4
ECB interest rate	0.00% (0.05% Mar '16)	Barley	152.71	Energy	117.7
UK (CPI) inflation rate	1.9% (target 2%)	Oats	168.31	Fertiliser	107.2
UK GDP growth rate	0.2% (Q4 '18)	Potatoes	139.57	Agro-chemicals (all)	106.3
FTSE 100	7,425 (30 Apr'19)	Cattle and Calves	99.61	Feedstuffs	119.2
		Pigs	104.51	Machinery R&M	107.8
		Sheep and Lambs	108.68	Building R&M	112.5
		Milk	119.54	Veterinary services	115.2

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