Farm Advisory Service

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June 2017

News in brief

Polling cards at the ready

With just over a week now till the General Election political debates are once again heating up among the parties. Plans to increase NHS budgets, spending on schools, taxation, balancing the budget, and abolishing tuition fees are just some of the pledges coming from the UK Conservative and Labour parties. Closer to home, the Scottish parties are also continuing to debate about a potential second independence referendum; then of course there is Brexit…

It is unlikely that the result of the Election will affect Brexit, with both the Conservative and Labour parties saying they will enact the EU referendum result, although if Labour wins they are more likely to push for a 'soft Brexit' as opposed to a 'hard Brexit'.

Whoever the elected Government ends up being it will be their job to lead the Brexit negotiations with the EU and getting a good deal for agriculture will be essential. They will have to negotiate new trading arrangements and immigration rules, as well as devise a new system of agricultural support, not an easy task!

Looking for a diversification idea?

One option could be deer farming. With retail sales of venison on the increase there is a clear consumer demand. Coupled with low start up costs, a good return on stock and abattoir facilities located in Scotland it might be an enterprise worth considering, particularly for upland farming businesses that are faced with dwindling subsidies. See this month's Sector Focus article for further information on venison markets.

Next month….

- Autumn cropping decisions
- Options for rural support post Brexit

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This month's editor:

Gillian Inman

NFUS Brexit election manifesto

Ahead of the General Election on the 8th June, the NFUS has published their manifesto on what a good deal for Scottish agriculture will depend on. Their three priorities include:

- Bold and ambitious Free Trade Agreements with the EU and international trade partners, which upholds exacting standards, limits regulatory divergence and protects the UK market from cheap imported produce.
- A re-drawn agricultural policy with a ringfenced budget that is geared towards active, efficient and productive agriculture, with the policy priorities developed and delivered by the Scottish Government.
- A sensible approach to controlled immigration which allows the Scottish agriculture and food processing industries access to EU workers for seasonal and permanent, skilled and unskilled posts.

The NFUS manifesto also includes their views on current regulation, market opportunities and the creation of opportunities for new entrants. See https://www.nfus.org.uk/userfiles/images/Policy/Brexit/The%20Brexit%20Election%20-%20Full%20Document.pdf for further details.

New forestry legislation for Scotland

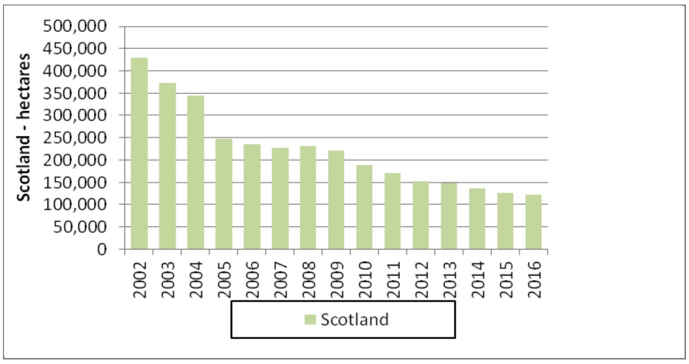
Following the introduction of the Forestry and Land Management (Scotland) Bill, the Scottish Parliament is considering their first piece of forestry legislation. What changes will the legislation bring and what will the bill deliver?

- Improved accountability, transparency and policy alignment. Forestry will be fully accountable to Scottish Ministers and the Scottish Parliament.
- A modernised legislative framework to develop, support and regulate the sector in Scotland.
- More effective use of Scotland's publicly owned land. The National Forest Estate will be managed to deliver economic, environmental and social outcomes and the Scottish Government will be able to offer land management experience and expertise to others.
- Creation of a new executive agency Forestry and Land Scotland and a dedicated forestry division within the Scottish Government.

These changes are being pledged to enable the Scottish Government to better support the industry, create growth in the rural economy, mitigate climate change and develop the role forestry plays in health, education and recreation.

Organic land area in decline

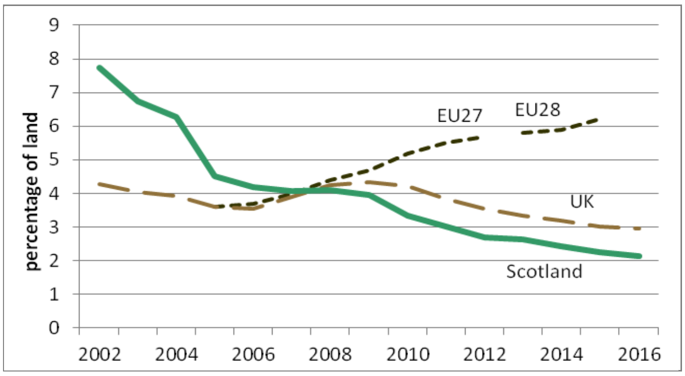
Statistics recently published by the Scottish Government has revealed that the area of land used for organic farming in 2016 was 121,598 hectares, down 4,669 hectares (-3.7%) compared to the previous year, see chart below.



Source: Scottish Government

Although there was a 1.2% decrease in the area of organic potatoes and vegetables, the overall reduction was mainly due to fewer hectares (-4.2%) of grassland being organic. Interestingly, over the same period the area of land in organic cereals increased by 1.0%.

The area of organic farmland in the UK as a whole has also fallen, see chart below, albeit by a slightly lower amount at -2.6%. In contrast the percentage of farmland that is organic in the European Union is on the increase.



Source: Scottish Government

Why the decrease in organic land area in Scotland and the UK? The organic bodies are putting it down to a lack of confidence in the organic market and lack of long-term government support.

At a time when everything is in a political turmoil, time will only tell how high organic farming is on the forthcoming elected governments agenda!

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Global crop weather improves

After a severe dry spell across much of the UK and parts of Europe heavy rain has arrived, including in Scotland. While some crop damage may have occurred due to the dry spring this heavy rain should be early enough to allay the worst fears. However parts of Spain, eastern France and Germany remain dry. Nonetheless EU grain markets have fallen aided by the strengthening of the euro against the dollar. The so-called "Trump Dump" of US dollar assets has accelerated as Donald Trump's chaotic Presidency including his sacking of the CIA chief continues to alarm investors.

In the US, cold wet weather has slowed sowings and crop emergence with some maize crops requiring re-sowing. This all points to a smaller US maize crop and more soyabeans in their place. The recent cool wet conditions also threaten the quality of the wheat harvest which is just starting in southern states. Recently, warmer and drier conditions have returned to parts of the US.

With world weather and crop conditions generally improving in recent weeks markets have remained relatively relaxed. Time remains for an upset however, it will take a major crop problem to emerge somewhere important for markets to strengthen significantly.

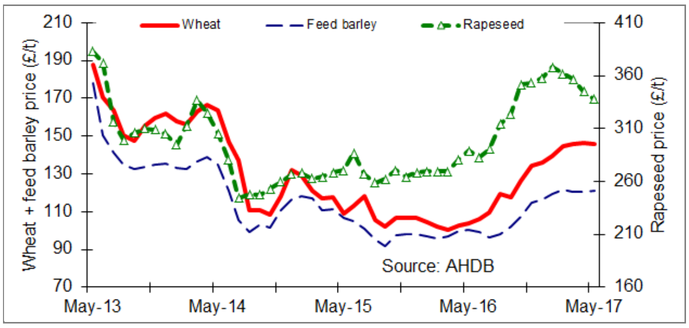
In the UK lower world grain markets have been largely offset by a weakening of sterling, as political tensions over Brexit mount, leaving grain prices in sterling relatively unchanged.

UK LIFFE wheat futures for November 2017 are virtually unchanged in the last month at £140.45 and physical prices are also little changed.

Wheat prices in Scotland now appear capped at the price level of imported wheat. Trade data shows the UK was a net wheat importer in March to the tune of 97,000t. Higher UK wheat ending stocks are now expected come June and long holders of wheat may face more difficulties in moving wheat before harvest. The arrival of rain has also boosted yield prospects for the coming UK harvest and taken the pressure off buyers.

- Rain reduces risk and scale of UK shortfall in wheat and barley come harvest.

UK spot ex-farm grain and oilseed prices



World grain outlook tightens

In their first estimate for 2017/18, the USDA are forecasting a decline in world grain ending stocks; the first in five years. Total world grain stocks (wheat and feed grains) are set to fall 7% in 2017/18 to 480mt and stocks-to-use ratios to drop to 23%; the lowest in four years and down from 24.6% in 2016/17.

The fall in stocks is driven by maize with wheat stocks continuing to climb. Rising world demand spurred on by relatively low grain prices and rising population and wealth are a key reason for falling maize stocks. Despite this decline stocks are expected to remain relatively comfortable and markets have not strengthened particularly as a result.

USDA world grain estimates, (mt)

	2016/17	2017/18	Diff.
Wheat - Output	753	738	-15
Wheat - Use	740	735	-5
Wheat - Stocks	255	258	+3
Maize - Output	1,065	1,037	-28
Maize - Use	1,054	1,062	+8
Maize - Stocks	224	195	-29

- Falling world grain stocks offer potential for market rebound **IF** a major crop problem emerges in the next 6 to 8 weeks.
- Otherwise world market could remain subdued.

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Indicative grain prices week ending 19 May 2017 (Source: SACC/AHDB/trade)
'* Before oil bonus, # Ex-farm England spring max 1.85%N, ~ nominal

£ per tonne	Basis	May 17	Jun 17	Hvst 2017	Nov 2017	Nov 2018
Wheat	Ex-farm Scotland	146.00	146.00	137.00	140.00	140.00
Feed barley	Ex-farm Scotland	122.30	122.00	114.00	117.00	117.00
Malting barley	Ex-farm England	-	148.00	145.00	148.00	148.00
Oilseed rape*~	Delivered Scotland	-	-	296.50	-	-

Producers smiling

The price chart says it all. In early May, a 390kg DWT steer was making close to £200 more than a year earlier. The pickup in finished trade through April fed through quickly to the later spring calf and store prices, meaning most producers benefited. Add in the generally good weather through calving the mood in the production end of the chain is pretty good.

Processors on the other hand are now having to contend with higher cattle prices and supermarkets competing hard on price on the shelves. Good early summer weather and bank holidays are helping demand for steaks especially. But demand elsewhere is reportedly not that strong, which suggests that a lack of cattle is underpinning the trade. That the price of young bulls and cull cows (up to £1,400) has improved, most supports this case.

This week (w/b 22 May), 370-375p/kg DWT is on offer for typical Scottish steers with Angus up to 405p.

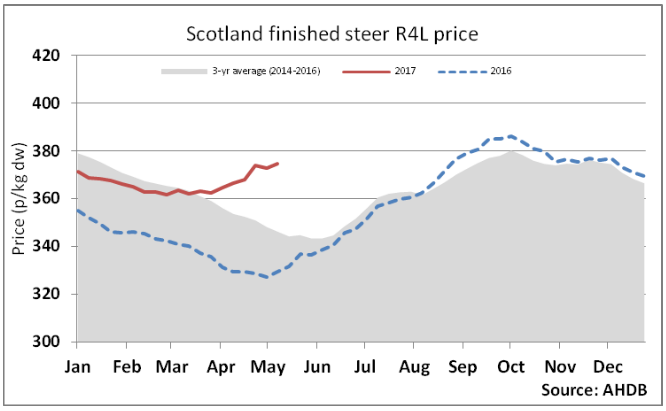
Beef trade good globally

Cattle prices are doing well almost everywhere in the world. A combination of tight supply and good demand explain the situation.

The Australian's are rapidly rebuilding their suckler herds having cut them because of bad droughts. As ever, while offloading breeding stock in the bad years floods extra beef onto the market depressing prices, rebuilding herds means retaining extra heifers. In January, the percentage of female cattle killed in Australia was the second lowest in the past 25 years. The famous US beef cycle is also in the upswing stage with the cow herd expanding.

A growing taste for beef in China accounts for much of the good news on the demand side. In 1990 each Chinese ate just 1kg of beef per year. By 2014, per capita consumption was up to 4.3kg and growing. American government economists expect China to import 900,000t of beef this year, up from 400,000t in 2013.

Looking forward, a firm global trade for beef is helpful, but it is the fundamentals of the British market that are most important. With cattle numbers relatively tight, a weak exchange rate limiting imports and a strong preference for home produced beef, the finished cattle price looks set to remain in the producers favour.



Making most of cheapest feeds

Last week, I had the privilege of joining the West Fife beef discussion group for the day. Having enjoyed a couple of excellent farm visits in the afternoon, the after dinner session looked at opportunities to lift margins. Making better use of grassland to cut costs is all too often overlooked. Consider the following:

- Creep at £240/t and 87% dry matter = 28p/kgDM.
- Grass based on (a modest) annual utilisation of 6,000kgDM/ha at a cost of £150/ha (seed, fert, sprays and plastic) = 3p/kgDM.
- Applying extra N fertiliser will cost 5p/kgDM based on CAN at £190 and a utilised response rate of 1:15 (i.e. £190 divided by 270kgN x 15kgDM).

Note that the above costings do not allow for fixed costs, so growing more grass to make silage significantly lifts the cost per kgDM. The message is simple: get more out of quality grazed pasture.

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Prime cattle prices (p/kg dwt) (Source: drawn from AHDB data)

	E&W			Scotland			E&W		Scotland
	South R4L Steers	North R4L Steers	North -U3L Y. Bull	R4L Steers	R4L Heifer	-U3L Y. Bull	South -U4L Steers	North -U4L Steers	All -U4L Steers
29 Apr	344.3	347.4	315.1	366.6	370.6	343.3	360.7	358.4	369.0
6 May	343.6	349.7	324.2	368.5	372.1	350.7	364.7	362.9	381.7
13 May	344.2	352.0	328.8	370.6	373.0	356.9	365.9	360.9	372.6

Market summary

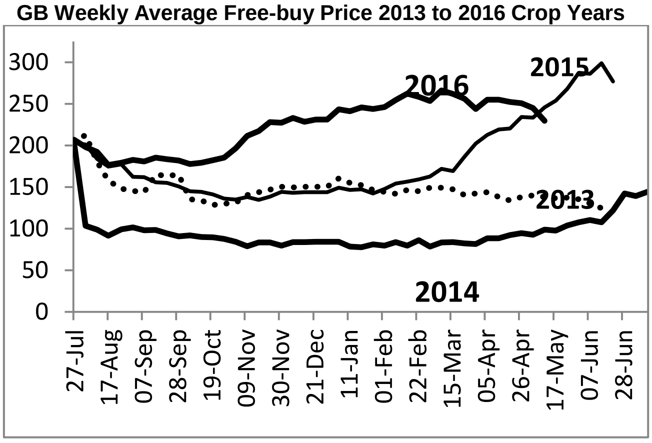
- For the week ending 12 May the AHDB's Weekly Average GB price for all ware potatoes dropped by £12.19 over the week to £205.86/t. The Weekly Average Free-buy price which excludes all forward contract material fell by £15.27 over the week to £229.69/t. As the cross-over point in the graph below illustrates, this is the first time since the start of the 2016 season that prices have fallen below the equivalent figures for the 2015 crop.

GB Weekly Average Price 2016 and 2015 Crop (£/t)

Crop Year	12 May	5 May	28 Apr	21 Apr
All potatoes 2016	205.86	218.05	213.78	217.18
All potatoes 2015	213.81	214.16	209.14	202.16
Free-buy 2016	229.69	244.96	250.81	252.31
Free-buy 2015	245.59	233.28	234.24	220.36

Source: AHDB

GB Weekly Average Free-buy Price 2013 to 2016 Crop Years



Source: AHDB

Planting almost complete

Apart from some seed crops, planting is now drawing to a conclusion in most areas. Rain is required however for crop development with irrigation being used on early crops in Ayrshire.

So far this season the weather has been unusually dry which is already causing some concerns for a wide range of arable crop growers. Weather conditions over the next few weeks and into the growing season will be key to determining the size of the forth-coming harvest and its associated impact on the industry.

Remaining stocks from the 2016 crop are reported to be keeping well albeit with some seasonal deterioration apparent. There are reports of some skin finish issues in material destined for packing and some cases of rejected loads being circulated.

Movement mainly for contracted stocks

In the Scottish packing sector free-buy demand is limited, with most concentrating on using contracted supplies. Prices have firmed for material destined to England, with the best quality supplies holding their value. Typically grade 1 Maris Piper is from £200 to £260/t with value pack Piper down at £120-£150/t. General grade 1 whites are within the £200-£250/t price range with value pack material within the £120-£150/t

In the bag market, there is steady movement for chipping supplies from East Lothian. There is reported to be slow demand for general ware samples with trade returning to normal following the May Bank Holiday. Typically Maris Piper for chipping is trading within the £230-£240/t price range with Piper seed tops around £130-£140/t.

Small amounts of Ayrshire Epicures are now being lifted for local stores with a retail price of £5 per kg. Larger volumes for the supermarkets are not expected for another week.

Exports 8% ahead of last year

Scottish Potato Exports July –April

	2016-17	2015-16	Change %
Seed (Tonnes)	84,746	78,526	+8.0
Ware (Tonnes)	8,364	7,855	+6.5
Total (Tonnes)	93,110	86,381	+7.8

Export season July to June Source: SASA

With the export season now in its final quarter, it is worth noting that Scottish potato exports to non EU countries are currently running 8% ahead of last year at this stage in the export season. The largest market for seed is Egypt (55,394t) and that largest market for ware is the Canary Islands (7,953t)

Diary dates

Potatoes in Practice, the UK's largest outdoor potato event is scheduled for Thursday 10th August 2017. There will be a special focus this year on blight with field trials demonstrating recent research on the impact of different agronomy regimes. Further information from: www.hutton.ac.uk/pip2017

The AHDB's biannual potato industry showcase event – BP2017 will be held this year over 22nd and 23rd November. The venue is as in previous years – the Yorkshire Event Centre, Harrogate. Further information from: www.bp2017.co.uk

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Ramadan helping prices

A very good lamb and cull ewe trade this week (w/b 15 May) as demand is boosted by Ramadan. Reports from the markets in mid-Wales show lambs making 220-240p/kg LWT and ewes averaging £70 with the best over £100. Here in Scotland, new season lambs are now flowing in tradable numbers with 470-480p/kg DWT on offer. The best grading lambs are grossing over £100.

A good month ahead

Getting lambs finished and away in the next month will be a priority for early spring lambing flocks. While most of these will be located in southern Britain, it's surprising the number of Scottish producers that start lambing in late February. Given the cost of such production, these lambs need to capture the prices likely in early June.

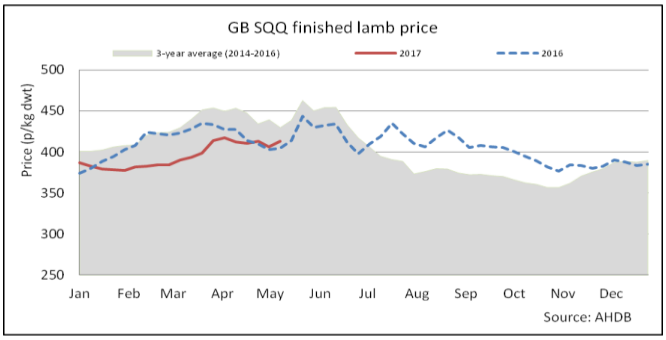
This year's timing of Ramadan will help. While demand for sheep meat is good at the start of this important Muslim festival, the main period of Ramadan requires strict daily fasting curtailing demand. Eid al-Fitr marks the breaking of the fast and lasts several days with Ramadan ending around 24 June. So if you have some lambs ready, get them away before the Royal Highland.

How might the lamb market develop thereafter? A repeat of last year's main lamb selling period would be nice. As the chart shows, for July through to November, the finished price stayed well above recent year levels. The trouble is, it carried on at those levels through till very recently. Most store lamb buyers will be nursing losses from last season, so may be less generous in the marketplace come the late summer.

Perhaps more importantly, the UK lamb crop may well be the biggest in nearly a decade. December census results point to a bigger breeding flock, with generally good weather through lambing improving lamb survival. A lot of lambs are reportedly on the ground.

After June, demand will depend on supermarket sales and exports. The former will depend on how much the supermarkets want to promote (discount the retail price) lamb sales. While the latter will be helped by the continued weakness of sterling against the euro, plus economic growth on the continent. Last year taught us that a favourable currency does not necessarily lead to an export boom: consumers must want to buy lamb.

The good news is that most European economies are growing at a decent clip. Hopefully the new French president can help rejuvenate our main export market. Better news still, the German sheep meat market is developing thanks in large part to a growing Muslim population. AHDB estimate that Britain exported 10,900t to Germany in 2016.



Will demand for breeding stock help? Possibly not: anecdotal evidence here in the west of Scotland suggests that sheep flocks are declining again. Auctioneers also note how the breeding trade has changed over recent years as an aging farmer population has switched to non-breeding sheep enterprises. Hence, strong demand for ewe lambs and couples but trouble selling in-lamb females.

Post lambing analysis

With lambing complete, a quick review can help identify opportunities for improvement.

The cornerstone of good sheep margins is a good scan plus a high survival rate. Say the 500 mules you tupped scanned 180%, your potential crop was 900 lambs. Have you got 800 lambs now? Of course, I can't have lost 100 lambs!

Yet achieving an 89% survival rate (to marking) is pretty good for higher scanning flocks. No one likes counting the dead 'uns, but spending a little time establishing your survival % and what accounted for lamb deaths, will help you plan for next season.

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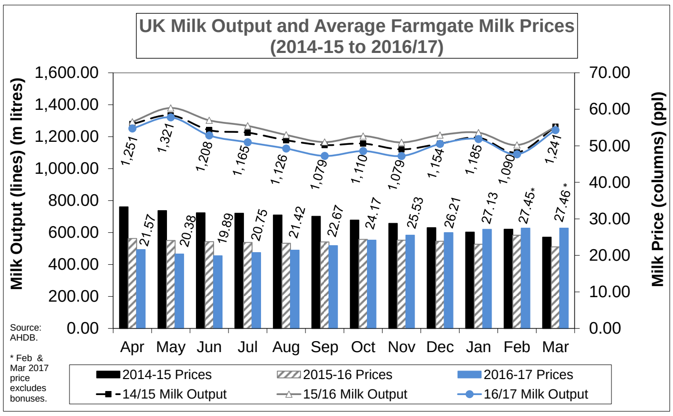
Week ending	GB deadweight (p/kg) 16.5 – 21.5kg			Scottish auction (p/kg)			Scottish Ewes (£/hd)	E&W Ewes (£/hd)
	R2	R3L	R3H	Stan	Med	Heavy	All	All
29 Apr	416.8	417.6	412.4	220.9	212.5	174.3	66.7	66.8
6 May	411.0	410.8	408.9	194.5	222.9	214.2	64.3	68.4
13 May	416.7	419.3	416.2	227.5	225.6	211.2	66.8	68.8

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

March ’17 production increase is lower than might be expected

DEFRA milk production figures for March 2017 show that UK output is estimated at 1,241.06m litres (before butterfat adjustment). The March ’17 figures represent a drop of 18.81m litres on March ’16, when production stood at 1,259.87m litres. This gives some indication that the spring peak in milk production may be lower than last year. Cumulative milk production for 2016-17 stands at 14,009.25m litres which is 819.83m litres behind last year’s total of 14,829.08m litres.

From this point forward, our milk price chart will show the average UK milk price excluding retrospective bonuses, since DEFRA no longer publishes the average price including retrospective bonuses. There has been little change to the average price level between February and March. The UK average price (before retrospective bonuses) for March 2017 is estimated at 27.46ppl, compared to 27.45ppl during February 2017. More recently, however, farmgate milk prices have been on the move, with some of the more relevant changes highlighted in the following section.



- UK milk production increased during March 2017 but there are signs that the spring production peak could be subdued this year.

Milk price update – June 2017

Price announcements for June 2017 include:

- Müller M&I – After holding their farmgate milk price for three months, Müller has confirmed a 0.50ppl milk price reduction for non-aligned suppliers from the 9th June 2017. This takes the price for non-aligned suppliers down to 26.19ppl (see table).
- Müller M&I – The retailer supplement for April 2017 is confirmed at 0.276ppl.
- Graham’s Dairies – Prices will reduce by 0.50ppl from 1st June 2017. This takes Grahams farmgate milk price down to 26.25ppl.
- First Milk – FM’s price reductions for May 2017 were released after the May ’17 edition of Agribusiness News had gone to print, so for equity of coverage, the FM price changes from 1st May 2017 are summarised as follows:
  - Mainland Scotland – reduction of 0.25ppl taking the standard litre price down to 25.84ppl (see table below).
  - Lake District – reduction of 0.35ppl taking the standard litre price down to 26.76ppl.
  - Midlands – reduction of 0.10ppl taking the standard litre price down to 26.15ppl.
  - Haverfordwest – reduction of 0.35ppl taking the standard litre price down to 25.88ppl.

Annual Average milk price estimates for June 2017 (ppl)	
Milk Buyers – Scotland	**Standard Ltr***
Lactalis (No profile or seasonality) (3 month contract) [1]	27.50
First Milk Balancing- A price (90% of production). [1,2]	25.84
First Milk Manufacturing (Lake District)- 4.0% Butterfat & 3.3% Protein-A price (90% of production). [1, 2]	26.76
Müller Wiseman- M&I - Müller Milk Group [1, 3]	26.19

[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] *May 2017 prices stated. June 2017 prices awaiting release.*

[3] *No monthly supplementary payment included in the price estimate.*

Dairy markets set to improve

Recent reports suggest that prices may have ‘bottomed out’ and that improved prices look set to prevail during the second half of the year. Our table of UK commodity prices below, shows cream and butter prices starting to improve between March and April, with only SMP prices going downwards by £50/t. Markets have continued to strengthen further on the back of high demand for butter. Looking forwards, the prospect of improved SMP prices may be tempered, however, by the relatively high level of stock currently sitting in intervention storage (approx. 350,000 tonnes).

UK dairy commodity prices (£/ tonne)	Apr 2017	Mar 2017	Nov 2016
Butter	3,725	3,650	3,800
SMP	1,500	1,550	1,850
Bulk Cream	1,730	1,690	1,990
UK milk price equivalents (ppl)	**Apr 2017**	**Mar 2017**	**Nov 2016**
AMPE (2014)	27.67	27.79	31.46
MCVE (2014)	31.79	32.08	33.68

Source: AHDB

Royal Highland Show

This year the show is on from 22nd – 25th June and SAC’s new Senior Dairy Consultant, Csaba Adamik, will be available to meet clients and take enquiries. We look forward to seeing you there.

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Venison market trends

Over the last decade, UK retail sales of venison have continued to rise. In 2006 venison's sales were at £32m and increased by over 34% to £43m by 2009 with future growth expected to continue.

Venison has benefitted from consumer preferences for more 'natural', less processed meat products particularly amongst younger consumers. Venison also benefits from the 'flexitarian' trend to eat less meat but meat that is higher; value, health and welfare. Venison has also been popular with celebrity chefs, further boosting appeal to the younger consumer.

A number of major retailers have indicated that general sales of venison are on the increase. Sainsbury's reported its venison sales up 115 per cent in December 2015 over the previous year, driven by summer sales of venison sausages and burgers. Other retailers reported sales up by 50% on the previous year.

Farmed venison markets

Scotland produces an estimated 3,500t of venison per annum, of which just over 50t comes from farmed deer. Deer farmers are unique in the livestock sector in being able to kill their deer either on the farm or in an abattoir. At the moment there are two dedicated abattoirs in the UK killing farmed deer, one in Scotland and one in Yorkshire. Only two supermarkets in the UK purchase farmed venison and generally from abattoir killed carcases. These two abattoirs are:

1. Dovecote Park in Yorkshire supply Waitrose with British farmed venison which they source from the First Venison Group. This is a co-operative of 33 UK farmed venison producers with 7 in Scotland that supply farmed deer for Dovecote Park to supply Waitrose. The group supplies over 2,500 carcases (approx. 30% from Scotland) which are slaughtered at Round Green Farm, a purpose built abattoir in South Yorkshire.
2. Stagison – The only deer abattoir and processing plant in Scotland. Stagison accept deer from farms and estates all over Scotland. They take calves from 6 months old to finish on the farm, to yearlings that are ready to process. They currently supply venison products to chefs and suppliers in the Scottish food industry.

A third option for farmers to sell their deer to finishers. There are a number of producers in England who will accept deer from six months old and finish them on their own farm before processing. There is also the option for farmers to kill their own deer on the farm with a free bullet and transport the carcases intact to a licensed red meat premises within strict time limits for skinning and evisceration. This is uncommon in Scotland and can lead to deer being treated as wild, not farmed.

The Scottish Venison Strategy Group wants to encourage increased production of Scottish farmed venison and reduce the UK's reliance on imports. In the short to medium term the Scottish Venison Strategy Group anticipates that an additional 1,200 tonnes of venison per annum is required to keep step with ongoing demand. It is estimated that up to 300 to 400 more deer farms, if at the same commercial scale as those operating in Scotland at present, will be required by 2020 to sustain current market share.

Wild venison markets

Landowners have responsibilities for the welfare of deer and their natural habitat. This involves management of deer numbers, mainly by regular culling. For red deer in particular a collaborative approach to deer management has developed with the formation of Deer Management Groups (DMGs), of which there are now more than 70 in Scotland. DMGs mostly cover the Scottish Highlands, but are now becoming established in other areas where there are large commercial forests.

A large percentage of the wild venison handled in Scotland is processed by three large venison processors, who supply the major retailers. These are Highland Game based in Fife, Simpson Game near Inverness and Hubertus Game in Perthshire. There are also a number of English processors that will process Scottish wild deer and supply the retailers. In Scotland there are also a number of smaller producers and estates who supply local restaurants, fine food suppliers, farmer markets, butchers etc. Many Scottish stalkers and larders are members of the SQWV Ltd (Scottish Quality Wild Venison Ltd) which exists to maintain, develop and promote Quality Assurance Standards throughout the whole Venison industry.

Support available

- **Venison Advisory Service Ltd (VAS)** provides support and advice to those considering setting up a commercial deer farm business.
- **Scottish Venison Partnership** offers information on both wild and farm deer.
- **SAC Consulting Food and Drink** can support venison producers develop a processing. marketing and sales strategy.

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Management Matters: FIT Changes to AD support

FIT review

The UK government has recently been reviewing the sustainability criteria for FIT's. The intention was to have the new regulations in place by spring 2017. However, a drafting error in the RHI regulations meant it had to be withdrawn and now will not be laid before UK parliament until after the General Election, delaying implementation until at least July.

So what does this mean for prospective renewable energy projects after the changes come into effect?

- The rules for fuelled technologies will be the same (almost) for the FIT and the RHI.
- For plants claiming both FIT and RHI, the RHI rules will apply.
- The new FIT rules including sustainability, are only for new plant – not retrospective.

FIT changes to AD

A minimum of 50% of biogas must be derived from wastes or residues. This is probably the single biggest change to the rules affecting new AD projects. As most non-fatty wastes have low methane potential, this normally means far more than 50% of the feedstock needs to be residues and wastes. Currently residues and wastes generate only around 20-30% of biogas for the majority of Scottish farm scale AD CHP plants.

However, it's not all or nothing but scaled proportionally to the amount the 50% threshold is missed by. Even where 100% crops are used 50% of the electricity produced would still receive FITs.

Carbon limits on the ELECTRICITY produced by feedstocks will be introduced of 66.7gCO2eq/MJe until 2020 then tightening to 55.6gCO2eq/MJe. Compare this to the RHI limit 34.8gCO2eq/MJth. Most engine based CHP units produce approximately 1:1 electricity to heat, this means the RHI criteria appears almost twice as tight. The full details of the calculations will not be known until the legislation is published, however, we would assume the same calculation methods that are used under the Renewable Obligation (RO).

Due to the fact that energy is lost in a CHP engine (not all the heat can be recovered) you need to put more energy into the CHP engine than you get out in electricity and heat. In turn this means that the carbon of the electricity is higher than that of the feedstock, typically about 180-200% of the feedstock value.

Whereas in practical terms for AD the RHI carbon limit as feedstock goes is far higher than it appears, as the carbon of the feedstock is split between the heat and the electricity. A further factor is introduced to the RHI calculation which accounts for the fact that it is thermodynamically impossible to recover all the useful heat, this results in effectively lowering the final heat emissions to approximately 65-80% of the feedstock value.

So in effect this means that for the FIT up until 2020, any feedstock with a carbon value over about 33gCO2eq/MJ is at risk from failing the criteria. After 2020 that will tighten to 27gCO2eq/MJ for feedstocks. Compared with the RHI, the same feedstock limit is about 47gCO2eq/MJ. To put this in perspective, silage grass grown using all bagged fertiliser could potentially be 27g of carbon, however as soon as digestate is used to replace bagged fertiliser, carbon emissions fall sharply.

Land Criteria will also be introduced in line with those already used for the RHI. The aim is to exclude fuels or feedstocks being grown on land that has high biodiversity or carbon stock. As far as UK AD operators are concerned they would need to prove the land crops were grown on was not; designated for conservation purposes, highly biodiverse grassland, peatland, formerly afforested or former wetland. The simplest way to evidence this is farm records such as IACS from 2007/08 or aerial photographs prior to January 2008.

Despite the initial impression that these changes make AD CHP a difficult option for a new project (AD biomethane injection is not as affected by these changes to the FIT), when you look at the detail and calculate actual figures per project it's manageable.

In order for a project to be viable the following needs considered; eligible heat use needs to be as high as possible (digestate drying will not be allowed under the incoming RHI rules so alternative heat uses such as polytunnels, feed drying bedding drying etc. are needed). The maximum amount of crop based feedstocks would be in the region of 25-35% to avoid cutting the tariffs too much. The full government response to the FIT consultation can be found here.

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Input Costs – Fertilisers

Fertiliser	Price for bulk delivery (£/t)	Average price per unit of nutrient (£/kg)
Nitrogen - AN (34.5%)	£180-190	0.54
Nitrogen - Urea	£205-215	0.46
Phosphate - TSP	£275-285	0.61
Potash - MOP	£260-270	0.44

Note: the above prices are for May 2017 at time of writing (mid May), based on 29t loads bulk bags, they are a guide only and may vary widely.

Ammonium nitrate and urea

New season UK AN prices were released by CF in May, at or above £180/t delivered, depending on order size and location. These prices marked a sharp fall from recent levels in the £230-240/t range which were elevated due to gas supply restriction in the Baltic States which have now been resolved. Traditionally buying ammonium nitrate ahead can lead to significant savings and the lowest prices first on offer are no longer available, with prices expected to rise in the next few months. Having said that, the world market looks well supplied with competing nitrogen products.

The sharp fall in UK AN prices appears to be an attempt to maintain the volume of sales in the UK following the steady rise in UK farm usage of competing products such as urea and ammonia which have been increasingly competitive. Trade data supports this showing a decline in UK AN imports and a rise in imports of urea and ammonia. EU demand for ammonium nitrate has also been weak.

Urea prices in May were quoted in the £205 to £215/t range. UK urea imports have been increasing in recent years and trade data shows they rose 18% to 461kt in 2016. Rising UK consumption has been supported by the better value of urea per unit of nitrogen compared to AN. Urea prices have come down recently due to increasing global capacity with several large urea producers coming on line in Algeria and other North African countries; suppliers ideally placed to export to the UK.

Phosphate and potash

Phosphate prices have strengthened a little in recent months, partly as a result of a reduction in Chinese plant capacity due to tightening environmental restrictions there. However, weak demand in major markets such as India, and good production levels from North Africa, are also keeping a lid on prices at present.

Potash prices have been rising gradually in recent months due to good demand but may come under downward pressure towards the end of 2017 due to the completion of a large new potash mine in Western Canada, bringing new supplies to the market. This all points to a stable or weaker price outlook later in the year.

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Key economic data

General Indicators		Price indices for March 2017 (Defra 2010 = 100)			
		Output Prices		Input Prices	
Base interest rate	0.25% (0.50% Mar ’09)	Wheat	119.5	Seeds (all)	100.2
ECB interest rate	0.00% (0.05% Mar ’16)	Barley	124.6	Energy	108.6
		Oats	124.7	Fertiliser	94.1
UK (CPI) inflation rate	2.7% (target 2%)	Potatoes (Main Crop)	166.7	Agro-chemicals (all)	94.1
		Cattle and Calves	127.8	Feedstuffs	113.8
UK GDP growth rate	0.2% (Q1 ‘17)	Pigs	106.1	Machinery R&M	113.8
		Sheep and Lambs	104.1	Building R&M	113.1
FTSE 100	7,551 (26 May ’17)	Milk	111.3	Veterinary services	108.3

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Funded by the Scottish Government and EU as part of the SRDP Farm Advisory Service

SAC Consulting, Rural Business Unit publication
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