Issue 33 | November 2019

Milk Manager NEWS

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

Contents

This month's editor:
Lorna MacPherson

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

SAC CONSULTING

Scottish Government
Riaghaltas na h-Alba
gov.scot

Milk Manager NEWS

Market Update

UK Wholesale Dairy Commodity Market

- Fonterra's latest on-line GDT auction (5th November) resulted in a substantial increase of 3.7% in the weighted average price across all products, reaching US $3,446/t. This is the 4th successive increase in a row and by far the largest. There was very little movement in butter price of +0.2% to $4,117/t. The biggest rises were in skim milk powder (+6.7% to $2,924/t) and butter milk powder (+5.4% to $2,786/t). Cheddar showed a small drop of 0.6% to $3,609/t. Full results available at https://www.globaldairytrade.info/en/product-results/

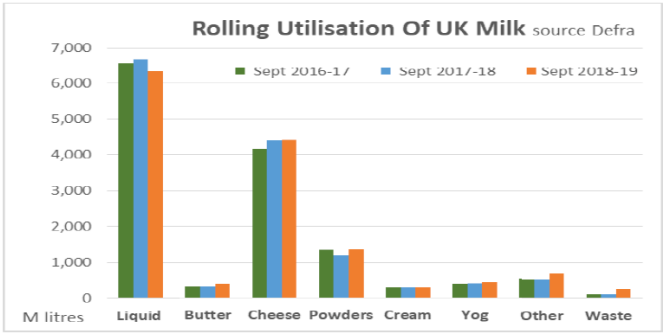
- Currency fluctuations are mainly responsible for the downwards movement in UK wholesale butter and cream prices for October. There has been little butter traded on the spot market during October with opinion that there is differentiation in the price traders are will to buy and sell at.

Commodity	Oct 2019 £/T	Sept 2019 £/T	% Difference Monthly	Oct 2018 £/T	% Diff 2019-2018
Bulk Cream	£1,490	£1,590	-6	£1,840	-19
Butter	£3,170	£3,230	-2	£4,100	-23
SMP	£2,040	£1,960	4	£1,380	48
Mild Cheddar	£2,830	£2,830	0	£3,000	-6

Source: AHDB Dairy - based on trade agreed from 1st to 28th October 2019. Note these prices are indicative of values achieved over the reporting period for spot trade (excludes contracted prices)

- SMP price continues to increase due to strong demand and for the first time in five years, the average monthly price has surpassed £2,000/t. However, the volumes involved are not enough to have an impact on the farm-gate milk price.

- Utilisation of milk for various dairy products is shown in the following graph. Liquid utilisation has been falling compared to other products over the last two years, while milk volumes have increased by 3.4%. As returns for powders has been increasing, they have benefitted from the extra growth in milk production, with increases in yogurt and other products helping utilise extra milk.



Source: The Dairy Group, AHDB and Defra

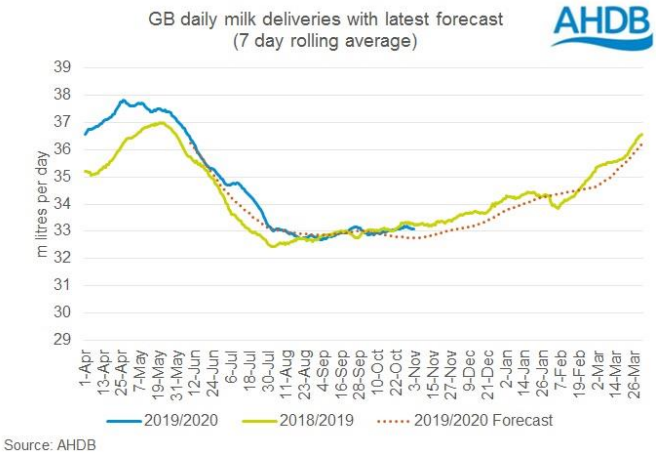
- Despite the fall in butter price in October, AMPE increased by approximately 0.5ppl from September on the back of higher SMP prices. In comparison, MCVE only rose 0.19ppl, with the whey powder component increasing from 1.7 to 1.91ppl. There was no change in cheddar and only a very slight drop in the whey butter powder component (0.03ppl).

	Oct 2019	Sep 2019	12 months previously	Net Amount less 2.4ppl Average Haulage – Oct 19
AMPE	30.21ppl	29.73ppl	28.34ppl	*27.81ppl*
MCVE	30.09ppl	29.90ppl	32.66ppl	*27.69ppl*

Source: AHDB Dairy

UK Milk Deliveries and Global Production

- GB milk production is stabilising, with deliveries 0.2% down on the previous week (for the week ending 2nd November) and 0.5% below the same week last year (equivalent of 180,000 litres).

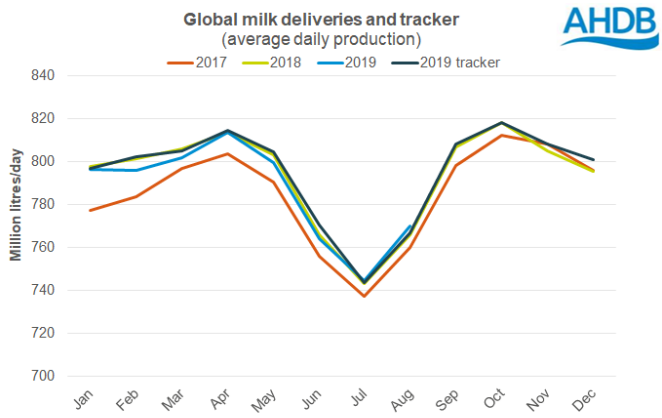


Source: AHDB

- There is little growth in global milk production, with small growth in the EU and New Zealand. However this is offset by a reduction in supply from North and South America. Year to date,

EU-28 production is up by 1% for August 2019, compared to the same month last year, with a monthly production of 12,819 million litres. Production is up 0.4% on the year to date, to August (AHDB Dairy).

- While global milk supplies for the year to date in August 2019 are 0.2% lower than the same time period last year, production for the month of August saw a small increase of 0.5% compared to August 2018, at 770 million litres/day.



Source: Eurostat, USDA, DCANZ, Dairy Australia, Ministerio de Agroindustria

Monthly Price Movements for November 2019

Commodity Produced	Company Contract	Price Change from Oct 2019	Standard Litre Price Nov 2019
Liquid & Cheese	**Arla Farmers UK**	*No change*	29.02ppl liquid 30.19ppl manufacture
Cheese, Liquid & Brokered Milk	**First Milk**	*-0.45ppl liquid -0.47ppl manufacture*	27.0ppl liquid 27.90ppl manufacture
Cheese	**Fresh Milk Company (Lactalis)**	*No change*	26.50ppl liquid 27.61ppl manufacture
Liquid & Manufacture	**Grahams**	*No change*	26.0ppl
Liquid & Manufacture	**Müller Direct**	*No change*	25.75ppl (includes 0.5ppl premium)
Liquid & Manufacture	**Müller (Co-op)**	*+0.01ppl*	29.38ppl
Liquid & Manufacture	**Müller (Tesco)**	*+0.24ppl*	31.44ppl
Liquid, Powder & Brokered	**Yew Tree Dairies**	*No change*	25.5ppl Standard A litre price

Other News

- Despite a 0.45ppl price reduction for November, First Milk has announced it is increasing its member premium (paid as a 13th payment) from 0.25ppl to 0.5ppl from April 2020 and is holding its November milk price for December.

- The 0.24ppl increase to TSDG farmers comes on the back of Promar's annual cost tracker for April 2019 to March 2020, which puts variable costs at 17.12ppl, overhead costs at 11.94ppl and depreciation at 2.01ppl (total 31.07pplp). Changes in feed, fuel and fertiliser prices for the last quarter of the year were up by 0.37ppl, which added to 31.07ppl brings the new quarterly price up to 31.44ppl. The new price is 0.2ppl greater than the November price last year.

- Research by Promar for the financial year ending March 2019, showed a 13% fall in average profit per cow across their 520 farms. Their total variable costs rose by 1.3ppl to 17.2ppl but the increase in farm income was only 0.84ppl. The top 25% herds (ranked by operating profit before rent and finance) had higher yields (+794 litres at 9,102 litres/cow) and significantly better cost management, resulting in an extra £750/cow compared to the bottom 25%. The difference in purchase feed costs between the best and worst farms were 9.86ppl and 11.5ppl respectively.

- At the end of October, Müller announced that it was serving termination notices to 14 dairy producers north of Aberdeen and introducing a tiered haulage charge to all its 230 producers in Scotland from February 2020, in an attempt to curb excess milk supplies. The haulage charge will be based on the level of expansion between 2017 and 2019 and will vary from 0.25 to 0.85ppl on all litres produced.

- On another sad note, First Milk has announced its intention to close the Campbeltown creamery with a loss of 14 jobs. This is despite the efforts of the 29 producers that supply the creamery looking to take over the running of it and a successful crowdfunding campaign which raised £95,000. The milk will continue to be collected by and paid for by First Milk.

lorna.macpherson@sac.co.uk, 07760 990901

Straights Update

Straights prices for delivery in artic loads as of early November are as follows (varies depending on location):

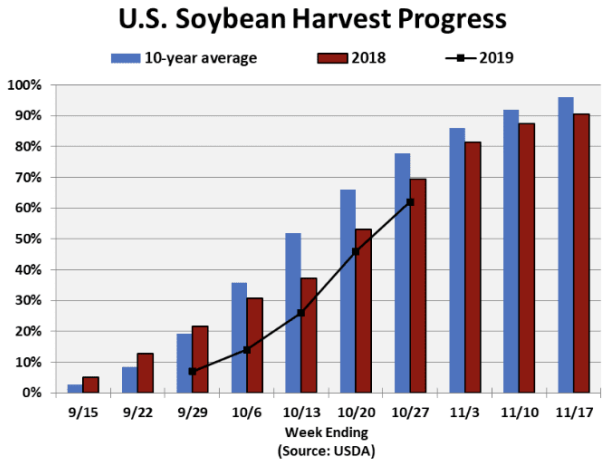
£/T for 29t loads delivery + £8/t haulage to central belt	Nov 19	Dec 19	Jan 20 - Apr 20	May 20 - Sep 20
Proteins				
Hipro Soya	302	303	303	306
Rapeseed Meal	206	206	208	-
Maize Distillers Meal	207	211	211	-
Starch				
Wheat	146	147	150	May-Aug 156 Sep 160
Barley	128	129	132	May-Aug 138 Sep 142
Maize	176	177	177	-
Fibre				
Imported Sugar Beet Pulp	193	Asa 182	182	190
Soya Hulls	151	150	150	-

Source: Straights Direct and Cefetra on 12th November. Barley and wheat prices are based on delivery to central belt (for North-East, deduct £5/t for wheat), courtesy of Julian Bell, Senior Rural Business Consultant, SAC Consulting. Prices do not include seller's margin.

Global News

- The US soyabean harvest is progressing slowly due to cold weather and snow around the Great Lakes. As of the w/c 4th November, harvest was reported to be 75% complete, compared to 81% at this time last year and an 87% average. The weekly harvest data in the graph below shows the below average pace of the 2019 harvest, and is the second slowest on record being ahead of the 2009 season when just 46% of the crop had been harvested by late October.

- The world agricultural supply and demand estimates (WADSE) report released on 8th November indicated abundant global grain supplies. While maize production was back slightly by 1.85mT to 1,102.2mT, wheat production was up 0.32mT from the last report to 765.55mT. Wheat output estimates were cut for the US, Australia, Argentina and increased for the EU, Russia and Ukraine. Overall world wheat markets are well supplied with a lot of competition from export origins; not surprisingly this is keeping world prices subdued.



UK and Scottish News

- The wet end to autumn across Scotland and much of northern and eastern parts of England will create a significant knock-on-effect into next season. Undoubtedly there will be a sharp drop in winter crop sowings; particularly wheat. This may take the pressure off our own wheat export campaign in 2019/20 and has already boosted forward wheat prices for 2020 harvest in the UK and should support feed barley prices too.

- On the flip-side the fall in winter sowings looks negative for UK and Scottish malting barley prices come harvest 2020 given that spring barley is the main alternative for land left unplanted this autumn across England and Scotland. At the same time, feed barley prices for 2020 harvest are likely to be supported by the fall in UK wheat sowings. The main competition for malting barley may therefore be farmers opting to grow high yielding spring feed barleys instead. This could provide some support for malting barley premiums in 2020.

- While the Brexit extension is a positive for export markets, the UK's exportable surplus is over 2 million tonnes and sales to date are currently below 50% of that. It is a similar situation with feed barley, with exports predicted to be 1 million tonnes by the end of November, out of a surplus of 2.2 million tonnes.

julian.bell@sac.co.uk, 0131 603 7524
lorna.macpherson@sac.co.uk, 07760 990901

Colostrum Management for Successful Passive Transfer

Last month SAC Consulting held an event at Hardgrove Farm, Dumfries, on the topic of Healthy Calves: Reducing Losses and Maximising Performance. There were many topics discussed and key messages reinforced by knowledgable speakers from SRUC Veterinary Services, SRUC Research and Consultancy, local vets and AHDB Dairy. However, every speaker touched on the importance of colostrum to a calf's survivability and long-term health and production capacity when it eventually enters the milking herd.

The purpose of colostrum

As we all know, colostrum is full of nutrients and antibodies, which are crucial to the health and welfare of a calf. A calf is born with no resistance to pathogens as antibodies cannot cross from the cow into the calf through the placenta. Therefore, cows have evolved to transfer short-term antibodies in their first milk, colostrum, providing short-term immunity until the calf can build up its own resistance to pathogens. This process is known as passive transfer. At Hardgrove, Ali Haggerty (University of Glasgow Vet School) discussed the implications of failure of passive transfer (FPT) and stated that research by the University of Glasgow Vet School found that one in five calves suffered from various levels of FPT, showing that dairy farmers in Scotland still have room for improvement in their colostrum management.

The three Q's of colostrum

The "three Q's of colostrum" are Quantity, Quality and Quickly and each of these Q's must be adhered to for successful passive transfer.

Quantity

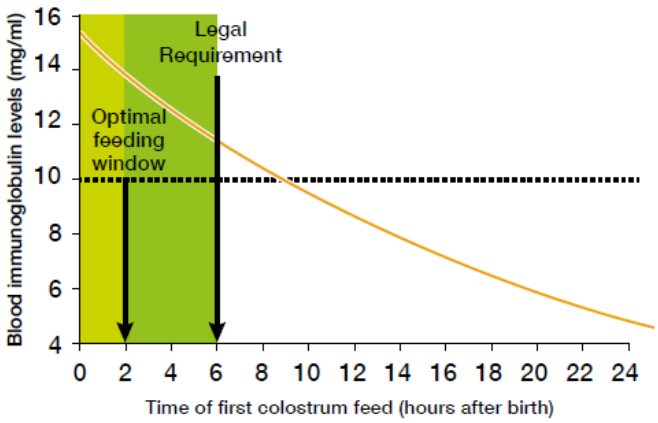
A newborn calf needs a minimum of three litres or 10% of its bodyweight of colostrum in the first two hours of life, followed by another similar sized feed within the first 12 hours.

Quality

The quality of colostrum is dependent on the health and nutritional status of the cow. Under no circumstances should colostrum from a cow with an unknown or positive Johnes status be fed to a calf. Harvesting colostrum as soon as possible is imperative as the antibody content decreases by around a third by 14 hours after calving. Colostrum should ideally be collected within two hours of calving. The bacterial load in colostrum will double every twenty minutes after harvesting until it is correctly stored or used. Bacteria in colostrum inhibit the absorption of antibodies in the calf, reducing its value.

Quickly

A calf's ability to absorb the antibodies in colostrum decreases quickly after birth, so timing is important.



Source: AHDB Beef and Lamb

Storing colostrum

Once collected, colostrum should be used or stored within one hour. The storage options are as follows:

- Refrigerate below 4ºC, for no more than 24 hours. Adding potassium sorbate, which is a common food preservative, allows colostrum to be refrigerated for up to three days.
- Freeze at -18ºC to -20ºC for up to one year. Freeze in quantities required, marking the date collected and cow ID on the container.
- Pasteurising colostrum significantly reduces the bacterial load while maintaining an acceptable amount of antibodies. This increases the time that colostrum can be refrigerated and frozen.

Testing colostrum

The quality of colostrum is dependent on the health and nutritional status of the cow it was collected from. Testing colostrum is easy and can be done quickly on farm by using either a colostrometer or a brix refractometer 0 – 32%. These devices can be purchased very cheaply online (£20 - £30). The devices are quite similar, however the refractometer is a little more robust and is not dependent on temperature of colostrum for an accurate reading. AHDB Dairy have produced an easy to follow video on how to use these devices, available at https://www.youtube.com/watch?v=Rdt766azjew.

Testing for colostrum quality

Blood sampling for antibodies from groups of calves that have received colostrum and are within one week of birth can give you a good idea of the effectiveness of your colostrum management. Samples can be tested for either the antibody level (IgG) or the total protein (TP) in the blood, with results characterised as follows:

Quality	IgG g/L	TP g/L
Good	> 12	>55
Marginal	10 - 12	50 - 55
Bad	> 10	< 50

Source: AHDB Dairy

james.orr@sac.co.uk; 01292 525010

Selecting a Beef Bull for Dairy Cows

The vast majority of pedigree beef bulls have Estimated Breeding Values (EBVs). These are calculated exactly the same way as are dairy PTAs (Predicted Transmitting Ability) but measure different things e.g. eye muscle area, growth rate, etc. The only difference between the two schemes is that PTAs measure the contribution the bull will make to the calf, whereas EBVs reflect the traits of the animal itself and hence have to be divided by two to calculate the impact on their offspring.

The following is a list of the important EBVs of a beef bull which dairy farmers must take into account, in descending order of priority.

1. Calving Ease Direct. This measures the impact a bull has on the size, shape, etc. of his calves and hence how easily they will be born. It is presented as the percentage increase in the number of cows who will calve more easily (positive values) or will have more difficulty calving (negative values). The target must be to select sires with the highest possible positive EBV and certainly within the top 25% of the breed.

   Calving Ease Maternal, which in the BreedPlan system is called Calving Ease Daughters, can be ignored completely. The only exception would be where beef cross heifers are being sold on as replacements in a suckler herd. EBVs are available for Gestation Length (direct) and for Birthweight. However as calves who are born easily are unlikely to have high birthweights or long gestation lengths, these can be ignored, depending solely on heavy selection for high Calving Ease Direct values.

2. Growth Rate and Carcass Value. An index predicting the extra carcass value from finishing a bull's progeny is used by both EBV providers. In the UK Signet system it is called Beef Value (BV) while in the BreedPlan system it is called Terminal Sire Index (TSI). The main driver in the index is carcass weight which is predicted from the 400 Day Weight of the animal. While selection heavily on BV/TSI has been extremely successful e.g. nearly doubling daily liveweight gains and carcass weights over the last 30 years, it has also nearly doubled cow liveweights!

   Unfortunately the top bulls for BV/TSI are now increasingly failing to achieve the specifications now required by the meat trade. For example, some of the more progressive suckled calf producers, finishing their entire bull calves on *ad-lib* concentrates post-weaning are now beginning to be penalised for:
   - Exceeding the carcass weight limits of between 380 – 400 kg, with producers not being paid for any additional carcass weight.
   - Carcasses being too lean i.e. grading at fat class 1.
   - Bulls being fit for slaughter at under 12 months of age when they cannot be sold as beef (under EU legislation) and hence are again downgraded.

Nevertheless BV/TSI is a good figure to use when selecting bulls as it includes other aspects of carcass value, in particular muscularity. However, unfortunately for many if not all beef breeds it also selects for increased leanness, as this is highly positively correlated to growth rate i.e. high growth rates are achieved by animals laying down a high percentage of lean and a minimum of fat in their daily gain. This would suggest that the target BV/TSI value of bulls currently being produced would be between 60 to 80 of the breed's percentile value, and certainly not in the top 10%.

The alternative would be to go into more detail and select bulls on their 400 Day Weight, Muscle Depth and Fat Depth EBVs.

basil.lowman@sac.co.uk; 01835 823322

Could Cutting Carbon Save you Money?

That was exactly what Ayrshire dairy farmer John Kerr looked into over a four-year project with SAC Consulting. John saved just over £63K and cut the farm's carbon footprint by around 6% through making small tweaks to routine activities, with no loss of production.

John, who farms at Woodhead, Newmilns in partnership with mum Anne, was one of nine Climate Change Focus Farmers across Scotland who worked with SAC Consulting on the Scottish Government Farming for a Better Climate initiative. With support from industry specialists and a farmer discussion group, John and Anne looked at practical ways to benefit the farm business whilst also reducing the farm's carbon footprint. For John and Anne, any changes they made had to be practical and easy to do on a day-to-day basis, whilst also allowing them to maintain or improve business profitability.

After a review of the business performance, activities targeted by John and Anne included:

- **Cutting the fuel bill** - following an energy and fuel audit, one of the things John changed was to use a smaller tractor on the diet feeder, saving around 4,400 litres of fuel annually. With red diesel at 53ppl, this switch gave an easy saving of £2,330 on the fuel bill and a reduction of 11,792 kg of CO_2 per year.

- **Shed ventilation** - removal of some of the side sheeting on the cow shed has dramatically changed both the airflow and light levels in the building. After an initial small-scale trial, John plans to remove more sheets and open the ridge of the shed to improve the air stack effect. Increasing light levels for the cows is estimated to give an extra litre per cow per day, equating to increased income of £8,300 over the year. In terms of carbon savings, this increased yield across the herd is expected to reduce the farm's future carbon footprint by nearly 2%.

- **Calf housing** - two calf igloos were purchased to provide additional calf rearing capacity. Along with a few changes to the calf shed, calf performance improved, allowing John to sell beef x calves for over £200 at three weeks of age.

Dairy Heifer Calves at Woodhead

- **Grass management** – there has been a renewed focus on soils, fertilisers, liming, grazing and paddock management, aiming to increase both utilisation and production of grass. With an increase in grass production, the need to go for a 3rd cut of silage was negated. This resulted in a saving of 19.2 tonnes of purchased third cut silage fertiliser (27:14:0) and 418 litres of red diesel, saving 74,559 kg of CO2e (carbon dioxide equivalent) and £5,020. Silage quality has also improved, leading to an estimated saving of £120/cow/winter.

With Scotland looking to achieve a net-zero carbon balance by 2045, all sectors will have to play their part to help turn these ambitions into reality. Agriculture has been identified as a significant source of greenhouse gases, accounting for nearly a quarter of Scotland's emissions in 2017. However, it is not all bad news; agriculture is also one of the few sectors that can also 'lock up' carbon, for example increasing the carbon content held in soils or through woodland planting, making farmers uniquely placed to help Scotland achieve its carbon reduction ambitions.

You can hear more about what John has done and the activities of other focus farmers in the project, as well as consider some of the key areas most farms could look at to reduce emissions via the Climate Change Focus Farmer pages at www.farmingforabetterclimate.org. You can also find the initiative on Facebook and follow us on Twitter @SACFarm4Climate.

rebecca.audsley@sac.co.uk; 01292 525089

Options for Improving Cashflow

Despite having a regular monthly income, managing cashflow can still be a problem on many dairy farms. Issues with fertility can have a major impact on the calving spread which will in turn affect milk sales and cashflow. One solution which is often mentioned is selling low yielding cows, especially those which may not be back in calf, and buying back in fresh calved cows to boost production and even out cashflow. The following calculations show the impact over a six month period of such a move.

Financial Implications of Selling Less Productive and Buying More Productive Cows on Cashflow

Impact of Selling Low Yielding Cows to Replace with Higher Yielders

	Cows	Price per head £	Total Price £
Sell	30	800	24000
Option 1 Buy	15	1200	18000
		Cashflow	6000
Option 2 Buy	20	1200	24000
		Cashflow	0

Milk Yield	Cows	Milk Yield/head	Total Yield/day					ppl	£/day		£/month
Loss	30	9	270								
Gain	15	26	390	plus	120	litres/day	@	26	31	or	**936**
Gain	20	26	520	plus	250	litres/day	@	26	65	or	**1950**

Feed Costs	£/t	kg	£/head/day		
Blend	280	6.25	1.75		
Vitagold	38	7.00	0.27		
Parlour Cake	220	1.00	0.22		
		Total	**2.24**		
Blend	280	6.25	1.75		
Vitagold	38	7.00	0.27		
Parlour Cake	220	6.00	1.32		
			3.34		

Extra feed cost	Cows				
			1.10	/day	
	15		**16.50**		**495.00**
	20		**22.00**		**660.00**

Net Change					£	£ After 6 months	
Option 1	Extra milk sales less extra feed costs				**441**	**8646**	*(includes margin from sales)*
Option 2					**1290**	**7740**	

These calculation do not take account of the cost of borrowing if the cost of cattle purchases exceeds cattle sales.

Option 1 involves selling 30 cows and buying back 15, freeing up £6000 of cash to meet immediate cash needs. In this example, all cows are fed a PMR with cake to yield in the parlour. If the 15 fresh cows average 26 litres/day, 120 litres more milk will be sold per day. Feed costs increase due to increased parlour cake for the higher yielding cows, leading to a net benefit of £441/month or £8646 over six months if the £6000 generated by the sale is taken into account.

Option 2 follows a similar scenario, but all the money released from the sale of the 30 cows is used to buy 20 fresh calved cows. At an average daily yield of 26 litres, this boosts milk production by 250 litres/day. When extra feed costs have been taken into account, the net benefit per month is £1290 or £7740 over six months.

There may also be additional benefits of freeing up cubicle capacity & feed space which could benefit the remaining herd. However, this is not a decision to be taken lightly, there is the potential loss of genetics that have been built up over a number of years in some herds and the health risks associated with buying in stock. These factors have to be weighed up against the financial benefit to the business in the short-term. Option 1 does not appear to generate sufficient extra monthly cashflow to justify the risks of buying in new cows, especially if you have historically run a closed herd policy. Although Option 2 does not generate as

much cash over the six month period, the impact on the monthly cashflow is more significant. You should spend some time forecasting your cashflow for the next six months to allow you to see if the replacement of cows in the herd is actually going to generate enough extra cash to have a positive impact on your financial situation.

Other options you may wish to consider to improve cashflow are:

- Review all fixed costs – can you switch suppliers to get a better deal?
- Review all non-essential expenditure.
- Ask your suppliers about the possibility of setting up fixed monthly direct debit payments which spread your annual cost more evenly over the year, easing winter cashflow.
- Speak to your bank manager about existing borrowing. There may be options to restructure, making re-payments cheaper, or to take a capital repayment holiday.

If you would like to explore your business performance and cashflow, you can access funding for one-to-one advice through the Farm Advisory Service, Integrated Land Management Plan. This allows you access to an accredited consultant to look at the financial health of your business and offer suggestions to improve performance and cashflow. For more information, use the flowing link https://www.fas.scot/integrated-land-management-plans-ilmps/

alison.clark@sac.co.uk; 01776 702649

Pain Relief at Calving

While it is common practice to administer an NSAID (non-steroidal anti-inflammatory drug) to a cow or heifer after a difficult calving, research has shown benefits of these drugs even with straight forward calvings, requiring no intervention. Anti-inflammatory drugs help reduce inflammation and act as a pain killer, as pain is essentially the body's reaction to inflammation.

Calving is a painful event and reducing that pain may provide health and performance benefits. Farmers are under pressure to reduce their antibiotic usage, but it is still often the case that antibiotics tend to be overused while anti-inflammatories are underused in situations such as a hard calving, injury or disease. Pain relief can help cows show normal behaviour quicker. One good reason to give an NSAID after calving is to enable the cow to start eating as quickly as possible, in order to reduce the risk of displaced abomasum or ketosis. It is also thought to help involution, with a quicker return to normal uterine function.

While some NSAID's have been shown to increase the risk of retained foetal membranes and metritis post-calving, others have indicated no detrimental effect. In fact, there are some potential performance benefits of these drugs, including slightly higher milk yield in early lactation and a lower risk of subclinical mastitis compared to untreated animals.

Dystocia can also be painful for the calf as well. Studies have looked at the effect of treating calves with an NSAID following a difficult birth. Treated calves had more vigour and an improved suckling reflex compared to calves given a placebo. More research is required in this area but early indications are that NSAID's may be a useful and cost-effective management tool to reduce pain associated with difficult births, helping these calves get off to a better start in life.

Short-term treatment with NSAID's for both assisted and unassisted calvings, may give some behavioural benefits and improve well-being of both the cow and calf. There is also some indication that production may be enhanced. Always seek veterinary advice on the most appropriate post-calving treatment and adhere to the recommended dose rates and meat and milk withdrawal periods. Withdrawal periods can vary depending on the product used.

lorna.macpherson@sac.co.uk; 07760 990901

Dates for your Diary

- 16th November - **Agriculture, Animal Care, Engineering and Forestry Open Evening at SRUC Barony**. SRUC Barony Campus, Parkgate, Dumfries, DG1 3NE. Time: 10.00. For enquires email barony@sruc.ac.uk, or call us on 01387 860251.

- 20th November - **AgriScot**. The Royal Highland Centre, Edinburgh, EH28 8NB.

- 23rd November - **LiveScot**. Lanark Agricultural Centre, Lanark, ML11 9AX.

- 25th November - **The Graze Debate**. Dewar's Centre, Glover Street, Perth, PH2 0TH. Time: 10.00. To book your place call 01835 823 322 or email val.angus@sac.co.uk

- 27th November - **Open Evening at Elmwood**. SRUC Elmwood Campus, Carslogie Road, Cupar, Fife KY15 4JB. Time 17.00. For enquires please email elmwood@sruc.ac.uk or call us on 01334 658800.

- 27th November - **Selective Dry Cow Therapy on Scottish Dairy Farms**. Radstone Hotel, 3 Ayr Rd, Shawsburn, Larkhall, ML9 2TZ. Time 10.30-14.30. To book your place contact Janis Forrest by email janis.forrest@sac.co.uk or call 0131 603 7525.

- 27th November - **Veterinary Nursing Open Day at Barony.** SRUC Barony Campus, Parkgate, Dumfries, DG1 3NE. Time: 10.00. For enquires email barony@sruc.ac.uk, or call us on 01387 860251.

- 2nd - 3rd December - **Dairy Leader Forum**. Jurys Inn, 1 Park Place, Cardiff, CF10 3UD. Time 12.30. For more information see https://ahdb.org.uk/events/dairyleader-forum-2019-cardiff

- 9th - 11th December - **DIY AI Course**. Aberdeen. For more information please contact Embryonics on 01606 854411.

For any further enquiries regarding the information in this newsletter please contact:

Lorna MacPherson (Dairy Consultant)
SAC Consulting Office
Thainstone Agricultural Centre
Inverurie
Aberdeenshire
AB51 5WU
Email: lorna.macpherson@sac.co.uk
Tel: 01467 625385
Mobile: 07760 990901
Fax: 01467 620607

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