

Issue 29 | March 2019

Milk Manager NEWS



**Farm
Advisory
Service**

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



Contents

Milk Market Update	1
Global and domestic situation	
Straights Update	3
Cereals and protein prices going forward	
Preparing for Turnout	4
Target grass covers and cow considerations	
Scrutinising Costs in the Dairy Herd	5
Where not to cut costs	
Controlling Milk Fever with Calcium Binders	6
How they work and benefits	
Avoiding Cows Calving through the Night	7
How time of feeding affects calving time	
Effectiveness of Selective Dry Cow Therapy	8
Results of a Scottish Government funded project	
Dates for your Diary	9
What's on?	
This month's editor: Lorna MacPherson	



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



Scottish Government
Riaghaltas na h-Alba
gov.scot

Market Update

UK Wholesale Dairy Commodity Market

- Fonterra's latest on-line GDT auction (5th March) resulted in a 3.3% increase in the weighted average price across all products, reaching US \$3,309/t. This is the 7th consecutive increase in a row, after months of declining prices. Butter was up 3.7% to \$4,657/t but the biggest mover was an 11% rise in butter milk powder to \$3,480/t. Cheddar was up 6% to \$3,888/t and the biggest decline was seen in skim milk powder (SMP), down 4.3% to \$2,462/t.
- In the UK market, fat prices have eased throughout February, as a result of plentiful milk supplies and poor demand. The spring flush is approaching and coupled with Brexit concerns, purchasers have little incentive to buy and are not keen to commit to buying forward. The butter market has weakened and this has likely impacted on the demand for cream. Milk volumes have remained above last year's production and so there is no shortage of product.
- Proteins have stayed relatively stable, with little activity in the cheddar and SMP market, with buyers holding off to see what happens to prices with Brexit, and the anticipated spring flush.

Commodity	Feb 2019 £/T	Jan 2019 £/T	% Difference Monthly	Feb 2018 £/T	% Diff 2019-2018
Bulk Cream	£1,610	£1,710	-6	£1,850	-13
Butter	£3,680	£3,900	-6	£4,300	-14
SMP	£1,690	£1,670	1	£1,130	50
Mild Cheddar	£2,880	£2,880	0	£2,925	-2

Source: AHDB Dairy - based on trade agreed from 1st to 27th Feb 2019. Note these prices are indicative of values achieved over the reporting period for spot trade (excludes contracted prices)

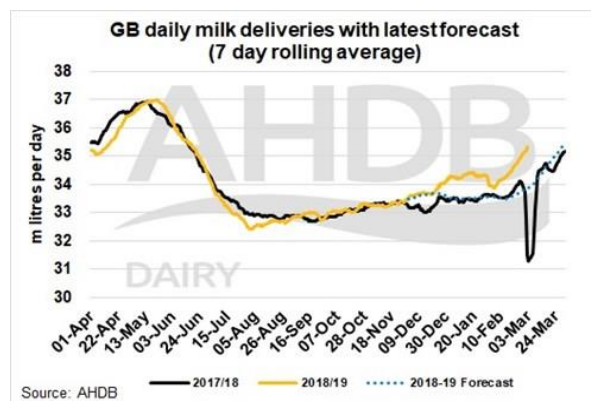
- Market indicators AMPE and MCVE both eased back with a greater reduction in AMPE on the back of falling butter and cream prices.

	Feb 2019	Jan 2019	12 months previously	Net Amount less 2ppl Haulage - FEB 19
AMPE	29.30ppl	30.19ppl	26.88ppl	27.30ppl
MCVE	31.42ppl	31.58ppl	31.30ppl	29.42ppl

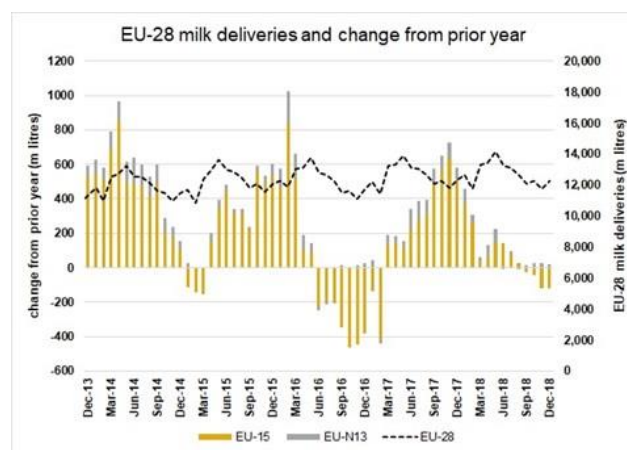
Source: AHDB Dairy

UK Milk Deliveries and Global Production

- Milk deliveries in the UK continue to be ahead of last year, running at a massive 12.2% above the same week last year (where weather conditions affected milk collections). This equates to 3.87 million extra litres. Deliveries are 1.3% up on the week ending 3rd March.



- EU milk deliveries from the EU-28 declined in November compared to the same month in 2017, being back 0.8% (on average 3.1 million litres/day). However, for the year to date (up to November 2018), production was up by 0.9%. Three of the key EU producing countries (Germany, France and Netherlands) are below previous year's production for the month of December and the growth in the UK and Ireland has not helped make up the shortfall.



- Milk production has been falling in Australia on the back of the current drought. The first half of the 2018/2019 production season showed a 5.2% decline from the previous year and in December 2018, milk production was back 6.9%. In contrast, New Zealand production is up 4.9% from June 2018 to January 2019 and

Milk Manager NEWS

January 2019 production increased by 8.7% compared to the same month last year.

Monthly Price Movements for March 2019

Commodity Produced	Company Contract	Price Change from Feb 2019	Standard Litre Price Mar 2019
Liquid & Cheese	Arla Farmers UK	<i>No change</i>	29.06ppl liquid 30.24ppl manufacture
Liquid & Cheese	Arla Direct	<i>No change</i>	27.75ppl liquid 28.92ppl manufacture
Liquid & Brokered Milk	First Milk Mainland Scotland	<i>No change</i>	27.5ppl liquid 28.43ppl manufacture
Cheese	Fresh Milk Company (Lactalis)	<i>No change</i>	27.5ppl liquid 28.5ppl manufacture
Liquid & Manufacture	Grahams	<i>-0.75ppl</i>	26.75ppl
Liquid & Manufacture	Müller Direct	<i>-1.25ppl</i>	26.75ppl (includes 0.5ppl premium)
Liquid & Manufacture	Müller (Co-op)	<i>No change</i>	30.04ppl
Liquid & Manufacture	Müller (Tesco)	<i>No change</i>	31.24ppl
Liquid, Powder & Brokered	Yew Tree Dairies	<i>No change</i>	27.50ppl Standard A litre price

Other News

- Arla's decision to hold their milk price for March now opens up a 2.81ppl difference between them and the poorest paid price by Müller, which is 26.25ppl for March deliveries (this does not include the 0.5ppl premium). Arla's decision to hold their milk price is supported by the fact that milk deliveries are back in some of the key EU producing countries compared to the same time last year. This has helped the European commodity market remain relatively stable so far in 2019.
- In addition, Arla have announced they will pay their farmer owners their annual net profit from 2018, which equates to £64m to their British Farmers (or £245m in total to their European farmer owners). This will be allocated as a 13th payment averaging 2.04ppl for every kg of milk delivered in 2018. Arla has seen strong growth of 3.1% in its branded sales volumes over the last 2 years, with revenue increasing to £9

billion in 2018 from £8.3 billion in 2016. Their 2018 average performance price, which is the value Arla generates per kg of owner milk, was 36.4p.

- Graham's Dairies continues its partnership with Aldi, extending its contract for another 5 years to supply Scottish stores with milk, butter, yoghurts and creams manufactured from Scottish milk. This is the largest contract Graham's hold and is worth over £55 million.
- Müller are carrying out a major review of their business over a 2 year period in order to make cost savings of £100 million. Project Darwin, as it has been named, is looking to make savings in several areas of the business (logistics, administration, back office and processing), which do not appear to impact on their farmer suppliers.
- There will be no change to Müller's farm-gate price for its direct suppliers in April, with the liquid standard litre price remaining at 26.75ppl, which includes the 0.5ppl premium (paid annually in arrears).
- The Sainsbury's Dairy Development Group (SDDG) will see a small rise in milk price of 0.24ppl in April. This brings the Müller SDDG price up to 30.65ppl and the same increase gives Arla SDDG suppliers 30.53ppl after their 0.12ppl haulage cost. Sainsbury's recent cost tracker review highlighted a 0.23ppl and 0.03 ppl increase in feed and fertiliser respectively and a reduction in fuel costs of 0.02ppl, giving an overall increase of 0.24ppl.
- First Milk has announced no drop in price next month and that their farmers will gain from its member's premium 13th payment. The 0.25ppl premium is based on member's capital investment, with the majority of members reaching their capital target. This brings the April price for their liquid standard litre up to 27.75ppl (and 28.68ppl for manufacturing). The 0.25ppl premium will accrue as the 13th payment which will be paid in April 2020 as a lump sum.

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

Straights Update

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

£/T for 29t loads delivery + £8/t haulage to central belt	Mar 19	Apr 19	May 19 - Oct 19	Nov 19 - Apr 20
Proteins				
Hipro Soya	292	292	291	302
Rapeseed Meal	221	221	May-Jul 215	-
Wheat Distillers Pellets	219	219	229	-
Starch				
Wheat	170	171	May-Jul 173 Aug-Oct 150	156
Barley	163	164	May-Jul 165 Aug-Oct 130	136
Maize	171	172	173	-
Fibre				
Sugar Beet Pulp (10mm)	197	197	202	-
Soya Hulls	139	139	139	145

Source: Straights Direct and Cefetra on 8th March. 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

- Wheat production for 2019 appears promising, with AHDB predicting a 7% increase (27mT) in wheat production by the worlds' major wheat exporters to 395mT this year. World wheat markets are showing little sign of recovery as exporters are competing to win forthcoming tenders and some funds are willing to sell wheat at a lower price.
- The latest USDA crop report confirmed that both US maize and wheat ending stocks are significantly higher than trade guesses. Wheat carryout increased by 45 million bushels to 1.055 billion as a result of higher imports and lower exports and food use. Maize ending stocks also rose by 100 million bushels and usage for ethanol production was cut by 25 million bushels, due to the recent slow pace of biofuel production, adding further downward pressure to the market.
- Imports of US soybeans by China were at their lowest monthly level for four years during February due to on-going trade negotiations with the US. Only 4.46mT of beans were imported in February, which is 17% less than the same month last year. There has also been less demand with the outbreak of African swine fever affecting the world's largest pig herd. Since August 2018, there have been 111 outbreaks of this highly contagious disease in 28 of China's provinces and regions. The majority of oilseeds imported by China typically occur in the 4th quarter and early in the New Year. However, the tariffs imposed on soyabeans means that China has been buying more beans from South America. Since the trade truce on 1st December, China has so far purchased 10mT of US soyabeans despite a 25% tariff on US shipments.

UK and Scottish News

- The cereal market in the UK has fallen recently as the value of Sterling has increased about 1% against the Euro and US Dollar in the last month. Since the beginning of the year, feed barley has dropped about £20/t. It looks like there will be a surplus of barley at the end of the season as maize has been competitively priced this winter, displacing barley from rations. The pace of barley exports has been slow and any exports after the 29th March are on hold until there is clarity on Brexit negotiations.
- UK wheat is in a similar situation, with prospects for the expected larger crop this harvest unknown. If there is a no-deal Brexit, both wheat and barley may be subject to EU tariffs. Prices could recover in the event of a deal being struck but could also be accompanied by a stronger pound.
- The ENSUS bioethanol plant is set to start production of ethanol again in March, an announcement which saw the May 19 UK wheat futures push upwards at the beginning of March. However, the plant is said to be run at reduced capacity to only fulfil British orders. A key issue in getting the plant to run continuously would be further development of the UK's alternative fuel market, with an increase in the use of Premium E10 (10 volume % of ethanol), which is currently the

standard fuel for new petrol engines manufactured in the EU.

- Stronger Sterling has been the main driver for the recent fall in rapeseed prices coupled with the temporary closure of Saipol's rapeseed crushing factory in France, due to strike action. The fall in EU rapemeal means it is cost-effective to be hauled into England to the crushing plant at Erith. Rapeseed prices have not been helped by the impending arrival of new crop Australian rapeseed and the US's weak soyabean market.

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

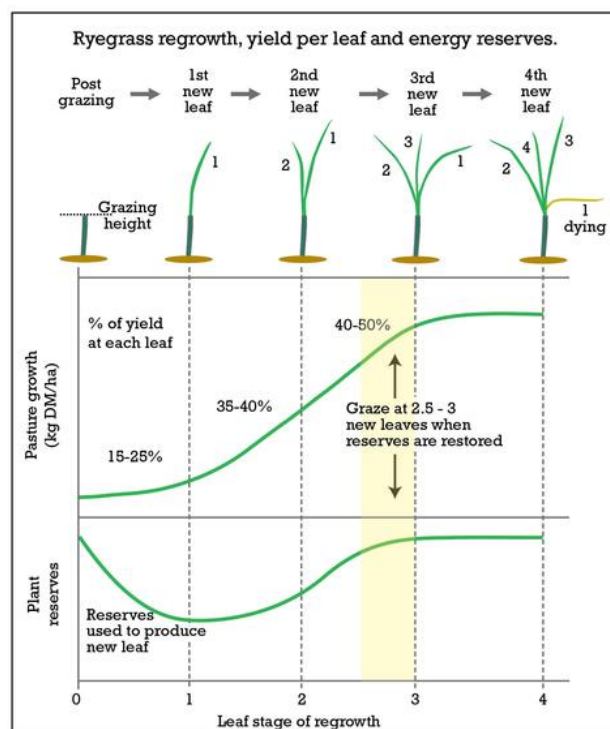
Preparing for Turnout

With many farms short of forage and higher concentrate costs this winter, an early spring with grass available for an early turnout will be welcomed. As grass is the cheapest feed, focussing on reducing concentrate costs and saving precious stocks of forage and straw will be crucial for producing milk at a lower cost.

Walk your grazing fields prior to turnout to assess grass growth and plan your rotation based on field covers. If you do not use a plate meter to measure grass covers you can assess your pasture for leaf stage. A ryegrass plant only ever has 3 live leaves on it and when the 4th leaf emerges, the first leaf dies off (see diagram opposite). Nutritional quality of the plant is maximal between the 2-3 leaf stage so aim to graze paddocks at this, which is equivalent to a cover of 2700-3000kg DM/ha.

It will be necessary for the first grazing in the rotation to turn out earlier so that fields grazed later in the rotation are not well past the 3 leaf stage. If all the fields are of similar cover, turn out slightly earlier than planned, e.g. at the 2 leaf stage or a cover of just over 2000kg DM/ha. Grazing too early below the 2 leaf stage means that plant reserves will not be fully restored and repeatedly grazing before the 2.5-3 leaf stage will result in slower regrowth, with reduced pasture yield and persistency of the sward.

The Leaf Stages of a Perennial Ryegrass Plant



Source: Barenbrug agriseeds

On the one hand, it makes sense to graze the highest field covers first (which may be around 2400kg DM/ha) so the others have a chance to catch up and not get too far ahead. However, it is good practice to turnout onto a lower cover, making it easier for cows to graze down to the desired residual and get into "grazing mode" (aim for a residual of 1500kg DM/ha or about 4cm). Once cows are moved onto paddocks with higher covers, they are more likely to achieve the target residual there as well. Turning cows out onto high covers, often means they leave a higher residual and this pattern continues in subsequent paddocks. The higher the residual, the poorer the grass quality in the next rotation.

Moving from a silage based ration to fresh grass is a big change to the cow and the rumen bugs can take around 3 weeks to adapt. A gradual transition onto grass is preferred to avoid digestive upsets and on/off grazing is ideal, not only to maintain cow performance but also to minimise soil damage early on, particularly where conditions have been wet. As a rule of thumb, cows should manage to eat 5kg dry matter in about three hours of grazing under reasonable sward and weather conditions. Flexibility is key to making on/off grazing strategies work and if weather conditions

deteriorate, bring cows inside. Also, having more than 1 access point to paddocks will help reduce soil damage.

Key issues with relying on spring grass for milking cows is the variation in dry matter that can occur due to the weather, and the risk of SARA from the high sugar and low structural fibre content. It is important to monitor rumen fill, rumination rates and dung consistency for early detection of SARA and do not rely on too much spring grass to support high yielding early lactation cows without sufficient buffer feeding. Energy is usually the most limiting factor at grass and minimising condition loss is key to getting cows back in calf.

Whilst the best grass fields are usually kept for the milking herd, remember that youngstock will be more vulnerable to worms, with older cattle having developed a natural immunity. Therefore youngstock should be given the first grazing of fields with the lowest worm burden. Make sure you have correct protocols in place for lungworm prevention prior to turnout.

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

Scrutinising Costs within the Dairy Herd

With many milk buyers reducing their milk price for March, further cuts are a concern with the spring flush just around the corner and some milk buyers already struggling to find homes for excess milk.

While milk price is a main determinant of profit, there is huge variation in the cost of production (see table opposite) and herd health is one of the biggest factors, along with replacement costs. You can get a rough indication of your cost of production by adding up the total costs associated with the dairy in your yearend accounts and divide that by the number of litres produced. This can be broken down further into separate components such as labour, vet/med, feed costs etc. and benchmarked against herds of similar production and management to see where efficiencies can be made.

Estimated Typical Cost of Production (COP) in UK for 12 Months Ending December 18

Top and bottom 25% ranked on Net Margin after Total Full Economic Costs of Production

	Pence per Litre	
	Top 25%	Bottom 25%
Herd Replacement Cost	2.7	4.8
Total Variable Costs	12.8	15.0
Cash Only Overheads	8.9	12.2
Total Cash Costs of Production	24.3	32.0
Total Overhead Costs	11.2	16.8
Total Costs of Production	26.7	36.6
% change in COP compared with 2017/2018	4.2	3.9

Source: AHDB Dairy

It may be tempting to look at cutting a number of costs, but beware of cutting costs that directly impact on “cow care”, which can potentially affect cow performance. This includes feed, bedding, veterinary costs and vaccines, reproductive aids and hoof care. If cutting costs reduces output, work out what that means to the bottom line. Whilst some veterinary costs such as vaccines are tempting to cut when milk prices are low, prevention is usually cheaper than treating a disease outbreak, so evaluate vaccine use with your vet. When it comes to herd health, lameness is the biggest cost on dairy farms, followed closely by fertility and mastitis.

Other costs that are less likely to impact on cow performance in the short-term should be closely looked at to see where savings can be made. This includes things like equipment which does not affect the cow, expensive semen and genomic testing.

With feed being the biggest cost on the farm, cutting concentrate feed and lowering milk output will more often than not be false economy. Professor Mike Hutjens from the University of Illinois has 5 golden rules for feeding when milk prices are low:

1. **Never give up milk.** Reducing milk output by cutting feed costs is rarely profitable.
2. **Maximise your milk cheque** through meeting buyer specifications on milk composition and hygiene quality.

3. **When making feed decisions, keep in mind long-term consequences.** He suggests not cutting additives such as yeasts and mycotoxin binders as chances are the benefit outweighs their cost. Also, removing chelated trace minerals may increase mastitis risk, lower fertility and immunity. Assess feed additive costs and benefits carefully and their long-term impact on health and performance.
4. **Monitor cow response closely** to any feed changes. For example, if milk urea creeps up, can you get away with feeding less protein which is more expensive than energy in the ration? Are there changes in dry matter intake or milk output or milk composition by more than 0.1% point? If so, what are the economic consequences of this?
5. **Dry matter intake is key.** Any change that reduces intake can lead to slower rumen fermentation, reduced energy intake and less microbial protein synthesis. This can result in lower milk yields, body condition loss and poorer fertility. Fresh cows will suffer the most.

Transition cow management is a key area to focus on, with diseases at this time indirectly hitting margins through the use of veterinary drugs, deaths, lost milk production and poorer fertility. Transition diseases may also reduce peak yields and therefore total lactation yield. Are there areas where transition cow health and management could be improved? Perhaps this is worth a conversation with your vet and nutritionist, especially if the incidence of milk fever or retained cleansings is greater than 5%. By reducing transition diseases, the risk of culling and mortality in early lactation reduces. Evaluate reasons for cows leaving the herd and when, so that preventative measures or changes to management can be implemented to lower involuntary culls. This will also help lower the replacement rate, with fewer heifers required to maintain herd size and surplus heifers can be sold.

Is cow comfort as good as it could be? If cows are not comfy or lying down long enough then less milk will be produced compared to what the ration is expected to yield. This applies to stocking rates as well. Drying off a few less productive or barren cows early and creating more space in the milking shed may not actually reduce overall milk output and will save a little on concentrate feed costs.

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

Controlling Milk Fever with Calcium Binders

Milk fever is one of the main threats to cows transitioning well at calving. It occurs when the cow cannot mobilise sufficient calcium to meet the high demand for milk production. There are different feeding strategies for dry cows to minimise the risk of milk fever; from low calcium diets, partial DCAB and full DCAB strategies. In the last few years the use of calcium binders has become more popular.

Calcium binders work by binding calcium in the small intestine so that it is not absorbed, therefore effectively feeding a low calcium diet. This stimulates the cow's hormonal mechanisms to release calcium from the skeleton. Essentially the cow is able to activate her own defence mechanism against milk fever and maintain the desired blood calcium levels pre- and post-calving. Consequently, feeding high calcium diets pre-calving makes the cow's hormonal mechanisms "lazy" and not so effective at mobilising calcium.

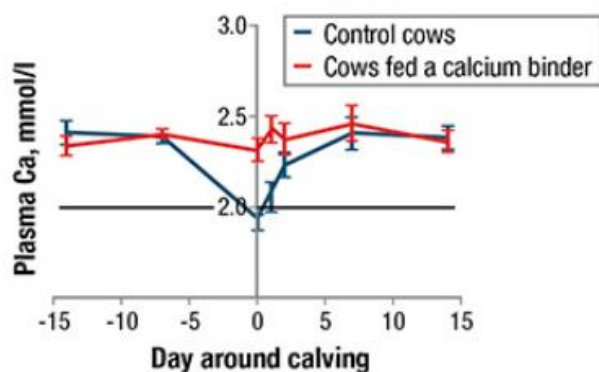
For typical low calcium diets to control milk fever, the diet must supply no more than 30g of calcium per day. This is difficult to achieve in practice with normal feed ingredients, especially if grass silage is included in the ration. More reliance on wholecrop or maize silage, with little or no grass silage are required for low calcium dry cow diets and even then the 30g target may still not be met.

When using a DCAB strategy to control milk fever, its effectiveness depends on the use of low potassium forages to keep the DCAB below a target level. Potassium in the diet should be less than 1.4% on a dry matter basis, which not easy to achieve if slurry and potash have been applied to grass. Full DCAB rations need very careful monitoring so as not to reduce feed intake with high levels of unpalatable anionic salts, such as magnesium chloride. Also monitoring of urine pH is important to make sure the cow is not too "acidic" and regular forage mineral analysis is required to assess mineral balance and DCAB level, especially when silage pits are changed. The potassium level in the diet and DCAB value are irrelevant when feeding a calcium binder and so forages that were thought to be unsuitable for dry cows can still be fed successfully. The binder will also substitute for calcium boluses.

Calcium binders can also affect phosphorus availability so adequate levels must be included in the ration (0.35-0.38% of dry matter). Care must be taken not to feed the binder once the cow has calved as this can lead to milk fever. It must only be fed for a maximum of 21 days and so only suits herds that separate their far off and close up cows. After calving, the cow's hormonal systems are well primed so that she can efficiently absorb calcium into the blood required for milk production.

Both clinical and subclinical milk fever cases are reduced with calcium binders, by helping maintain normal blood calcium levels at calving time (see graph below). Subclinical milk fever cases tend to occur when blood calcium is below 2mmol/litre and clinical cases below 1mmol/litre.

The Effect of a Calcium Binder on Blood Calcium



Source: <https://www.progressivedairy.com/topics/feed-nutrition/low-calcium-approach-may-eliminate-potassium-concerns>

Even where clinical milk fever is not thought to be an issue, subclinical milk fever can still impact on health and production as insufficient blood calcium can trigger a number of other diseases. Calcium binders have been shown to increase milk production, lower SCC, reduce the incidence of metritis and subsequently lower culling rates.

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

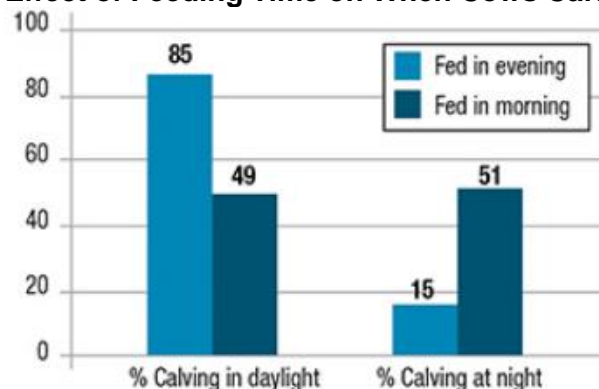
Avoiding Cows Calving through the Night

Getting good quality colostrum into calves as quickly as possible after birth is a key factor in calf health and survival. Timeliness of colostrum

feeding can suffer when calves are born through the night, when little or no staff are on duty. In addition, calf losses may also occur with difficult calvings that go unsupervised. Therefore it would be ideal to reduce the number of cows calving during the night and this can potentially be influenced by the time of feeding.

Much of the research on time of feeding in relation to calving has been carried out in beef cows but is also applicable to the dairy herd, although studies in dairy cows are less well documented. A large scale study carried out by Oklahoma State University over 15 farms in Iowa with 1331 beef cows showed that when cows were fed once a day at dusk, 85% of calves were born between 6am and 6pm. Best results are achieved when cows are fed late in the day from 3 to 4 weeks before calving.

Effect of Feeding Time on When Cows Calve



Source: Oklahoma State University

The reduction in night-time calvings can be explained by changes in rumen motility. A few hours before calving, there is a lower frequency of rumen contractions. During the last fortnight of gestation, pressure in the rumen starts to decrease and the decline is more rapid during the calving process. By feeding at night, there is a rise in rumen pressure due to feed volume in the rumen from eating fresh feed, telling the cow she's not ready to calve just yet. Rumen pressure then declines during the day, leading to the cow being more likely to calve.

In beef cows, the effectiveness of feeding late in the day on daytime calvings is maximised when the amount fed out is consumed within 12 hours. In the dairy situation where it is crucial to ensure cows are never out of feed (to maintain rumen fill and maximise appetite after calving), the results

may be less pronounced. However, the delivery of fresh feed is the greatest stimulus to getting cows up to eat at the feed fence and if fewer night-time calvings is desirable, feeding later in the day may well be worth trying.

In feeding systems where concentrate feed is provided separate to forage, providing concentrate in the evening can also increase the likelihood of a daytime calving. At Oklahoma State University, beef cows had *ad lib* access to round bales of hay and received additional concentrate feed. Changing the time of concentrate feeding from morning to late afternoon/early evening feeding resulted in 72% of the cows calving between 6am and 6pm. When cows were fed their concentrate in the morning, almost half of the calves were born during the day and half during the night.

Interestingly, further research has shown that a heifer calving for the first time during the day, will also tend to calve during the day with her subsequent calves (<https://www.tsln.com/news/feed-at-night-calve-during-the-day/>).

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

Effectiveness of Selective Dry Cow Therapy

A three year Scottish Government Funded project run by SAC Consulting is currently looking at monitoring dairy herds that are reducing their antibiotic use through the practice of selective dry cow therapy (SDCT). There is increasing concern about antimicrobial resistance, both in livestock and in human medicine, and farmers in all livestock sectors are being strongly encouraged to reduce their antibiotic use where possible.

It is common practice to administer antibiotics to cows at drying off to help clear up existing mammary infections and prevent new infections developing during the dry period. However, this blanket antibiotic approach is now considered unacceptable.

With SDCT, antibiotics are only administered if there is evidence of infection, usually based on somatic cell count (SCC). Mastitis history and other factors such as teat end damage may also be taken into account. Cows which have no

evidence of infection are given an internal teat sealant to act as a barrier to the entry of bacteria. This project is a joint collaboration between SAC Consulting, Müller, Zoetis and the University of Edinburgh. It is due for completion in December 2019, with dairy farmers supplying Müller in Aberdeenshire and Ayrshire taking part. The effect of SDCT is being monitored through SCC pre- and post-calving and mastitis cases of dry period origin (cases occurring within the first thirty days after calving). Many of the participating farmers have been drying off as many as 80% of their cows without antibiotics and are achieving good results in terms of dry period performance.

The Dry Period Protection Rate is a key measure of success and looks at the percentage of cows ending their lactation with a low SCC (last three recordings below 200,000 cells/ml) and calve in with a low SCC at first recording (below 200,000 cells/ml). The target for the Dry Period Protection Rate is 90% and the best farms are achieving this, both for cows on SDCT and ADCT (antibiotic dry cow therapy).

The percentage of cows that are dried off with a high SCC (one out of the last three recordings over 200,000 cells/ml) and calve in with a low SCC (below 200,000 cells/ml) is known as the Dry Period Cure Rate. The target is 80% and average results are only slightly lower for cows on SDCT. This target is also being achieved by the best herds both in the SDCT group and the ADCT group, with one of these high performing herds drying off up to 76% cows without antibiotics. It must be noted that dry period performance varies greatly from farm to farm and even herds using more antibiotics at drying off are still not achieving the targets. Results from 13 herds are summarised in the table below).

Dry Period Performance with SDCT and ADCT

	Dry Period Protection Rate		Dry Period Cure Rate	
	Average	Range	Average	Range
SDCT	79%	71-91%	76%	64-94%
ADCT	91%	72-100%	79%	68-90%

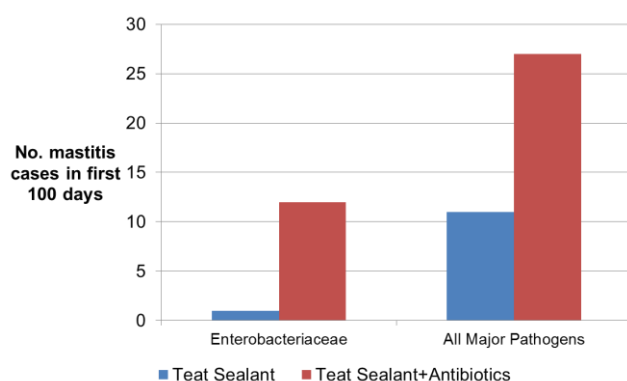
Clinical cases of mastitis varied between the herds from 8 to 61 cases/100 cows/year. Interestingly, the herd with the highest number of cases hit the

90% target for Dry Period Protection Rate for both the SDCT and ADCT group.

The clinical mastitis of dry period origin rate varied from farm to farm but ranged from 2.6% to 36%. However, more than half of the farms are well within the target of less than 1 in 12 or below 8.3% of dry period cases per 30 day period.

On some farms there was a higher percentage of mastitis of dry period origin from cows on SDCT. On other farms the percentage was greater in cows that received antibiotics at drying off and so the effect of SDCT on mastitis of dry period origin also varies greatly between farms. In fact research shows that administering antibiotics to cows with a low SCC at the end of lactation (<200,000 cells/ml at last 3 recordings) can actually increase the risk of mastitis (see graph below):

Impact of Reducing Antibiotic Dry Cow Therapy in Uninfected Cows



Source: Bradley et al, 2010

Ultimately, it is hoped that this project will build confidence in SDCT, showing that this practice is not detrimental to cow health and performance, and increase farmer engagement in this crucial area of reducing antibiotic use.

Reference: Bradley, A.J. et al, 2010. The use of a cephalonium containing dry cow therapy and an internal teat sealant, both alone and in combination. Journal of Dairy Science, 93: 1566-1577.

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

Dates for your Diary

- 18th March - **The Five Non-negotiables of Managing the Modern Dairy Cow**. Stirling Auction Mart, Stirling, FK9 4RN. Time 10.45. Event Organiser: AHDB t: AHDB KE Events Hub on 01904 771216/Mark Campbell on 07528 780346. ke.events@ahdb.org.uk
- 18th March - **The Five Non-negotiables of Managing the Modern Dairy Cow**. Weston House Hotel, Craigie Road, Ayr, KA8 0HA. Time 18.30. Event Organiser: AHDB t: AHDB KE Events Hub on 01904 771216/Mark Campbell on 07528 780346. ke.events@ahdb.org.uk
- 19th March - **The Five Non-negotiables of Managing the Modern Dairy Cow**. Hetland Hall Hotel, Carrutherstown, Dumfries, DG1 4JX. Time 18.30. Event Organiser: AHDB t: AHDB KE Events Hub on 01904 771216/Mark Campbell on 07528 780346. ke.events@ahdb.org.uk
- 21st and 28th March - **Digging Deeper Course – Understand Business Performance**. Thornhill Inn, 103-106 Drumlanrig St, Thornhill, Dumfriesshire, DG3 5LU. Time 10.30-16.30. To book your place contact the KE Events hub on 01904 771216 or email ke.events@ahdb.org.uk. Alternatively, contact Chris Stockwell, chris.stockwell@ahdb.org.uk
- 12th-13th April - **Holstein European Championships**. Libramont, Belgium.
- 16th April - **Transition Cow Management**. Brian Yates, East Logan Farm, Castle Douglas, DG7 1NX. Time: 10.30-14.30. To book your place contact Janis Forrest on 0131 603 7525 or email: janis.forrest@sac.co.uk
- 17th April - **Dairy Leader Development Programme – Employment and Recruitment**. Hetland Hall Hotel, Carrutherstown, Dumfries, DG1 4JX. Time: 09.00-17.00. Event Organiser: KE Events Hub t: 01904 771216 email: ke.events@ahdb.org.uk

Milk Manager NEWS

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

© SAC Consulting 2019. SAC Consulting is a division of Scotland's Rural College (SRUC).
Funded by the Scottish Government and EU as part of the SRDP Farm Advisory Service.