Issue 15 | July 2017

Milk Manager NEWS

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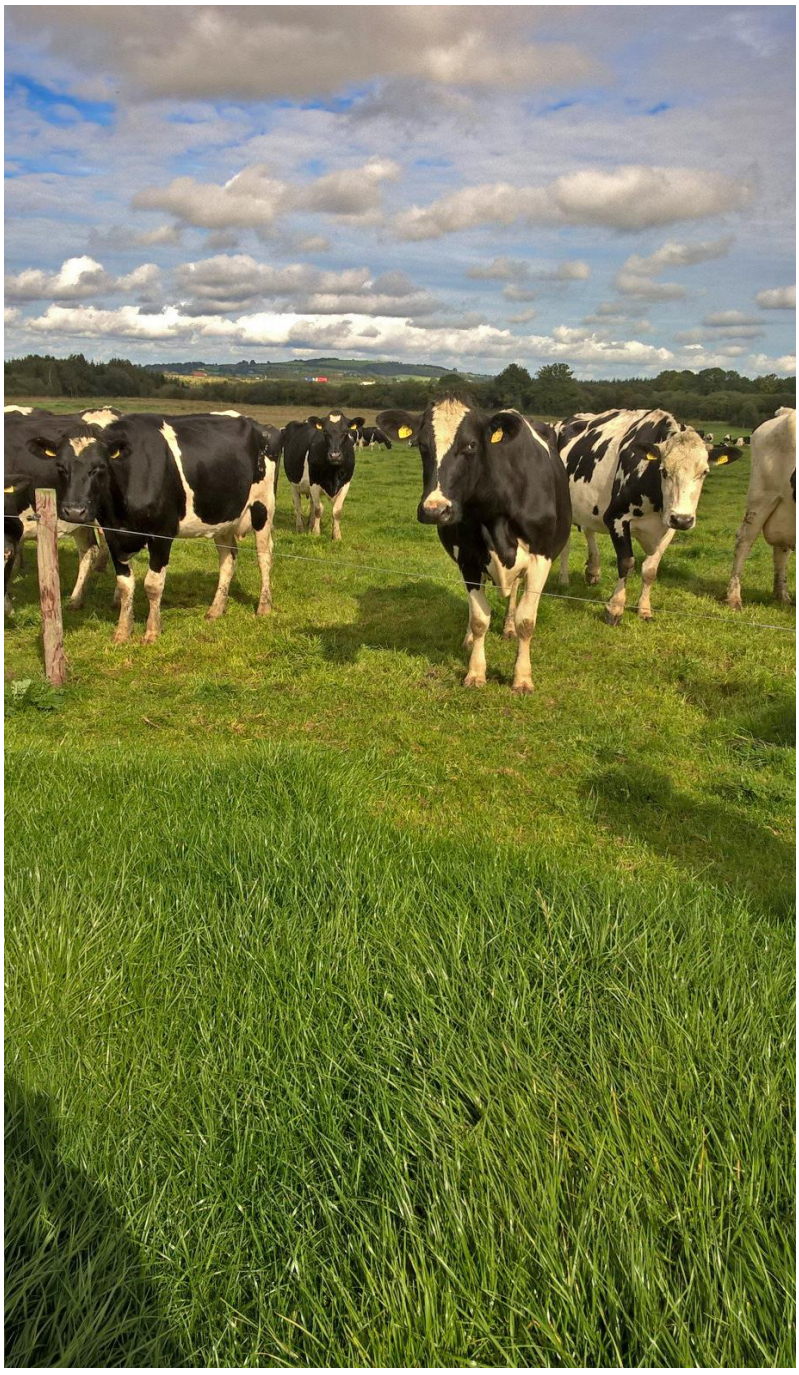

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Europe investing in rural areas

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Milk Manager NEWS

Market Update

UK Wholesale Dairy Commodity Market

- Fonterra's recent online GDT auction (4th July 2017) showed another drop of 0.4% in the weighted average price across all products, reaching US $3,303/t. The previous auction on the 20th June also showed a 0.8% decrease which was the first fall since March this year. Only butter milk powder and whole milk powder showed positive movements (+10.8% and +2.6% respectively). Despite butter continuing to increase in value in the UK, the GDT auction resulted in a 0.1% fall to $5,775/t.

Commodity	June 2017 £/T	May 2017 £/T	% Difference Monthly	June 2016 £/T	% Diff 2016-2017
Bulk Cream	2,370	1,960	+21	1,100	+115
Butter	5,100	4,300	+19	2,355	+117
SMP	1,700	1,550	+10	1,300	+31

Source: AHDB Dairy - based on trade agreed from 1st-27th June 2017. Note these are average prices indicating prices traded across the whole of the past month.

- The strong demand for butter and poor availability continues, resulting in price increases of between £600 to £700/t throughout the month of June. The seasonal decline in butterfat has contributed to this trend and is thought to be lower than normal.

- Demand for cream is strong both in the UK and on the continent. There is a normal seasonal increase in demand towards the end of June in the UK as Wimbledon wouldn't be Wimbledon without strawberries and cream!

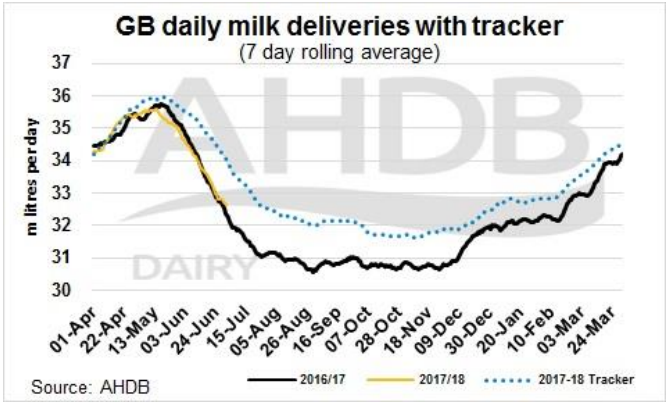
- SMP has not risen as much as butter and cream and prices have actually eased back recently, despite strong rises at the end of May and in early June. The EU Commission recently released 100t of SMP from intervention storage, which sold at €1,850/t (equivalent to £1,620/t) and this may have dampened trade.

- The significant rise in butter and SMP over the last month (19% and 10% respectively) has boosted AMPE by 5.6ppl. MCVE has risen 3.6ppl on the back of mild cheddar prices increasing by about £275/t due to lack of spot availability. Whey butter was also up 20% and whey powder rose 6% from May. Both AMPE and MCVE have almost doubled over the last 12 months. It is questionable whether these high butter prices can be sustained, given that retail butter prices have not yet increased to the consumer.

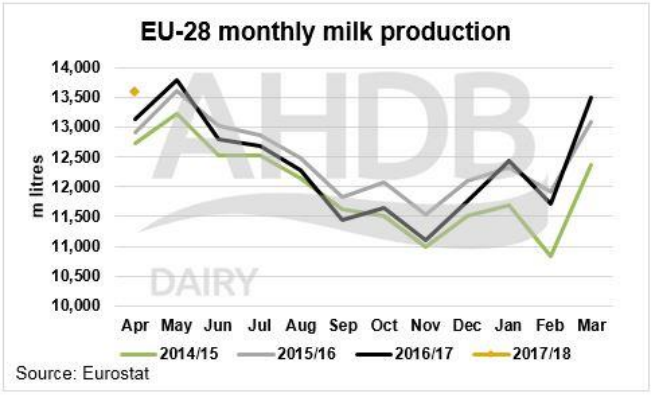
	June 2017	May 2017	12 months previously	*Net Amount less 2ppl Haulage – JUN 17*
AMPE	36.4ppl	31.0ppl	18.9ppl	*34.4ppl*
MCVE	36.9ppl	33.3ppl	19.6ppl	*34.9ppl*

Source: AHDB Dairy

UK and EU Milk Deliveries



- Milk deliveries are still falling, with a week on week reduction of 1.1% for the week ending 1st July. Compared to the same week last year, production is up 0.8% (or 300,000 litres).



- Latest figures for EU-28 milk deliveries show that volumes were up by 0.4% for April 2017 compared to April 2016. Growth has come from Italy, Ireland and Poland, whereas reductions in volume have come from France and Germany. UK deliveries were similar to last year. From January to April 2017, EU-28 deliveries are down 1.4% (718

million litres) compared to the same period last year.

Monthly Price Movements for July 2017

After the small price cuts of last month, there is now real positive movement in milk prices for July and August. However, given the continuing strength of butter and cream prices, the industry is confused as to why farm gate prices are not higher, especially since AMPE and MCVE have risen around 17ppl over the last 12 months and farm gate prices have only increased 7ppl in the same period. In addition, the cream income to a liquid processor was estimated at 13.84ppl for May (up by 2.39ppl from April).

Commodity Produced	Company Contract	Price Change	Standard Litre Price for July 2017
Liquid & Cheese	**Arla Farmers UK**	*+1.44ppl*	28.03ppl Liquid, 29.17ppl Manufacture
Liquid & Cheese	**Arla Direct**	*+1ppl liquid +1.04ppl manufacture*	26ppl Liquid, 27.04ppl Manufacture
Liquid & Brokered Milk	**First Milk Mainland Scotland**	*A price no change. B price +1ppl*	25.49ppl A price 25ppl B price
Cheese	**Fresh Milk Company (Lactalis)**	*No information available*	Previously 28.47ppl Level profile price 29.05ppl
Liquid & Manufacture	**Grahams**	*No change*	26.25ppl
Liquid & Manufacture	**Muller non-aligned**	*No change*	26.19 ppl
Liquid & Manufacture	**Muller (Co-op)**	*No change*	27.91ppl
Liquid & Manufacture	**Muller (Tesco)**	*No change*	29.37ppl
Liquid, Powder & Brokered	**Yew Tree Dairies**	*No information available*	Previously 27.5ppl Standard A litre price

- Muller's retail supplement from Aldi, Lidl and Morrisons for May and June has been confirmed at 0.275ppl and 0.328ppl respectively. This is a fall of around 60% in value since February. Whilst the July standard litre price for non-aligned suppliers has not changed, there will be a 1.5ppl increase as of 1st August, bringing the price up to 27.69ppl.

- Arla's July increase of 2 eurcents/kg or 1.65ppl has been reduced to 1.44ppl due to currency deductions and cashflow adjustments. The milk price increase is down to market returns for butter, cheese and other fat containing products as strong demand continues alongside low fat stocks.

- Sainsbury's suppliers have seen their milk price increase by 0.3ppl in July based on their recent cost tracker review. Since January 17, price increases have totalled 0.94ppl, bringing the Muller SDDG price to 27.97ppl and Arla SDDG to 27.85ppl. Muller's price includes a bonus of 0.62ppl for meeting their animal welfare and environmental criteria. The 0.3ppl increase is based on a 0.24ppl increase in feed costs over a 6 month period to April 17. Red diesel increased by 0.03ppl over a 3 month period to April 17 and nitrogen fertiliser also rose by 0.03ppl over the previous 12 months to April 17.

- Yew Tree Dairies have signed up farmers to its first two year fixed price contract. The contract ends July 19 and so reduces the risk of volatility in milk prices during the next two spring flushes. The nett price to the farmer is 27.328ppl, based on 29.028ppl less 1.7ppl haulage. Between 5 to 60% of producers' output has been contracted. Based on the average of all prices for the last two years (24.67ppl) this looks like a good move.

- Global GDP is above 3% for the 4th consecutive year and is forecast to rise from 3.5% in 2017 to 3.6% in 2018 (source: OECD). Demand for dairy products is predicted to outstrip supply growth of currently around 1%. In the UK it is expected that with falling milk supply in the last 5 months of the year, farm gate prices will rise as demand increases. The DEFRA average UK farm gate price should be over 30ppl by Christmas and could even increase up to 33ppl by spring 2018, supply permitting. It is currently 26.98ppl for May. Rising prices will understandably result in a supply increase in 2018 which will likely drive prices back down in 2019 (The Dairy Group).

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Straights Update

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

£/T for 29t loads delivery + £7/t haulage	Jul 17	Aug 17	Sept-Oct 17	Nov 17-Apr 18
Proteins				
Hipro Soya	303	305	305	317
Rapeseed Meal	176	176	176	183
EU Wheat Distillers	172	172	172	174
Starch				
Wheat	155	155.50	156	159
Barley	132	127	129	132
Maize	180	181	181	Asa 169
Fibre				
Sugar Beet Pulp – imported	179	179	179	148
Soya Hulls	130	Asa 132	132	133

Source: Straights Direct on 11th July. 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 markets around the world have reacted positively to the hot, dry conditions in the latter part of June. The US spring wheat futures rose to a three year high. However, rain and cooler temperatures in France and the UK have been welcomed and it is thought that there has been some but limited damage to yields. The French soft wheat crop has had its projection lowered by 1.6Mt by Strategie Grains from its mid-June report. For the week ending 26th June, 65% of the crop was rated good to excellent, compared to 68% the previous week.

- Big global maize stocks will keep wheat values from moving considerably higher unless there are further weather related events affecting yields.

- Spain has suffered from vey dry conditions in key barley growing areas, with the crop having also been affected by frost earlier this year. The Spanish winter barley crop may be as small as 555Kt this year and so is set to be an even bigger importer of barley compared to last year. The EU crop monitoring report from 26th June stated that yields of winter (1.89t/ha) and spring barley 92.23t/ha) are on track to be the lowest since 2014 and 2015 respectively. The spring barley crop is also set to be 3.4Mt lower than 2016, at about 5Mt.

- Oilseed rape prices have also strengthened on the back of recent hot dry weather in Canada and Australia. The rise in canola futures was due to stressed crops in the southern regions of Alberta, Saskatchewan and Manitoba. For the first time ever, the canola acreage is higher than the wheat acreage, at 22.8M acres (stats Canada) and 450,000 acres greater than forecasted in March.

- The French oilseed rape harvest is now underway (as of 30th June) and early reports are of yields and quality being slightly above average.

- The current heat and drought affecting the US wheat crops has not affected the soyabean crop to the same extent. However, if these conditions continue then yields will likely be reduced. The most critical time for soyabean yields is the pod setting period in August.

UK and Scottish News

- It is thought that the oilseed rape harvest in the UK will be a few days earlier than previous years, although will ultimately be determined by weather. Currently, the outlook is that there will be a surplus of seed available in the short-term and those looking to price and sell at harvest should exploit up-lifts that occur from changes in currency.

- The first winter barley crops have been harvested in the UK with yields ranging from 2.5 to 4t/acre. Spring barley crops are looking average to good and a big surplus is likely, even if average yield levels are not achieved this season.

- The UK is set to be a net imported of wheat for the 2017/18 season. This is due to a smaller winter sown area and a significantly lower carryover from this season. The UK wheat crop this year is estimated at 14.4Mt, similar to last year. New crop UK wheat futures are on a high, with prices almost £12/t greater than the post planting average (for Nov 17, as of 6th July), currently sitting over £150/t since 3rd July.

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Wholecrop Cereal Options

If grass silage stocks are tight then wholecrop cereal is a good option for increasing winter forage stocks, especially when cereal prices are low. A second forage also has benefits in terms of dry matter intake, particularly important for high yielding dairy cows. Depending on your yield and quality of 1st cut silage, you might want to consider wholecrop cereal as a second forage but there are several options of when to cut and what preservation method to use. All cereals are suitable for wholecrop; barley, wheat, oats, triticale and rye.

Fermented Wholecrop

The most common option is fermented wholecrop, taking the crop when the grain is at the soft cheddar cheese or cream cheese stage. This is usually when the grain is between 35 to 45% dry matter and is past the milky-ripe growth stage, at least 3 to 4 weeks before combining (see below).

Guide to DM Content for Whole Crop and Moist Grain Harvest

Whole Crop DM %	Description		Crop Colour	Grain Texture	Grain Moisture %
36-38	Fermented whole crop		Green ear Green stem	Soft dough	
39-42			Ear starting to yellow, stem green	Soft cheddar	
43-46			Ear mainly yellow, stem starting to yellow	Soft cheddar	
47-54			Ear and stem mainly yellow, some green on stem	Hard cheddar, grains easily split with thumbnail. Assume crop moisture loses 1-2% per day	> 45
55-65	Urea treated whole crop	Crimped grain (60-70% DM) Urea treated grain (65-72% DM)	Ear and stem yellow, hint of green on stem	Hard cheddar, moist grains can still be split with thumbnail	35
66-70	Whole crop processed (e.g. alkalage)		Ear and stem yellow/golden brown, some green on nodes	Mature grains hard, difficult to split	= 30
71-80		Combinable grain	Ear and stem completely yellow/golden brown	Grains very hard, some heads bending over	> 25
>80			Ear and stem completely yellow/golden brown	Full maturity, ready to combine	< 20

Source: Dairygold Agri Business

The nutritive value of wholecrop changes little from the soft cheddar to the hard cheddar stage at around 55% dry matter, giving a window of about 3 weeks for harvest. Beware that the dry matter content can change quickly once the crop has reached 45% dry matter, increasing by as much as 1 to 2% per day, so careful monitoring is required before the anticipated harvest date. At dry matters over 45% a processor on the harvester is recommended to crack the grain so that it does not pass through the animal undigested.

The nutritive value can be altered with height of cutting. Leaving a high stubble will give a lower yield but will increase the energy, protein and starch content of the crop (and reduce fibre content). Consequently, leaving a low stubble will reduce nutritional value and increase fibre content as more straw is present, which will compliment very wet silages. Your decision on cutting height may depend on quality and yield of 1st cut silage. Fermented wholecrop can yield 12 to 15T dry matter per hectare, depending on when cut, which is more than three cuts of grass silage.

A suitable additive will be required to aid fermentation (particularly for crops in the higher dry matter range), as there will be very little sugars or moisture in the crop required for microbial fermentation.

Acid Treated Wholecrop

Acid treatment of wholecrop can effectively be made at a wide range of dry matters (from 35%-80%), as you are not relying on the sugars in the crop for fermentation. This preservation method is relatively expensive compared to inoculants for fermented wholecrop. Acid products usually contain propionic acid and/or its salts, as propionic acid is very effective as inhibiting growth of yeast and moulds. The downside of this treatment is the safety aspect of using acids and their corrosive effect on machinery.

Urea Treatment

Urea preservation is suitable when the crop is between 55 to 65% dry matter and is at the hard cheddar cheese stage. This is normally at 2 to 3 weeks before normal harvesting and you should be able to still split the grains with your thumbnail. Urea preserves the crop by reacting with moisture and is broken down by the naturally occurring enzyme urease in the grain to produce ammonia and carbon dioxide. It is the ammonia gas that preserves the crop, killing moulds and bacteria and raises the pH to give an alkaline feed at around 8 or 9.

Application is best carried out with a fertiliser spreader on the pit or mixed with the crop as loads are tipped. Urea must be applied evenly and the crop built up in shallow layers to enable even application and distribution of ammonia gas. Consolidation is not necessary as ammonia must be able to move throughout the crop for effective preservation. Typical application rates for urea are

20 to 30kg/T of fresh forage. It is important that there is no green left in the crop as any green material will contain sugars that can ferment and produce acids, which will counteract the alkaline preservative and make it less effective.

Commercial urea based products such as Home 'N' Dry or Maxammon follow the same principle of urea preservation. Starch content is higher than fermented wholecrop as a result of greater grain fill. Protein level is also enhanced by the urea preservative.

Urea treatment has several benefits:

- Maximises starch content and dry matter yield as later harvested compared to fermented wholecrop.
- Alkaline feed to benefit rumen health on intensive high starch diets.
- No fermentation losses (can be up to 15% with fermented wholecrop).
- Increased protein content.
- Discourages vermin.
- Very stable after opening clamp and at feedout.

Depending on which method of preservation you are aiming for, speak to your supplier to get the best advice on additives, application rates and clamp management.

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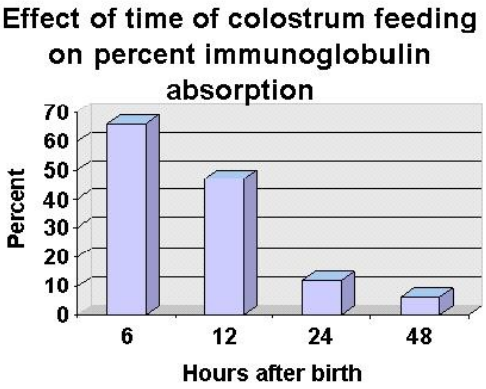
Colostrum – Part 2: Feeding Management

Quickly, quality and quantity are the three "Qs" we have all heard about regarding colostrum feeding. It might seem repetitive to talk about these over and over again, but the implementation of these "Qs", are going will determine how successful your calf rearing enterprise is. Very often these three "Qs", or some of them, are still neglected on farm. All these "Qs" are equally important and require the same attention.

1. Quickly – how soon the calf should receive colostrum?

The answer is simple: as soon as possible and the earlier the better. Remember, colostrum contains large size proteins, immunoglobulins (Ig's), of which IgG is the most important. They provide passive immunity by passing through the intestine into the bloodstream and protect the calf from disease. The efficiency of Ig absorption declines rapidly after birth. By 12 hours, absorption is only 50% and after 24 hours it is less than 10% (see graph below).



Source: Besser and Gay, 1994. Vet. Clinics of North America

The first few hours are critical. Any delay in the first feed of colostrum can lead to disease challenge if bacteria get into the digestive tract of the calf sooner than colostrum. This often occurs when calves are left in the calving pen with their dam. The calf can ingest bacteria from its environment quicker than it can find the teat and start nursing. We can all picture a newly born calf, trying to stand, stumbling around, bumping into objects and "sampling" all sorts of material that is left behind after birth.

This must be avoided by taking the calf away from the calving pen immediately after birth and feeding colostrum as soon as possible. Leaving the calf with its mother and replying on it to suckle the appropriate amount of colostrum can lead to poor immunity and increased risk of health problems such as scour or pneumonia.

2. Quality – what is good quality colostrum?

The answer is again simple: it has to contain a certain level of IgG's. But how much is enough? This is where problems start, by leaving the calf to suckle. We actually have no idea about the quality of colostrum consumed. As we don't see or handle it, the quality cannot be determined.

It is highly recommended to administer colostrum to newborn calves and not rely on nature or instinct at this stage. The udder and teats of modern dairy breeds are not designed for easy nursing, but designed for machine milking. If the calf is either bottle fed or stomach-tubed both the

quality and quantity fed can be measured, ensuring requirements are met.

Good quality colostrum should contain about 50g of IgG in every litre. This applies to the first milking, right after calving. Twelve hours later, at the second milking, the IgG content will be halved and only traces of IgG can be found in milk after 72 hours. It is extremely important to measure and only use colostrum that is the highest quality, as a first feed.

3. Quantity – how much colostrum should be fed?

A third simple answer: 150g of IgG, as a first feed. But how many litres is that? If the colostrum is good quality (i.e. contains 50g of IgG per litre) the calf requires three litres for its first feed.

If the colostrum is lower quality, it is important to make sure the calf receives an adequate intake of IgG. The lower the quality, the higher amount of colostrum that has to be fed to realise the required IgG intake. For example, if the colostrum has only 35g of IgG/l, 4.3 litres of that colostrum must be fed. However, keep in mind some calves will struggle to consume this amount voluntarily, especially smaller calves or calves of smaller breeds. In this situation, the use of an oesophageal feeder is recommended and necessary to make sure the calf gets sufficient IgG.

There is a limit to how much colostrum can be fed in one feed and it depends very much on the size of the calf. Generally it is not practical and can present health hazards if more than four litres of colostrum are fed in one feed. When only lower quality colostrum is available, administer up to four litres as a first feed and top up with the required amount six hours later.

A good rule of thumb is to feed 10% of body weight for the first feed where birth weight is recorded by a weigh scale or weigh band. But please remember, assessing colostrum quality is always the first step. Without knowing the quality, it is impossible to know the actual quantity required to be fed to provide the correct level of immunity.

Colostrometers, refractometers or densometers are perfectly adequate tools to assess colostrum quality on farm. Their use and practical recommendations about how to improve colostrum cleanliness will be discussed in the August edition of Milk Manager News.

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Managing Summer Mastitis Risk

Now is the time to be vigilant against summer mastitis outbreaks, with peak occurrence of the disease between July to September, when fly populations are at their highest. The disease is often farm specific and tends to occur in specific fields. Summer mastitis affects the non-lactating mammary gland, affecting dry cows, heifers and even young calves, although the latter is less common. Close attention must be paid to these groups of animals during the high risk period as undetected cases can lead to animals calving down with blind quarters or udder “blow outs”.

The most common cause of summer mastitis is the bacteria *Trueperella pyogenes*. However the incidence and severity can be increased by the presence of other organisms and factors affecting teat condition such as teat end damage. Other bacteria that have been implicated in summer mastitis include *Streptococcus dysgalactiae*, *Fusobacterium necrophorum, Bacteroides fragilis* and *Peptococcus indolicus*, all of which can be present on the skin of healthy cattle. The bacteria involved in summer mastitis can be spread between animals by flies, particularly the sheep head fly.

Symptoms of summer mastitis include:

- Enlarged teats, both in length and diameter for up to a week before obvious signs of sickness are seen.
- Swelling and hardening of the infected quarter.
- Very painful quarter with a thick, clotted secretion.
- Raised temperature in severely affected animals.
- Large numbers of flies around the infected teat causing irritation and kicking.
- Isolation of animal away from herd mates, lack of grazing, stiffness and reluctance to walk.
- Rapid body condition loss.
- Abortion. Although not common, abortion can occur up to two weeks after initial infection. Calves from affected cows may be weak and

more prone to disease unless given good quality colostrum from a healthy cow.

It is rare for infected quarters to recover and treatment is essentially to prevent the quarter from bursting and spreading infection to the other quarters. The immediate response to an infected animal is to completely strip out the infected quarter to reduce the risk of abscesses bursting through the side of the udder. Stripping should be carried out several times a day for the first few days with the infected pus disposed of safely and not on the ground. Isolation of infected animals is crucial to prevent flies spreading infection to healthy stock and they should be housed indoors. Veterinary treatment includes antibiotics and anti-inflammatories to reduce pain, swelling and abortion risk.

The key is to focus on prevention by reducing the risk of fly transmission and predisposing udder factors (see table below). These include dry cow therapy and teat sealants, fly control and avoiding poor teat condition, as cracked teats or cuts will increase the risk of infection.

Prevention Area	Comments
Dry cow therapy and teat sealants	Antibiotic dry cow tubes can significantly reduce incidence. However they may not provide adequate protection for the whole of the dry period. Consider longer lasting tubes if summer mastitis is a recurring problem on the farm. Internal teat sealants are also crucial in reducing the risk of infection and should be used. External teat sealants such as Stockholm tar can be applied to prevent infection but these types of products are messy and repeat application is required every few days. Micropore tape can also help, but needs to be re-applied at least every three weeks.
Fly control	Pour on products are normally applied along the animal's back. However application around the udder area may be beneficial. Again regular application may be required depending on product used. Fly tags can help but do not provide local protection to the udder's skin.
Teat condition	Animals with damaged teats/cuts/sores will attract flies and increase risk of disease. House these animals if possible. Hyperkeratosis from over-milking is a big risk factor. Ensure your teat dip contains an emollient.
Grazing manage-ment	Try to avoid fields which have shelter from a lot of trees or are near streams/rivers, where flies tend to favour. Manage grazing to avoid tall weeds (thistles) or long grass that provides cover for flies and increases infection risk with animals coming into contact with long grasses/weeds.
Isolation	Isolate infected animals or house them to reduce the risk of flies spreading infection.

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Total Dairy 2017 Review

Global Experts Focus on Dairy Efficiencies

How to improve efficiencies in fertility, feeding and heifer rearing were some of the topics tackled by dairy experts from around the world at the recent TotalDairy Seminar at Keele University in Staffordshire.

Now in its twelfth year, the two day event - which is lead sponsored by Zinpro and Zoetis - attracted over 400 delegates keen to hear the latest practical, research lead thinking in dairy herd management.

Opening the seminar, veterinary nutrition consultant, James Husband, from event organisers, Evidence Group said fertility was the linchpin to overall herd efficiency. He explained that getting cows in-calf promptly would avoid low

production from extended lactations and prevent cows from getting over-fat. This would help avoid disease risk around calving and subsequent reductions in performance. For optimum efficiency he advised farmers targeted a herd average of 180 days in milk. "On average, for every month longer than 180 days in milk, you lose 2 to 2.5 litres a cow a day," he explained.

Dr Paul Fricke of The University of Wisconsin-Madison, said good udder health was essential in order to achieve high herd fertility. "Mastitis events occurring during the breeding risk period have a profound negative effect on fertility," he said.

A study on four Wisconsin dairy farms found that cows that had chronic mastitis before and during the breeding period had a significantly lower conception rate to first service of 28%, compared to 45% in healthy animals. This was a result of the inflammatory response to mastitis. Those animals that had high somatic cell counts during the breeding period also had significantly lower conception rates of 37%.

Vet Ginny Sherwin from Nottingham University presented new research, which highlighted the huge scope for UK farmers to improve heifer rearing efficiencies. The 2016 Nottingham University study looked at data from 18,000 heifers across 437 farms in England and Wales and found that calving-in over the target age at first calving of 23 to 24 months had a significant detrimental effect on performance.

"We found that as soon as heifers are over 24 months at first calving, the chances of them surviving into their second lactation decreases. Another Irish study also showed that if you reduce age at first calving from 27 to 24 months, the chance of staying in the herd is 10% more," she said.

With less than a quarter of UK herds found to be hitting an average age at first calving of 23 to 24 months, this underlined the need for farmers to focus their attention on ensuring heifers reached the right size to calve at this target age. In doing so, they would be rewarded with lower rearing costs, reduced first lactation culling rates and improved 100 day in-calf rates.

Ms Sherwin added: "We also looked at the effect of age at first calving on 100 day in-calf rates. We found there was no effect under 23 months age at first calving, but once over 25 months there was a negative effect on the number that got pregnant before 100 days in milk."

Feed efficiency was one area tackled by Jud Heinrichs from Penn State University, who spoke in a number of presentations and smaller group workshops. He said variability in forage quality had a huge impact. "Maintaining high forage quality in all stages of forage management is the number one way to maximise feed efficiency," he said.

Ensuring good digestibility of the total diet and providing good physically effective fibre to promote rumination and saliva production was vital to get the rumen working effectively and encourage efficient digestion.

Professor Heinrichs also advised farmers to maintain even body condition across the herd due to the energy cost of putting fat on and taking it off. He added: "A lot of feed efficient farms have a lot more even body weight through lactation."

For more information from the event follow @TotalDairy on Twitter using #totaldairy. You can also sign up to hear the latest about next year's event at www.totaldairy.com

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On behalf of EBVC

Crichton Royal Farm Update

The multi-cut silage system is well underway at Crichton Royal Farm with the 3rd cut silage having recently been made on the 3rd July at Acrehead and the 10th July at Crichton. Acrehead 3rd cut came in at 30% dry matter with a yield of 4t/acre and was cut only 34 days after the 2nd cut. Post 3rd cut, all silage fields will receive slurry only, with the aim of doing Acrehead's 4th cut in five weeks time around the w/c 7th August.

3rd cut silage made at Crichton on 3rd July

Silage analyses on the first two cuts has been very good, with the 2nd cut being even better than the 1st (see table below). In preparation for 2nd cut, fields received ammonium nitrate at 30kg/ha of N and 20m^3/ha of slurry by tanker splash plate. Yields of 2nd cut were 4.5t/acre at Acrehead and 6.25t/acre at Crichton.

Parameter	1st cut*	2nd cut**
Dry Matter %	33.6	35.5
ME MJ/kg DM	11.7	12.5
Crude Protein %	13.0	18.7
D Value %	73.0	77.9
NDF %	38.5	40.9

* Average results from core samples of 5 pits covering 2 lots of 1st cut silage (wet NIR lab analysis).
**Analysis based on one pit sample analysed by mobile NIR scanner.

They say maize should be "knee high by the 4th of July". However by the 3rd July, one variety (Lovely) was at the tasseling stage and six feet high. In fact the maize was knee high on the 30th May, having been drilled 6 weeks prior to this! Two other varieties which were drilled two weeks later were chest high on the 10th July so all signs are positive for a good crop.

The hot spell of weather at the end of May and into June did not seem to affect cell counts, despite all cows being housed this summer. Cell counts have been consistently running at around 122 for Crichton and 124 at Acrehead. However three cases of E.Coli mastitis have occurred in the last three weeks with no change in regime so it is assumed these are weather related.

Attention to detail is paramount in getting heifers to calve down at the target of 24 months at Crichton. They must be a minimum of 10 months old when they first go to grass and are fed 2kg of compound at the grass to maintain growth. Heifers are wormed and fly treated before turnout and are then brought back inside at 12 months of age for breeding, so that they are on a consistent diet to achieve a growth rate of 0.8kg/day. All in-calf heifers are at grass and are treated with a pour on wormer and fly repellent every eight weeks. Mineral buckets containing garlic are provided to reduce fly challenge. This has been the policy for a number of years and seems to work well.

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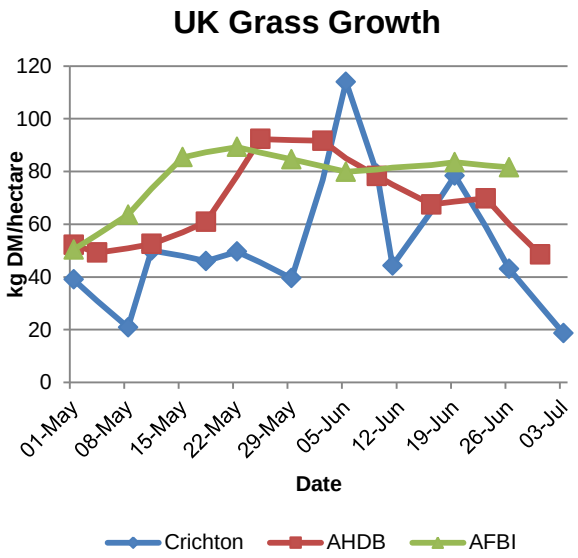
Grass Growth

Grass growth has been exceptional at the end of May and throughout much of June, with growth rates over 100kg DM/ha being recorded in some areas. According to AHDB Dairy, grass growth for June has been slightly ahead of last year although there is huge variation between areas of the country, ranging from only 15kg DM/ha in Hampshire to 101kg DM/ha in Stirlingshire. Grass growth at Crichton is much more variable in comparison and recent low measurements were due to some paddocks being recently grazed by youngstock. Latest AHDB Dairy figures from the end of June show that energy content is on average 11.7MJ/kg DM and crude protein levels are just under 24% DM.



Recent wet weather has contributed to high growth rates but note the lower dry matter of grass means

that cows may struggle to achieve high dry matter intakes at grass, increasing the need for supplementary energy in the diet. It is good practice on very wet days to feed an extra kg of cake in the parlour (if not already at the limit for parlour feeding) or provide an extra 1kg of concentrate in the buffer ration to reduce the effect of lower grass intakes on milk yield.

It will be getting increasingly difficult to get cows to graze down to the desired residuals. Consider pre-mowing and remove high grass covers over 3000kg DM/ha to maintain good grass quality and encourage leafy swards for the remainder of the grazing season.

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Dates for your Diary

- 11-13th July – **Great Yorkshire Show.** Great Yorkshire Showground, Harrogate, HG2 8NZ.
- 16th-20th July – **11th European Conference on Precision Agriculture**. John McIntyre Centre, Pollock Halls, Edinburgh. Contact Event Organiser for more information: info@ecpa2017.com, https://ecpa.delegate-everything.co.uk/
- 18th July – **Holstein UK: Annual Stockjudging and Open Day.** Denoldrum Farm, Inverbervie, DD10 0PL. Event organiser: DairyPro t: 024 7647 8681, dairyproenquiries@ahdb.org.uk
- 19th July - **Calf to Calving - Minimising Stress to Maximise Return**. Best Western Eglinton Arms Hotel, 59 Gilmour St, Eaglesham, Glasgow, G76 0LG. Followed by farm visit (courtesy of Robert Stevens). Time 10.45-14.00. To book your place, contact Andy Dodd on 07759 586321 or andrew.dodd@ahdb.org.uk
- 24th-27th July – **Royal Welsh Show**. Royal Welsh Showground, Llanelwedd, Builth Wells, Powys, LD2 3SY.
- 25th July – **Calf to Calving – Lameness – A disease of cows that start with your heifers?** Glasgoforest, Kinellar, Aberdeenshire, AB21 0SH. Time 10.45. To book your place contact Andy Dodd t: 07759 586321 or andrew.dodd@ahdb.org.uk
- 16th August - **Clearing open evening - SRUC Aberdeen Campus**. SRUC Aberdeen Campus, Ferguson Building, Craibstone Estate, Aberdeen, AB21 9YA. Time 16.00-20.00.
- 21st August – **Get Moo-ving on Mobility**. Hillhead, Kirkpatrick Fleming, Lockerbie, DG11 3NQ. Time 10.30-14.30. To book your place contact KE Events hub on 01904 771216 or email ke.events@ahdb.org.uk
- 22nd-23rd August – **Cattle Foot Trimming Course**. SRUC Barony Campus, Parkgate, Dumfries, DG1 3NE. Contact team training 01387 242918 or kyra.redpath@sruc.ac.uk
- 25th August – **Thainstone Spectacular**. Thainstone Agricultural Centre, Inverurie, Aberdeenshire, AB51 5WU.

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

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