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Milk Manager NEWS

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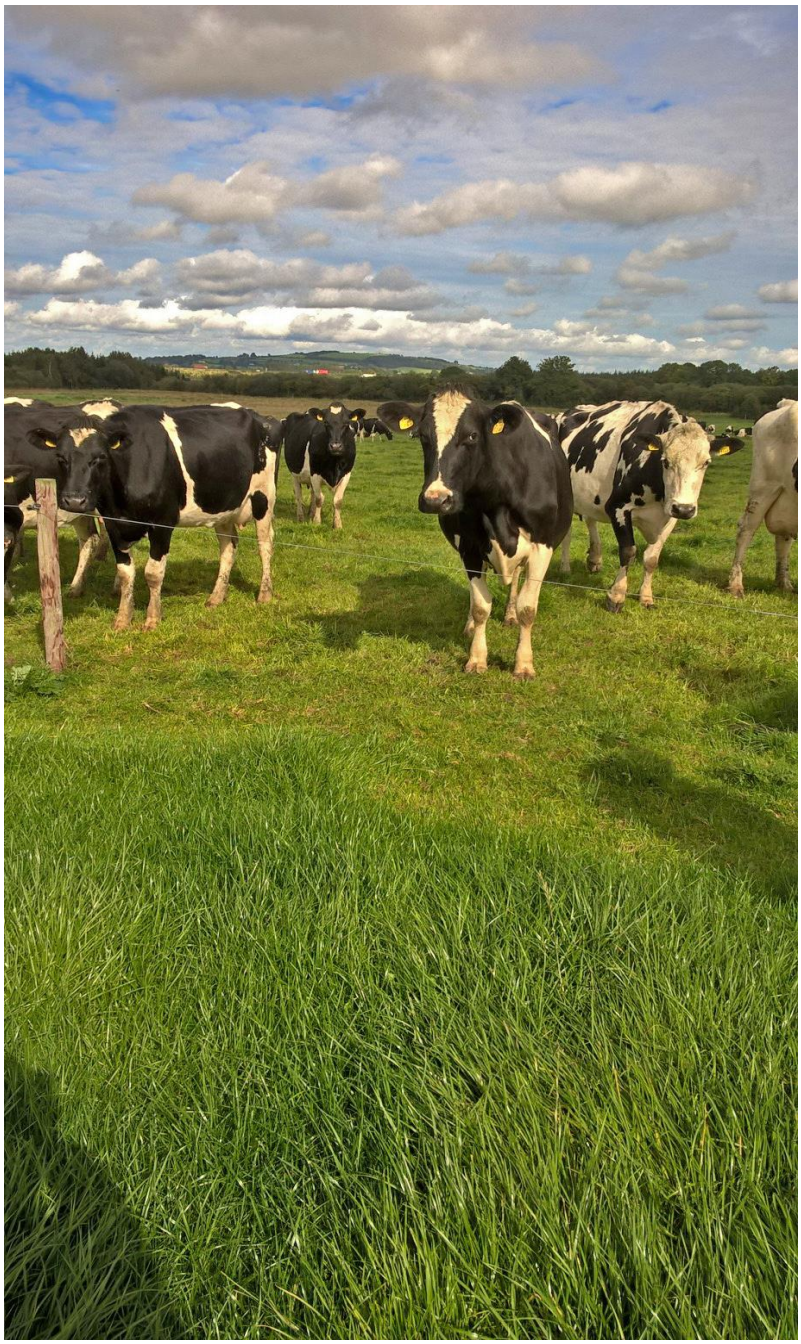

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Europe investing in rural areas

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Milk Manager NEWS

Market Update

UK Wholesale Dairy Commodity Market

- Fonterra's latest on-line GDT auction (3rd July) resulted in a 5% decrease in the weighted average price across all products, reaching US $3,232/t, the largest decline this year. The biggest falls were in butter (-4% to $5,390/t), skim milk powder (-4.6% to $1,913/t), whole milk powder (-7.3% to $2,905/t) and cheddar (-4.3% to $3,717/t). Increasing supplies of milk have been reported by Fonterra, with New Zealand production increasing 6% in May along with a 4% rise from Australia. Consequently, buyers are expecting to pay less for products.

- Throughout June in the UK, there has been little trade in commodities due to tight supplies and buyers hoping prices will fall. Prices have eased slightly despite concerns over milk production with the dry weather, leading to spot milk price rising to over 30ppl from the low to mid 20's.

Commodity	Jun 2018 £/T	May 2018 £/T	% Difference Monthly	Jun 2017 £/T	% Diff 2018-2017
Bulk Cream	£2,320	£2,350	-1	£2,370	-2
Butter	£5,130	£5,180	-1	£5,100	1
SMP	£1,360	£1,321	3	£1,700	-20
Mild Cheddar	£3,000	£2,970	1	£3,250	-8

Source: AHDB Dairy - based on trade agreed from 1st to 27th June 2018. Note these prices are indicative of values achieved over the reporting period for spot trade (excludes contracted prices)

- 89,556t of SMP have been sold out of EU intervention stocks since April 2018, with the latest 25,532t sold in June at €1,195/t, the minimum sale price set by the EU Commission (approximately £1,050/t). This leaves around 280,000t currently in store.

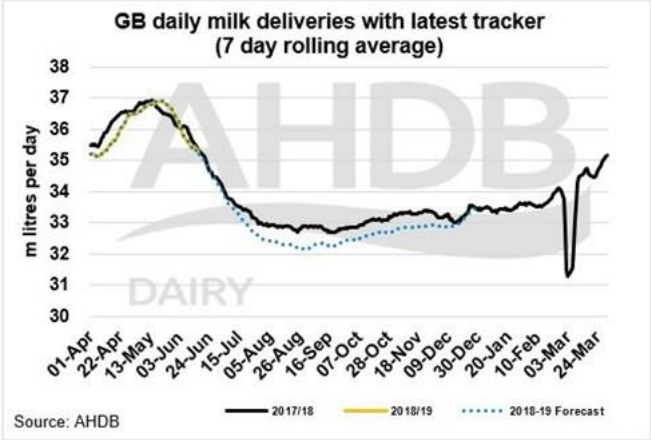
- Market indicators AMPE and MCVE provide a rough indication of market returns and with very little change in the dairy commodities this month there has been little movement. AMPE rose only 0.15ppl on the back of the small rise in SMP and MCVE increase by 0.44ppl due to the 1% rise in mild cheddar price.

	Jun 2018	May 2018	12 months previously	Net Amount less 2ppl Haulage – JUN 18
AMPE	33.23ppl	33.08ppl	36.41ppl	*31.23ppl*
MCVE	32.77ppl	32.33ppl	36.92ppl	*30.77ppl*

Source: AHDB Dairy

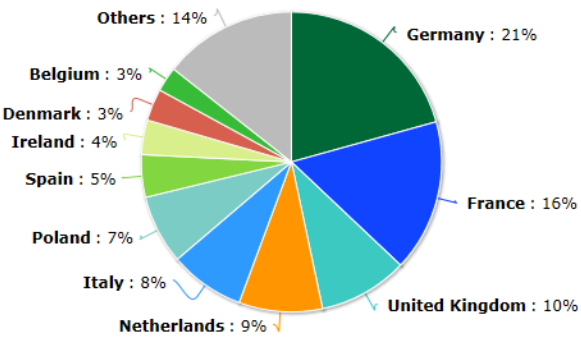
UK Milk Deliveries and Global Production

- Milk production in the UK has been declining week-on-week throughout June as the later spring flush has passed, down 1.4% for the week commencing 23rd June. Average daily production for this week was 34.76 million litres. Compared to the same week last year, production is back by just 20,000 litres (0.1%).



- Milk production in Europe is holding steady and very similar to the same time last year. Buyers are trying to drive the price of commodities down and both butter and SMP have been falling in the EU. Milk prices continue to be supported by the hot dry summer weather, which is keeping production in check, both in the UK and EU, with grass in short supply. Milk deliveries in the EU by percentage contribution per country are shown below, with the UK the third biggest contributor behind Germany and France.

Milk Deliveries to EU Dairies (Jan - Apr 2018)



Source: CLAL

- Global milk production was up 1.7% in April compared to the same month last year from the

five key exporting regions (US, Australia, New Zealand, EU and Argentina). Most of the growth came from the EU and the level of growth is as expected going by the 2018 tracker. Average global daily production in April was 815.5 million litres.

Monthly Price Movements for July 2018

Commodity Produced	Company Contract	Price Change from Jun 2018	Standard Litre Price July 2018
Liquid & Cheese	**Arla Farmers UK**	*+1.8ppl liquid +1.92ppl manufacture*	29.31ppl liquid 30.5ppl manufacture
Liquid & Cheese	**Arla Direct**	*+2ppl liquid +2.08ppl manufacture*	27.3ppl liquid 28.45ppl manufacture
Liquid & Brokered Milk	**First Milk Mainland Scotland**	*+1.2ppl liquid +1.24ppl manufacture*	27.2ppl liquid 28.12ppl manufacture
Cheese	**Fresh Milk Company (Lactalis)**	*+1.5ppl liquid +1.56ppl manufacture*	28.0ppl liquid 28.99ppl manufacture
Liquid & Manufacture	**Grahams**	*+1.25ppl*	28.00ppl
Liquid & Manufacture	**Müller Direct**	*+1.25ppl*	28.00ppl
Liquid & Manufacture	**Müller (Co-op)**	*No change*	27.99ppl
Liquid & Manufacture	**Müller (Tesco)**	*No change*	29.84ppl
Liquid, Powder & Brokered	**Yew Tree Dairies**	*+1.5ppl*	28.00ppl Standard A litre price

- The 1.5ppl increase from Lactalis to 28ppl is a minimum price guarantee which is to be held until the end of September.

- According to Nick Holt-Martyn of The Dairy Group, farm-gate milk price should continue to firm over the next 6 months, with an estimated 30ppl by the beginning of winter

- There was a high uptake of the Müller fixed offer of 28ppl from Lidl, fulfilling the 180 million litres/year allocation. Producers could chose to fix for either 2 or 3 years up to 50% of their milk supply in 10,000 litre per month lots from 1st June 2018.

- Sainsbury's has increased its SDDG price by 0.36ppl for July, bringing its standard liquid litre price up to 28.48ppl for Muller producers and 28.36ppl for Arla producers. This increase is due to the cost of feed rising by 0.36ppl over the previous 6 months to April 2018.

- The Co-operative Dairy Group and Tesco Sustainable Dairy Group both have price increases for August, 0.89ppl and 0.33ppl respectively. The Co-op price increases to 28.88ppl while the Tesco price will be 30.17ppl for Müller suppliers and 29.92ppl for Arla suppliers. The Tesco price increase comes on the back of feed, fuel and fertiliser prices increasing from July over the next 3 months.

- Graham's Dairies planning appeal to build 600 homes and a £40 million processing facility at Airthrey Green in Stirling was recently rejected, due to environmental concerns with the development on green belt land and concerns about flooding. This is a big blow to both Graham's and the local economy which would have benefited from more affordable homes and more jobs created in the Scottish dairy sector.

- A new report form the International Farm Comparison Network (IFCN) Dairy Research Network has suggested that an extra 295 billion litres of milk will be consumed by 2030 as world population and demand increases. This projection is based on consumption and population trends and to fill the gap, the global dairy herd will need to increase by 12% (417 million more dairy animals). The largest rise in milk production is expected in south Asia (64% growth), with a modest 14% increase predicted for Western Europe.

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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 + £8/t haulage to central belt	Jul 18	Aug 18	Sep 18 - Oct 18	Nov 18 - Apr 19
Proteins				
Hipro Soya	338	332	332	336
Rapeseed Meal	POA	Asa 214	214	219
Wheat Distillers Pellets	POA	229	229	229
Starch				
Wheat	173	173	178	183
Barley	150	158	153	158
Maize	182	183	183.50	181
Fibre				
Sugar Beet Pulp	204	207	207	177
Soya Hulls	179	177	177	169

Source: Straights Direct and Cefetra on 4th 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

- Trade discussions between the US and China has impacted on the oilseeds market. The CBOT soyabean market showed steep declines since the 25% tariff on US soyabeans into China. The USDA recently rated the US soyabean crop 73% good to excellent, which is a record at this stage of the season.

- The US wheat harvest has been favourable so far, at 41% completed compared to 39% this time last year and 8% faster than the 5-year average (as of 27th June). However, world cereal crop estimates have fallen two months running and stocks to use are now down to the lowest level since 2013 and prices have moved up to reflect this. Any further declines in crop estimates and prices will rise further and quickly.

- Compared to the UK, more severe drought problems are being seen in parts of northern Europe, particularly Scandinavia. The winter barley harvest is 2-3 weeks early in France and southern Germany and yields are down.

- Russian wheat output is expected to fall 20% this season and IGC recently lowered world wheat output estimates for 2018 by 12mt on lower Russian and EU cereal crops. The European Commission expects the smallest EU wheat crop since 2013 and the smallest barley and rapeseed crops since 2012. The main alternative view is currently coming from the US where wetter conditions are currently beneficial for maize and soya crops there.

UK and Scottish News

- Grain prices are at their highest level in 5 years with wheat and barley having risen £5/t in the last week and £10/t in the last month as UK/ European drought concerns intensify. The yield potential of Scottish and UK cereals for both grain and straw is understandably under question at the moment.

- The first UK cereal harvest of the year has taken place in Cullompton, Devon on 15th June by beef farmer Roger Adams of Honeypark Farm. The winter barley crop was combined and crimped at 55% dry matter. Yield was estimated at 12t/ha fresh weight.

Feed Buying

- First do a realistic feed budget to work out what you will need to buy this year (not for a normal season), gauging what's still to harvest and grass in the field, which is clearly challenging as we don't know when its going to rain.

- Given reported light yields of 1st cuts and likely 2nd cut silages, look into forward buying of alternative feeds such as distillery by-products, potatoes and fodder beet to spin out silage stocks this winter. Consider making wholecrop if possible and look into options for alternative bedding as straw will likely be in short supply. Also, assess the number of stock you are carrying into the winter period to reduce mouths to feed. Stricter culling policies on repeat breeders and cows with repeat cases of mastitis are worth considering. Can surplus heifers be sold or sell beef cattle store instead of finishing them? Early planning now is crucial to avoid exacerbating problems of forage shortages further through the winter when demand will be higher.

- Buy forward now as much of your remaining winter feed requirement as your cash flow

/storage allows; 50% would be a good place to start, but more likely 70%+. The less your business is able to withstand any further rise in feed price, the more you need to buy now. Arrange extra borrowings to cover it if need be; it is likely to be cheaper in the long run. The priority is agreeing to pay arable farmers in the East now so that they bale as much of their straw as possible, including rape straw for bedding. The drought is a pan-northern European/Eastern European problem, so if we are short of anything; especially bulky forage, it could be costly to remedy in terms of transport costs.

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Should You Use a Pre-Dip?

Source: https://www.delaval.com/en-us/our-solutions/milking/udder-health--hygiene/teat-dips/

The main benefit of using a pre-milking teat disinfection is to help tackle environmental mastitis organisms. It may also help control somatic cell counts and bactoscans. Post-dipping on the other hand is very effective against the spread of contagious mastitis. If environmental mastitis cases exceed 5 cases/100 cows per month, pre-dipping is recommended and has been shown to reduce new infections caused by E.coli and streptococcal infections by up to 50%.

Special pre-dip products are designed to be fast acting to rapidly reduce the numbers of mastitis causing bacteria on the teat skin and around the teat orifice. Therefore, post-dips are not as suitable, as they tend to have a much slower speed of action, as they are designed to kill bacteria on the teat skin for a prolonged period of time after milking. Post-dips also tend to contain teat conditioners which are not necessary for pre-dipping. However, often some of the same active ingredients will be present in both products.

Timing is important, as the dip should be left on the teat for at least 30 seconds, after fore-milking. It can be removed prior to milking by either dry-wiping or washing off then drying the teats.

While pre-dipping will extend the overall milking time, with more time required for preparation, care must still be taken to ensure that teats are clean before the application of the pre-dip. Any organic matter that mixes with the dip can quickly render the active ingredient ineffective, reducing its ability to kill bacteria. Soiled teats must be cleaned prior to applying the pre-dip. Cleanliness of the udder and teats can be improved if long hair is clipped or singed and tails are clipped. Teats must also be dry as any water on them will dilute the dip and again reduce its effectiveness.

Pre-dip application and then removal should be the last procedure before the milking machine is applied. Therefore, fore-stripping should be carried out beforehand, since the milker's hands are always a potential source of bacterial contamination.

In order to be effective the dip must cover the entire length of the teat and not just the teat end. The whole teat will be in contact with the milk liner so full teat coverage is important for reducing mastitis and also milk hygiene quality. If it is known that environmental pathogens are responsible for the majority of mastitis cases, focus on improving the environment but also pre-dip for maximum effectiveness.

Pre-dips can be applied by spraying but make sure the entire teat is covered. Generally dipping will use less product compared to spraying and unless applied very diligently, it is likely that dipping will be more effective and provide better teat coverage. Dipping will wet the teat only but spraying means liquid sprayed onto the udder can drain down from the udder onto the dry teat before cluster application. All traces of pre-dip must be removed so that residues do not get into the milk.

Nozzles should be checked at the start of each milking to ensure there are no blockages and even distribution of product.

Another benefit of pre-dipping is the added stimulation to the cow, helping improve the rate of milk let down, with the cow being milked out more fully and faster.

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Dealing with the Drought

The last two months have been some of the driest months on record and this is really starting to take its toll on grass growth. Data from AHDB Dairy currently shows a growth rate across the UK of 50.9kg DM/ha, compared with 69.9kg DM/ha last year. Long range forecasts suggest grass growth could slow even more, with little sign of significant rain on the horizon. Grasscheck in Northern Ireland are predicting a continual reduction in growth, with the 14 day forecast at 34.2kg DM/ha.

The supply and demand of grass on many farms is currently in a negative balance and the options are similar as going into a winter with low silage stocks. We can either reduce demand, or find a way to increase feed supply.

Culling hard may be an option or drying off cows early can reduce feed demand. This will give more feed for early lactation cows and keep driving fertility. Make dry cows follow the milking herd as they will clean up paddocks and stop them getting too fat. Care must be taken to keep residuals above 1500kg DM/ha. Any lower and regrowth will be hampered even more. Look at selling other cattle off the farm early, such as stores, rather than finishing cattle.

Milk sales, and subsequently feed intake, can also be cut back by reducing milking frequency. Sixteen hour intervals or even once a day could be considered. However, this will only work if grass allocated is reduced. Cows will still want to eat similar levels, yet will have a lower energy demand, increasing BCS.

Paddocks should not be grazed with any less cover than normal. This will only shorten the rotation length and exacerbate the problem in a few weeks time. Buffer feeding will be necessary to reduce grass intake. Parlour cake, silage, by-products or even zero grazing fields the cows can't access can help plug a gap. Cows on grass with no other feeding will only cause them to milk off their backs and reduce BCS, in turn hampering fertility.

The wet winter and spring caused a lower yielding 1st cut for most and silage pits were already empty after the long winter. Regrowth is slow and fertiliser isn't being taken up due to the lack of moisture. When cutting, consider leaving higher stubbles. This will allow faster regrowth as the plant can photosynthesise better. Stubbles around 100mm are being used on some farms to good effect. Slurry burning grass can also be an issue. Trailing shoe or injector should be used where possible to minimise slurry on grass leaves.

Some farmers have looked at applying water via umbilical systems to crops to stimulate growth. An average summer rainfall is approximately 3mm per day, or 30m^3 of water per hectare. This is a significant amount of water required. Any abstraction of surface water over 10m^3 must be authorised by SEPA.

Grass dry matter levels are over 25% in some cases. Cows eating 15kg DM of grass a day are taking on 15kg less water compared to grass at 20%. This coupled with warm temperatures means cows need good access to water. Water intakes are highest after milking. A large plastic trough could be installed near the exit of the parlour and filled with a volume washer before milking. This would help take some of the pressure off the water system in paddocks.

If cows are housed, every effort must be made to keep them cool. Heat stress can cause a 5-15% drop in milk, as well as lowering conception rates. Sheds normally need 0.1m^2 of air outlet and 0.2m^2 of air inlet per cow. Just now this should be maximised. Take sheets off the sides of sheds to maximise airflow (see photo). Water misters and fans should also be considered, especially in cows housed year round. Many farms in mainland Europe use insulated roof sheets to keep the heat down during the summer, an option worth looking at if building a new shed.

Some cereal growers are reporting that spring crops have significantly less straw than average, potentially increasing straw prices over the coming winter. Alternative bedding, forward buying straw and converting to slurry based systems should be considered. This may also present an issue with wholecrop yields on farm.

With 1st cut yields back and being fed out to buffer grass it is important as ever to forage budget for the coming winter. Reduce passengers and look at by-product availability. The sooner silage stocks are assessed, the sooner action can be taken.

This seems a fairly pessimistic view of the fantastic summer weather. However, we need to focus on the long-term success of our dairy businesses. The weather has allowed many farms to get up-to-date with work. This should be used to get some time off the farm and recharge the batteries.

Maximising Airflow in Hot Conditions

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Leptospirosis in the Dairy Herd

Widespread vaccination against leptospirosis has been very effective at significantly reducing abortion caused by the disease in cattle, and for unvaccinated herds the risk of infection is higher during the spring and summer months while cattle are at grass. Leptospirosis is a bacterial infection, of which there are at least 5 serovars, with *Leptospirosis hardjo* being the most important in the UK. The bacteria tend to reside in the reproductive tract and kidneys (see following photo). Therefore exposure to urine of infected cattle or placental or aborted material is how the disease is spread.

The most common symptoms are infertility, abortion, still births and a drop in milk yield. A drop in yield is often the first sign, which occurs within a few days of infection and may be accompanied by a raised temperature, reduction in feed intake and a soft, flaccid udder. Milk may be thick and yellow in appearance and tinged with blood.

Dark Swollen Kidneys due to Leptospirosis

Source: Blowey RW, Weaver AD: Colour atlas of diseases and disorders of cattle, 2nd ed. London, Mosby, 2003.

The disease can cause huge economic loss through poor fertility and abortions. Increased services per conception, early embryonic loss showing up as irregular oestrus cycles and a high percentage of repeat breeders are more common with acute infections. Abortions tend to occur 6-12 weeks post-infection and if the infection is picked up in late pregnancy, calves may be born premature, are often weak and can die within a few hours of birth.

The purchase of infected cattle is a common way to introduce infection and it is essential to know the vaccination status of bought-in animals. If they are antibody positive, there is no way of knowing whether this is due to vaccination or exposure to the disease. If animals are purchased, a 4-week isolation period is recommended along with antibody testing. Sharing bulls with other herds is also a risk factor.

Sheep can carry the bacteria without showing any signs of infection. Therefore, mixed grazing should not be practiced as sheep can excrete the organism in their urine. Contaminated water supplies through shared grazing, is also a common source of infection.

Once infected, cattle can shed the organism for months or even years. Control of transmission of the disease requires isolation of cows that have aborted, careful disposal of aborted calves/material, culling infected animals and disposal of contaminated bedding.

Herd status can easily be assessed through a bulk tank milk sample to measure antibodies to leptospirosis. A single sample is a snap shot in time and a series of monthly or 3 monthly samples provides better evidence of the dynamics of the disease in the herd. The status of animals not contributing to the bulk tank milk is not assessed e.g. youngstock, dry cows, sick cows and bulls. Vaccinated animals contributing to the bulk milk tank will increase the antibody level. Herds may be classified as follows:

1. Naïve – no infection present on the farm. Risk is that if infection is introduced, animals have no immunity and herds can be badly affected.
2. Active infection – indicated by high levels of antibodies, suggesting that leptospirosis is present and likely all cows will have been exposed, affecting fertility and productivity.
3. Low/medium infection level – infection is present but at a low level and veterinary advice and action should be taken to prevent the situation deteriorating.

Whilst the disease is treatable, prevention is the best course of action through vaccination. Yearly boosters are required as the vaccine does not eradicate the bacteria.

Heifers require two courses of vaccination, which should be given 4-6 weeks apart and completed before turnout. These should take place at least two weeks before service to avoid infection of the foetus. The annual booster should also be administered a fortnight before turnout to cover cattle over the high risk period at grass.

Leptospirosis is a zoonotic disease and can be transferred to humans, causing severe headaches and flu-like symptoms. The risk is greatest in the parlour with exposure to infected urine and also by coming into contact with infected abortion material.

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The Benefits of Lying Around

Lying time is becoming a widely recognised indicator of cow health and the increase in popularity of activity monitors has made this a valuable tool to detect changes in cow behaviour and assess cow comfort. The table below shows the time budget of a typical dairy cow:

Activity	Total Time Spent (hrs/day)
Eating	3 - 5
Lying/Resting	**12 - 14**
Social Interaction	2 - 3
Drinking	0.5
Management time	2.5 - 3.5

Source: AHDB – Dairy Housing a Best Practice Guide

To achieve an optimum lying time of 12 - 14 hours, time spent away from the cubicles or pens cannot be more than 2.5 to 3.5 hours per day. Long milking times and long periods walking to and from the parlour, or standing in the collecting yard, can all reduce the time cows have to eat and rest.

Cows will naturally choose rest over food and research has found that for every 3.5 minutes lost in rest, they will sacrifice 1 minute of feeding time, leading them to eating too quickly. Eating faster and chewing less means that cows will produce less saliva, which is essential to maintaining a healthy rumen. Not only is dry matter intake reduced, but feed efficiency and the risk of ruminal acidosis is increased, hence reduced lying times are associated with increased stress levels and reduced milk production (*James Bringe for Progressive Dairy Farmer Aug 2016).*

It is also likely that an increase in lameness will be seen when lying time is reduced as cows are putting more pressure on their claws, which can lead to a greater risk of hoof problems.

How long do your cows spend outwith their pen?

Even without investing in activity monitors, you can estimate your herd's time budget by first calculating how much time they spend outside their normal housing pen. Around 70% of their day should be spent eating and/or resting, so that leaves 6 hours for walking, waiting, milking, AI, drinking and socialising! If they spend more than 3.5 hours outside the pen, then eating and resting time will be compromised.

What is the benefit?

An on farm case study, (Matzke, 2003) looked at the effect of cows spending 3 hours compared with 6 hours outside of their pen. The cows which only spent 3 hours outside their pen gained 2 hours more rest time and produced 3 litres more milk than those which spent 6 hours outside the pen.

The impact was even more dramatic in heifers, where rest time increased by 4 hours and milk yield improved by 4 litres. By increasing lying time, lameness incidence should also decrease; a further study (Espejo & Endres, 2007) showed lameness prevalence was closely correlated with long periods outside the pen in 50 dairy farms studied in the US.

Improving lying time on your farm

- Milk cows in groups so that the time spent in the collecting yard is kept to a minimum.
- Minimise the time that cows are locked in head yolks for AI or veterinary visits.
- Provide a comfortable bed – do the "drop knee test" – if it hurts when you land on the cubicle surface, it is hurting the cow when she lies down.
- Deep sand beds are shown to give the maximum comfort and encourage the longest lying times, followed by mattresses.
- Provide adequate feeding and drinking space so that cows have easy access to feed and water so they can eat and drink efficiently, allowing maximum time for rest.
- Ensure adequate cubicle spaces, at least 1 per cow, to avoid competition for lying space.

References

Matzke, W. C. 2003. Behaviour of large groups of lactating dairy cattle housed in a freestall barn. M.S. Thesis. University of Nebraska, Lincoln.

Espejo, L.A. and Endres, M.I. 2007. Herd level risk factors for lameness in high producing Holstein cows housed in freestall barns in Minnesota. Journal of Dairy Science 90: 306-314.

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Avoiding the Post-Weaning Growth Check

Weaning is the most stressful times in a calf's life and how well it performs from weaning onwards can directly impact on the economics of rearing, milk production and that animal's longevity in the herd. Immediately post-weaning, it is common for growth rates to fall below the target of 0.75kg/day but this is not always obvious without weighing heifers regularly.

The following should be considered before weaning:

- Is the calf eating enough concentrate for adequate rumen development?
- Has the calf doubled its birth weight at weaning or reached the appropriate weight for age target?
- Is the calf at the minimum age? Calves weaned at less than 5 weeks are more susceptible to disease.
- Will the calf be able to compete in a larger group?

Feed intake and subsequently rumen development is the most crucial factor in deciding when to wean. Age or weight of the calf gives no indicator as to rumen development and how well the calf will thrive when diet and management changes occur. Weaning should take place when calves are eating at least 1kg of starter feed for three consecutive days (for smaller breeds aim for 0.75kg intake) but the more the better!

Calves on accelerated growth programmes consuming high levels of milk or milk replacer (>900g/day) will eat less starter feed and it is even more important that they are gradually weaned as opposed to abrupt weaning. Gradual weaning will result in less of a growth check and ensure calves are consuming sufficient concentrate to help replace the energy and protein lost from milk. Start the weaning process 7-10 days beforehand to encourage more starter feed intake. Gradual weaning can involve reducing the number of feeds per day, feeding less milk per feed or feeding the same volume but at a lower concentration of milk powder (lower dry matter intake).

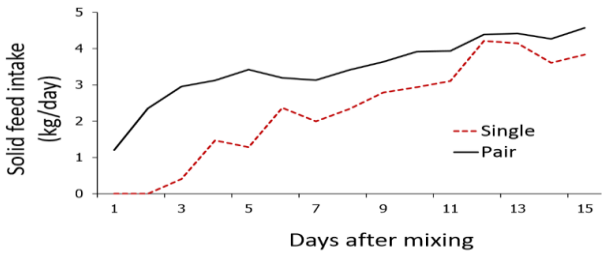
Dairy calves are commonly weaned at 8 weeks of age. Research from the University of Guelph compared calves weaned at 6 and 8 weeks of age. Those weaned later showed significantly higher liveweight gain both pre- and post-weaning, with higher starter feed intake post-weaning. Stress levels were also lower as indicated by more time spent ruminating, longer lying times and less non-nutritive oral behaviours i.e. licking and sucking (Eckert et al, 2015). The calves weaned at 8 weeks were 9 kg heavier at day 70.

Avoid social stressors and keep calves in the same size of group post-weaning without mixing calves. Increasing group size with unfamiliar calves means the pecking order has to be re-established and less dominant animals will suffer. With larger groups there is more competition for

resources, when the calf is already having to adapt to a new environment with potentially new sources of food and water.

There is evidence to suggest calves reared in pairs perform better during the milk phase than those reared in individual pens. Starter feed intake was higher and average daily gain greater in paired calves and this improvement continued post-weaning as shown in the graph below:

Feed Intake after Weaning and Mixing of Calves



Source: De Paula Vieira et al, 2010. Journal of Dairy Science: 93: 3079-3085

Stress at weaning compromises the immune system for at least 2 weeks, increasing the risk of picking up infections and further exacerbating the growth check. Therefore, minimising changes to housing, social groups, feed and water supply in the first two weeks post-weaning will help calves thrive and maintain growth rates. Any change to forage type and concentrates should be made gradually over a few days.

It goes without saying that handling for veterinary procedures (vaccination, dehorning and castration) should also be avoided at weaning. Only healthy calves should be weaned, and any with disease issues or poor feed intakes, should be held back until health and feed consumption have improved. To identify whether calves are suffering a growth check post-weaning, weigh them 7-10 days later to work out their average daily gain. If below target, review your weaning strategy and management procedures to identify areas for improvement.

Reference: Eckert, E., Brown, H.E., Leslie, K.E., DeVries, T.J. and Steele, M.A. Weaning age affects growth, feed intake, gastrointestinal development, and behavior in Holstein calves fed an elevated plane of nutrition during the preweaning stage. Journal of Dairy Science 98: 6315-6326.

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Dates for your Diary

- 10th July - **Show and Sale of Holstein-Friesian Dairy Cattle**. Craig Wilson Ltd, Ayr Mart, Whitefordhill, Ayrshire, KA6 5JW.

- 10th July - **Cow Signals: What are Your Cows Telling You?** Clackmae Farm, Earlston, Scottish Borders, TD4 6AJ. Time 10.30. To book a place, contact KE Events hub t: 01904 771216 or email: ke.events@ahdb.org.uk.

- 11th July - **Cow Signals: What are Your Cows Telling You?** Rerrick Park, Dundrennan, Kirkcudbright, Kirkcudbrightshire, DG6 4QT. Time 10.00. To book a place, contact KE Events hub t: 01904 771216 or email: ke.events@ahdb.org.uk.

- 12th July - **Future Farming Conference** - A Soil Association Event. Double Tree Hilton Hotel, Dundee, DD2 5JT. Time 10.00-16.00. For more info contact: Lyn White, Soil Association t: 07899 791748 or email: lwhite@soilassociation.org.

- 18th July - **Pedigree Holstein Cattle - Show and Sale on Behalf of Border and Lakeland Holstein Club**. Borderway Mart, Rosehill, Carlisle, CA1 2RS.

- 1st August - **Borderway Monthly Dairy Sale**. Borderway Mart, Rosehill, Carlisle, CA1 2RS.

- 2nd August - **Cow Signals: What are Your Cows Telling You?** Dendoldrum Farm, Montrose, Inverbervie, Angus, Aberdeenshire, DD10 0PL. Time 10.00. To book a place, contact KE Events hub t: 01904 771216 or email: ke.events@ahdb.org.uk.

- 7th August **– Worming your Way to Profit.** Forgandenny Village Hall, Perthshire. Time 15.00-19.00. To book your place contact: Sarah Millar t: 07800 841 822 email: smillar@soilassociation.org

- 9th August – **Cow Signals: What are Your Cows Telling You?** Strandhead Farm, Tarbolton, Mauchline, Ayrshire, KA5 5NP. Time 10.30. To book a place, contact KE Events hub t: 01904 771216 or email: ke.events@ahdb.org.uk.

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

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