

Issue 65 March 2025

Milk Manager NEWS



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Milk Market Update

Dairy Commodity Markets

- (4th Fonterra's latest on-line GDT auction March) resulted in a 0.5% decrease in the weighted average price across all products, reaching US \$4,209/t. This follows a 0.6% drop at the previous auction on 18th February. The biggest decline was seen in whole milk powder, down 2.2% to \$4,061/t. The biggest increases at the most recent auction were see in lactose (+14%), mozzarella (+7.9%)and butter (+2.2%). Full results are available at https://www.globaldairytrade.info/en/productresults/
- UK wholesale prices of dairy commodities continue to decline, with the exception of bulk cream, which showed virtually no change in the average monthly price from January into February. Butter showed the biggest drop, down 4%. While milk volumes are slowly increasing, stocks of butter are still reported to be low. While mild cheddar fell by just £30/t in February, demand for cheese is thought to continue to rise. Markets were fairly quiet over the reporting period, with buyers anticipating lower prices with the impending spring flush.

| Commodity | Feb 2025 £/t | Jan 2025 £/t | % Difference Monthly | Feb 2024 £/t | % Diff 2025- 2024 |
|-----------------|--------------------|--------------------|----------------------------|--------------------|-------------------------|
| Bulk Cream | 2,626 | 2,630 | 0 | 1,996 | +32 |
| Butter | 5,920 | 6,180 | -4 | 4,850 | +22 |
| SMP | 2,020 | 2,090 | -3 | 2,140 | -6 |
| Mild Cheddar | 3,960 | 3,990 | -1 | 3,530 | +12 |

Source: AHDB Dairy - based on trade agreed from w/b 27th Jan – 23rd Feb 2025. Note prices for butter, SMP and mild cheddar are indicative of values achieved over the reporting period for spot trade (excludes contracted prices and forward sales). Bulk cream price is a weighted average price based on agreed spot trade and volumes traded.

- It is a similar trend in the EU with butter down around 2% in January (and back 6% from its December peak) and milk volumes up between 1-2%. UK milk volume was up 3.6% for January. The EU SMP price has been stable over the last six months, and cheddar has been rising, up 3.9% in January. Even though EU milk supplies are up, demand has also been improving after the usual post-New Year drop.
- Given the declining butter price, the market indicator AMPE fell just over 2ppl for February

and MCVE fell just 0.29ppl on the back of the more stable cheddar price. The Milk Market Value has dropped for the fourth month in a row, back 0.64ppl for February to 43.0ppl from a high of 46.37ppl in October.

| | Feb 2025 ppl | Jan 2025 ppl | Feb 2024 ppl | Net amount less 2.4ppl average haulage - Feb 2025 ppl |
|------|--------------------|--------------------|--------------------|--|
| AMPE | 42.00 | 44.01 | 37.65 | 39.60 |
| MCVE | 43.25 | 43.50 | 36.77 | 40.85 |

| Source: | AHDB | Dairv |
|---------|-------|-------|
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• The Defra farm-gate milk price for January was 46.01ppl, which was 0.57ppl down from December's price. Estimates from the Dairy Group are for the Defra milk price to drop to around 45ppl for February and 44ppl for March.

GB Milk Deliveries and Global Production

Daily deliveries for the w/e 1st March were 34.71 million litres, which is 1.6% more than the previous week and 2.0% higher than the same week last year (an extra 680,000 litres/day). Milk production is heading northwards and AHDB predict that GB production will be up 1.1% in 2025. The milk price to feed price ratio continues to be favourable for continued growth in production and so far, it has not been as wet a spring as last year, which hopefully means better grazing conditions for those with an early turnout to grass.



• UK milk production figures from Defra were at 1,295 million litres for January, 1.1% higher than December production.

Global production in the six key exporting regions reported on by AHDB show growth for November 2024, with daily deliveries at 817.6 million litres, an extra 7.3 million litres/day compared to November 2023. The EU, UK, Argentina and New Zealand all showed growth in volume, with Australia and the US slightly down (0.2% and 1% respectively). The drop in US production is mainly attributed to the significant avian flu outbreak in Californian dairy herds. Looking ahead, it is forecasted that globally milk prices will fall in the second half of 2025 and this will be strongly influenced by spring weather and the extent of the spring flush in both the EU and the US. Global markets tend to soften when production growth is up around 1%, with many of the key milk producing areas already up more than 1% in volume compared to the same time last year.

| Commodity Produced | Company Contract | Price Change from Feb 2025 | Standard Litre Price Mar 2025 |
|---|--|----------------------------------|---|
| Liquid & Cheese | Arla Farmers UK | No change | 46.58ppl liquid 48.27ppl manufacture |
| Cheese, Liquid & Brokered Milk | First Milk | No change | 45.35ppl manufacture |
| Cheese | Fresh Milk Company (Lactalis) | No change | 44.72ppl manufacture |
| Liquid & Manufacture | Grahams | No change | 40.0ppl |
| Liquid & Manufacture | Müller Direct | No change | 42.25ppl (includes 1ppl direct premium. Does not include haulage charge) |
| Liquid & Manufacture | Müller (Co-op) | No change | 40.95ppl |
| Liquid & Manufacture | Müller (Tesco) | No change | 40.02ppl |

Monthly Price Movements for March 2025

Other News

• Organic milk prices are on the rise, with Organic Herd increasing their milk price by 1.68ppl for April. This brings their farm-gate price to 57.68ppl. While organic dairy product demand is increasing, Organic Herd were also keen to ensure that the inflationary costs farmers are dealing with are accounted for to help ensure long-term security of milk supply. The Arla Farmers organic milk price (manufacturing) for March is 58.26ppl.

- A new handling system to help manage "downer cows" was launched at Dairy Tech last month and is now available for purchase. The CowRecovery system was developed by Dorset dairy farmer James Yeatman and has been trialled on a number of dairy farms across the UK. It uses a specially modified telehandler bucket and moving technique to minimise risk of injury to both the cow and personnel when dealing with downer cows, helping improve their overall welfare. The equipment also comes with a full training programme developed by Synergy For more information farm vets. see: www.cowrecovery.com.
- Farmers with a Co-op milk contract are set to benefit from a change in the pricing mechanism used to set their milk price. Farmers will get paid more for milk, with the Co-op looking to invest nearly £1million in dairy farming. As of 1st April, their milk price will move to the Müller direct price of 42.25ppl, an increase of 1.3ppl. Co-op have also agreed a long-term supply contract with Müller.
- A Defra funded project led by AFBI (Agri-Food and Biosciences Institute) is looking to establish a network of 56 dairy farms across the four key dairying regions in the UK, including south-west Scotland. Called the UK Dairy Carbon Network, the project aims to significantly reduce carbon emissions through a number of innovative mitigation measures including dairy herd management, land use, nutrient management, with more efficient use of nitrogen and phosphorus, and technology. More information about how this farming network will work will be provided by AHDB and Agrisearch shortly, allowing interested farmers to volunteer for the project. For more information, visit the following link: AFBI led Project Launched to Promote Sustainable Dairy Farming across the UK | Agri-Food and Biosciences Institute

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Cereals Update

UK Cereals Market Update and Global Impacts

Wheat prices remain lacklustre to say the least. Over the last three weeks May '25 feed wheat futures values (Figure 1) have fallen £15/t to sit at £174.55/t (as of 5th March). Nov '25 futures have, over the same period, lost £9/t and are currently at £188/t (as of 5th March). The retreat in values reflects the more favourable weather seen across the US, South America and the Black Sea, and whilst the weather is a key factor, geopolitical tensions and economic uncertainty are also contributing factors. Add in to this the impact of US tariffs and trade is disrupted further.

Looking at historical trends in the domestic market, it is not abnormal for prices to fall under pressure at this point in the season. Correspondingly, the seasonality of UK feed futures has typically been stable in the second quarter of the calendar year in recent years, of course excluding the 2021/22 season. In 2023/24, UK feed wheat futures showed a tendency to rise after reaching low levels in the first quarter. As such, it is possible that as we understand more about harvest '25 and head into the new season, we could see some support in prices over the summer should fundamentals such as geopolitical developments and climate-related risks allow.

Figure 1. May 2025 feed wheat futures.



Malting barley markets remain steady, with old crop prices supported by a large carry into the new season and a narrow premium over feed, though demand remains slow. The focus now shifts to spring planting, which will determine future premiums.

Total cereals usage by the brewing, malting and distilling sector is forecast to decline this season on year earlier levels (currently down 7.6%). This decline is due to a downturn in demand and is partly

driven by the increase in the cost of living, as well as the longer-term trend of fewer younger people choosing to consume alcohol.

Feed barley prices are under slight pressure as futures weaken and buyers step back. However, replacement at lower levels is challenging, limiting further downside. Domestically, barley remains competitively priced against other feed grains.

For 2025, AHDB's Early Bird Survey (EBS) of planting intentions, carried out in November, suggested the winter and spring barley areas could fall by 1% and 13% respectively on the year. This could mean that we head into the next marketing year with a smaller domestic crop. However, currently, 2024/25 ending stocks are expected to be well above average, and as such, it is unlikely supplies will be particularly tight next season.

Current ex-farm prices are as follows:

| £ per tonne | Mar | Jul | Nov |
|--------------|-----|-----|-----|
| | -25 | -25 | '25 |
| Feed wheat | 180 | 184 | 188 |
| Feed barley | 165 | 175 | 180 |
| Malt. dist. | 185 | | |
| barley | | | |
| Oilseed rape | 420 | 423 | 391 |
| Feed beans | 210 | | |

Source: Hectare and United Oilseeds

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Turning out Heifers - Fed not Forgotten



Highly nutritious spring grass can be an effective tool for promoting growth in youngstock and can support growth rates of up to 1kg/day. Turning heifers out to grass can reduce rearing costs and ease the pressure on forage and straw stocks. Ensuring heifers reach the desired growth rate at

grass is dependent on effective grassland management and knowing when to target supplementary feeding to achieve consistently good growth rates for calving down at 24 months.

Daily liveweight gain (DLWG) targets are used as a key assessor of replacement heifer development. Calves need to be averaging a growth rate of 0.75-0.8kg/day to be on target for calving down at 24 months (assuming a 700kg mature body weight). Heifers should reach 55-60% of their expected adult body weight in preparation for their first service at 14-15 months and be around 85-90% of their adult body weight by 22 months.

Monitoring growth performance of heifers at grass is desirable but not always practical. At a minimum youngstock should be weighed pre-turnout, halfway through the grazing season and again at the point of housing to calculate DLWG. Ideally, they would be weighed more regularly (monthly) to identify poorer growth rates and allow for corrections to be made through supplementary nutrition.

Measuring wither height is an alternative option for monitoring growth if weighing is not an option. The target heights and weights for Holstein-Friesian heifers are noted in the table below (these figures will vary depending on mature body weight).

Target weights for age in Holstein-Friesian heifers.

| Heifer age (months) | Target weight (kg) | Target wither height (cm) |
|------------------------|-----------------------|------------------------------|
| 3-4 | 100-125 | 85-95 |
| 6-8 | 170-220 | 100-105 |
| 14-15 | 360-400 | 115-125 |
| 24 | 585 | 125-135 |

Source: CAFRE

Young heifers will see benefits from being fed supplementary concentrates in their first grazing season, in particular shortly after turnout and later in the year as the pasture quality and availability declines. Turning the youngstock out with access to concentrates or their housed ration will help prevent summer scour syndrome (SSC), which is most commonly seen in calves under six months of age but can be an issue up to 12 months of age. SSC is most likely to occur within the first month of turnout and is typically characterised by rapid weight loss and persistent scouring. The likelihood of calves contracting the condition is higher if they are turned out onto pastures which are heavily slurried and fertilised.

In a rotational grazing system heifers should be turned out to pastures with a pre-grazing cover of around 2400-2800kg DM/ha, or a sward height of no more than 4inches/10cm, where the D value will be around 75%. Grass quality will suffer later in the season if the group are unable to graze down to the desired residual of around 1500kg DM/ha or a sward height of 1.5inches/4cm for youngstock (if heifers are under eight months of age, a residual of 1800kg DM/ha is acceptable). If it is found that the heifers are unable to keep up with grass growth, it would be beneficial to close a paddock for silage production or immediately top the pasture after the heifers have been moved to allow for a leafy regrowth to support good growth rates in the next grazing period.

Tips for rearing heifers at grass:

- Monitor growth rates throughout the season to ensure heifers are on track for service and calving at 24 months.
- Maintain grass quality and measure sward height with a plate metre throughout the grazing season.
- Supplement the heifers with their housed ration or concentrates to ease the transition to grass and reduce the risk of SSC.
- Monitor the heifers for signs of a parasite burden which can hinder growth. Consider utilising the Preparing for Sustainable Farming, animal health and welfare intervention funding to investigate if a parasite burden is present and receive veterinary advice on the best treatment options. <u>Preparing for Sustainable Farming -Cattle Interventions | Helping farmers in Scotland | Farm Advisory Service</u>

Consider utilising FAS specialist advice funding to create tailor made heifer rations, including grazing plans. <u>Specialist Advice | Helping farmers in Scotland | Farm Advisory Service</u>.

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How Much is Enough When it Comes to Milk Replacer?

Your calf rearing policy should, from birth, ensure that you are giving heifer replacements the best opportunity to express their genetic potential as a productive animal when they enter the milking herd and that they remain productive over several lactations. Assuming all key colostrum protocols are being adhered to, the next key element of the calf rearing stage is milk replacer feeding. At a recent FAS event, there was a good discussion amongst the farmers present about feeding regimes for dairy calves, and there appears to be an increasing variance in the advice given on volumes and concentrations of calf milk replacer recommended for feeding to dairy calves.

The University of Nottingham have produced a handy online tool which allows different specifications, concentrations & volumes of milk replacer to be compared against target growth rates. It can be accessed through the AHDB website using the following link <u>Calf milk replacer</u> energy calculator | AHDB

Using the calculator is a good way of assessing whether you are feeding your calves enough to meet your heifer rearing goals. Both examples below assume a twice a day feeding regime giving a total of six litres of milk with a milk replacer concentration of 150g/litre and an air temperature of 10°C.

Example 1: 10-day old calf weighing 50kg. Target 24-month calving, 650kg mature bodyweight and growing at 0.8kg/day.

| Feeding Required to achieve desired growth rates | | |
|--|------------------------|--|
| Total energy required | 19.78 MJ/d | |
| Energy from fed concentrate | 0.30 MJ/d | |
| Energy required from milk replacer | 19.48 MJ/d | |
| Total amount of solids to be fed | 970 grams/d | |
| Amount of milk replacer to be fed to | EEL/d | |
| achieve desired growth rate | 6.5 L/d | |
| | | |
| Theoretical growth rates achievable on o | current feeding regime | |
| Energy provided from milk replacer | 18.1 MJ/d | |
| Energy provided from concentrates | 0.3 MJ/d | |
| Impact of cold | 1.06 MJ/d | |
| Total Energy Provided | 17.3 MJ/d | |
| Theoretical growth rate | 0.71 kg/d | |

Example 2: 10-day old calf weighing 50kg. Target 24-month calving, 700kg mature bodyweight and growing at 1kg/day.

| Feeding Required to achieve desired growth rates | | | |
|--|---|--|--|
| Total energy required | 23.10 MJ/d | | |
| Energy from fed concentrate | 0.30 MJ/d | | |
| Energy required from milk replacer | 22.80 MJ/d | | |
| Total amount of solids to be fed | 1135 grams/d | | |
| Amount of milk replacer to be fed to achieve desired growth rate | 7.6 L/d | | |
| | | | |
| | | | |
| Theoretical growth rates achievable on | ocurrent feeding regime | | |
| Theoretical growth rates achievable on Energy provided from milk replacer | ocurrent feeding regime 18.1 MJ/d | | |
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| Theoretical growth rates achievable or Energy provided from milk replacer Energy provided from concentrates Impact of cold | o current feeding regime 18.1 MJ/d 0.3 MJ/d 1.06 MJ/d | | |
| Theoretical growth rates achievable on Energy provided from milk replacer Energy provided from concentrates Impact of cold Total Energy Provided | n current feeding regime 18.1 MJ/d 0.3 MJ/d 1.06 MJ/d 17.3 MJ/d | | |

The examples demonstrate that in both scenarios, the current feeding regime is unlikely to achieve the targets set out and increasing the volume of milk being fed is justified. It is not uncommon now for calves to be fed eight litres per day on a twice a day feeding system and sometimes more on automated systems. Advice is also to build up milk volume quickly and that big strong calves can be consuming eight litres by seven days of age.

Key considerations when planning your milk replacer feeding regime:

- Age and weight of the calf; energy requirements increase with liveweight.
- Air temperature energy requirement increases when environmental temperature is out with critical lower levels (below 15°C in calves under 60kg).
- Mature cow weight and calving age.
- Quantity and quality of starter feed intake once calves are over three weeks of age and eating meaningful amounts.

You can access funding through the Farm Advisory Service Specialist Advice Plan to assess all aspects of youngstock rearing on your farm to ensure your calves have the best chance of being healthy, productive cows in your herd.

https://www.fas.scot/specialist-advice/

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Fodder Beet in Milking Rations

Fodder beet has surged in popularity for outwintering livestock, providing one of the highest yielding energy crops (65-90T of bulb and leaf yield/ha). While the crop may only be around 18-20% dry matter, fodder beet has an energy content of around 12 to 13.5MJ/kg DM depending on variety, making it comparable with cereals and other concentrate feeds. Fodder beet is often used to outwinter heifers, but it also has a place in the milking ration, even for high yielding housed cows, where it can help drive intakes and performance. If you are thinking about fodder beet as a crop for lifting and feeding to the milking herd, there are a few things to consider from variety choice to storage and how to incorporate it into the ration.

Variety

If you plan to lift the beet and not graze in situ, there are varieties more suited to lifting, for example, smooth skinned varieties and those with a lower dirt tare (less soil contamination of the lifted crop). Grazing varieties will tend to have more bulb above the soil surface and lifting varieties will sit lower in the ground, have a higher dry matter and be lighter in colour e.g. white.

Medium to high dry matter varieties are recommended for lifting. They tend to sit further into the ground and have a higher dirt tare and so may need washing before feeding. Their root is also slightly harder than lower dry matter varieties and should be chopped before feeding. However they will tend to keep better over the winter once lifted, being less prone to cracking in frost and more winter hardy than lower dry matter varieties. Low dry matter varieties are much softer and should only be used for grazing.

Paddock selection will be important as undulating terrain will be more difficult for a specific beet lifter to operate. Sowing with a precision drill with 500mm row spacing is recommended when using a beet lifter at harvest, however some growers are planting at 350mm to enhance yield. Alternatively, a beet bucket could be used to lift beet.

Think about when you might lift the beet for feeding, if late on, the variety must have a good frost tolerance. In theory, the green tops of the beet can be fed once wilted and are high in protein – around 15-25% on a dry matter basis, compared to the bulbs which are just around 6% protein. However, many modern lifters take the leafy top off which is left in the field, as removing the moisture from the leaf will help with storage.

Storage

The crop can be stored in either indoor or outdoor clamps but can be susceptible to frost. Frosted beets can cause digestive upset. The beet pile can be covered with straw to provide some insulation against frost. It can also be ensiled but should be washed and chopped beforehand. Feeds such as sugar beet pulp or soya hulls can be ensiled with the crop at a ratio of 1T to 5T of fodder beet, helping soak up the effluent.

If lifted and stored correctly, the crop can last for six months. It is recommended to wait at least four days between lifting and feeding, due to the high nitrate levels post-harvest.

Feeding

If dirty, the beet may have to be washed and it is best chopped to reduce the risk of choking. Like any new feed, it should be introduced gradually and can be fed at up to 15kg/head/day to milking cows. Start with no more than 5kg/head and then increase by 3-5kg/head every four days until the target level is reached. The roots are low in calcium, so it is worth reviewing whether current mineral supplementation is meeting requirements for milk production. If not, limestone can be added to the ration to make up the shortfall.

It is best to consult a nutritionist on inclusion to ensure the diet is properly balanced, especially if the fodder beet is there to replace another feed. However, depending on the inclusion rate, there may be little substitution needed, with a higher overall dry matter intake. It can be used as a direct replacement for cereals, with around 4.25kg of fodder beet replacing the same amount of dry matter of 1kg of dried barley. As it raises the sugar content in the ration, a great feed source for rumen bugs, it may have a positive effect on fibre digestion and hence butterfat.

For information establishing and growing fodder beet, see the following technical note: <u>https://www.fas.scot/downloads/tn694-alternative-forages-sheep-fodder-beet/</u>

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Husbandry of Dairy Calves

When rearing calves there is a lot to think about from to the day of birth right through to getting that calf to enter the milking herd. Husbandry is important throughout the calf's life.

Pre-weaning is a crucial time to socialise the calves. Calves who are grouped together learn their daily routine quickly and this allows them to be comfortable in a herd setting from early on. Visual contact can also be beneficial in growth and development of the calves, if they can see their peers they can settle more quickly when put into a group.

There is a short period of stress when grouping the calves together, whether pre-weaning or postweaning. Some calves may be more aggressive and some more timid, which will result in a lower feed intake initially in those lower down the pecking order. However, this is short-term, and normal behaviour should return within 5-15 days. It is recommended that calves are kept in groups no bigger than 12 members from three weeks of age and once weaned, this can increase to a group size maximum of 20 calves. The space required by the calves increases as they get bigger, therefore the group size should be dictated by the shed space available. Keeping them in smaller groups of under 20 calves means that it is easier to identify sick or injured calves.

Minimum space per calf in group housing.

| Weight of calf (kg) | Area per calf (m ²) |
|---------------------|---------------------------------|
| 60 | 1.5 |
| 85 | 1.8 |
| 140 | 2.4 |

Source: AHDB Dairy

In group housing care should be taken to monitoring each calf's milk intake. Machine feeding with electronic ID tags can be a useful tool to monitor feeding behaviour and highlight any sick calves that have not drunk their milk allocation before they show clinical signs of ill health.

Cleanliness is key when making the transition from individual to group housing regarding the pen, as well as equipment such as feed troughs, feeders and water supply. These are contact points where diseases can be passed from calf to calf easily. Keeping these clean can help to reduce this risk. Water supply should also be readily available from day one and checked daily to ensure there is no contamination from muck or bedding.

Bedding is also important to keep clean. When checking bedding the knee test can be done to see if the calves waste is being absorbed by the straw or draining away. This can be done by kneeling on the bedding to check if your clothing is wet, and if this is the case the bedding needs to be removed or topped up. Calves spend around 70% of their time lying down, therefore a dry bed is important and wet bedding can chill the calf, making it more difficult to maintain thermal comfort. Therefore, a dry bed can help the calves maintain their body temperature more easily, allowing them to put more energy into growing.

Mucking out and cleaning the sheds, should be done at least every three to five weeks and then lime or disinfection powder used afterward. This is recommended to reduce the amount of waste water going through the sheds. If using a high-pressure hose frequently it can disperse pathogens more easily between batches of calves. A deep clean should be carried out at least yearly to get a fresh start.

In summary, socialising calves from around three weeks of age is the best way to help them settle down into the herd later in their milking life. Cleanliness of the shed and equipment is also important to make sure the calves have the best start in life.

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The Multiple Roles of Methionine

Methionine is an essential amino acid for dairy cows and is the first limiting amino acid for milk production, followed by lysine. Typically miking rations are deficient in methionine, with feed ingredients containing low levels. There are several benefits of methionine supplementation for both milking cows and dry cows over the calving period.

As dairy cows are unable to produce sufficient quantities of methionine in the rumen to meet their requirements, supplementation is necessary. Even if high levels of protein are fed, methionine is still likely to be deficient. Methionine is normally supplemented in a rumen-protected form, so that it

is not degraded by the rumen microbes. It can then be easily absorbed in the small intestine, into the circulation and go on to provide multiple benefits.

By meeting the cow's requirements for methionine, more milk will likely be produced with a higher fat and protein content, alongside improved metabolic health (liver function) and enhanced fertility. There are also improvements in nitrogen efficiency, meaning that lower protein diets can be fed, potentially allowing a cost saving. The improvement in nitrogen efficiency means that milk urea levels may drop when feeding protected methionine.

Methionine has been shown to enhance liver function over the transition period, reducing the build-up of fat in the liver. It also has a role in immunity, helping reduce oxidative stress as methionine is required for the synthesis of glutathione, a powerful antioxidant and one of the most prevalent antioxidants formed in the liver. Some studies have shown a lower somatic cell count in cows supplemented with methionine.

The benefits of feeding methionine are greatest when provided in the latter part of the dry period (last 21 days) and in early lactation. During lactation, the biggest responses are seen during early lactation, and as lactation progresses, the responses in milk yield and composition tend to decline. This effect is down to the transition and early lactation period being the time of greatest nutrition demand and metabolic stress, with the need for amino acids, particularly methionine, at its highest. This is when supplementary methionine can help bridge the gap between dry matter intake and nutritional demand (supplementation during the dry period has been shown to increase dry matter intake after calving). Once the cow has recovered from negative energy and protein balance in early lactation, the response to supplemental methionine is less, as demand reduces, and cows are more able to meet their nutritional requirements.

A meta-analysis reviewing 21 publications on the effects of rumen protected methionine supplemented before and after calving showed that supplementation pre-calving had no significant effect on dry matter intake in the dry period. However, after calving, dry matter intake, milk yield, milk fat yield and milk protein yield all increased, as shown in the following table: The effect of supplementary rumen protected methionine pre- and post-calving on dry matter intake, milk yield and milk composition postcalving.

| | Control - no methionine | Response to methionine supplementation |
|---|-------------------------|--|
| Dry matter intake (kg/day)* | 19.5 | +0.45 |
| Dry matter intake @21 DIM (kg/day) | | +1.38 |
| Milk yield (kg/day)* | 35.6 | +0.8 |
| Milk yield @ 21 DIM (kg/day) | | +2.13 |
| Milk fat (g/day)* | 1288 | +75.8 |
| Milk fat @21 DIM (g/day) | | +117.6 |
| Milk protein (g/day)* | 1032 | +43.4 |
| Milk protein @21 DIM (g/day) | | +92.1 |

*Dependent on the duration of measurement which averaged 85.9 days (±38.36SD)

Source: Zanton & Toledo 2024

The increase in milk fat percentage and milk protein percentage with supplementation was +0.15% and +0.66% respectively. It was found that the response to methionine fell as lactation progressed and it was concluded that supplementation both before and after calving had a greater effect on production compared to just feeding methionine in lactation alone.

The recommended intake of methionine is often declared as a ratio with lysine, with the target being a 3:1 lysine to methionine ratio for milking cows. In terms of % of metabolisable protein, the target for methionine is 2.4% and lysine 7.2% to optimise milk yield and milk protein synthesis (NRC 2001). Therefore the level of supplementary methionine will vary depending on the ration. For dry cow diets, the ratio should be lower, with a ratio of 2.8:1 recommended. For close-up dry cows the target intake is between 30-35g methionine and 90-95g lysine. It may be worth speaking to your nutritionist about rumen protected methionine and how it can be incorporated into the dry and milking cow rations.

Reference: G.I. Zanton and M.Z. Toledo. 2024. Systematic review and meta-analysis of dairy cow responses to rumen-protected methionine supplementation before and after calving. Journal of Dairy Science Communications. Vol 5, issue 4, pp293-298.

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Dates for Your Diary

- 11th March Schmallenberg Virus Webinar. Time: 19.00-20.00. To register for this webinar please visit: <u>https://www.fas.scot/events/event/schmallenbe</u> rg-virus-webinar/
- 12th March Castle Douglas: Are You Making the Most of Your Time? Time: 10.30-14.30. Ernespie House Hotel, Castle Douglas, DG7 3JG. To book your place please visit: https://ahdb.org.uk/events/castle-douglas-areyou-making-the-most-of-your-time
- 14th 15th March **UK Dairy Expo**. Borderway Mart, Rosehill, Carlisle, CA1 2RS.
- 19th March Castle Douglas: Taking Steps to Enhance Cow Mobility. Time 10.45-14.15.
 Slaginane Farm, Castle Douglas, DG7 1SY. To book your place please visit:

https://ahdb.org.uk/events/castle-douglastaking-steps-to-enhance-cow-mobility

- 7th 9th April Herdsman Foot Trimming 3-day Course - Aberdeen. For more information or to book your place, please visit: <u>https://www.embryonicsltd.co.uk/course_calen</u> dar/herdsman-foot-trimming-27/
- 14th 16th April DIY AI 3-Day Course -Ayrshire. For more information or to book your place, please visit: <u>https://www.embryonicsltd.co.uk/course_calen</u> <u>dar/diy-ai-53/</u>

30th April - **Safe Use of Vet Meds - Medicines Matter**. Two-day on-line course. Time 9.00-16.00. For more information and to book your place please visit: <u>https://www.embryonicsltd.co.uk/course_calen</u> <u>dar/safe-use-of-vet-medicines-13/</u>

 6th - 8th May - DIY Al Course - Dumfries. For more information and to book your place please visit: <u>https://www.embryonicsltd.co.uk/course_calen</u> dar/diy-ai-55/

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



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