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Milk Manager NEWS

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Milk Manager NEWS

Market Update

UK Wholesale Dairy Commodity Market

- Fonterra's latest on-line GDT auction (3rd January) resulted in a 2.8% fall in the weighted average price across all products, reaching US $3,365/t. All products on offer returned negative price movements since the previous auction. Butter milk powder showed the biggest decline of -12.9% (to $2,556/t). Butter fell by 2.8% to $4,479/t and skim milk powder (SMP) by 4.3% to $2,838/t. Full results are available at https://www.globaldairytrade.info/en/product-results/

- Prices of domestic dairy products continue to decline, mainly driven by greater supply and less demand. UK prices are also influenced by the weaker markets in the EU due to higher milk volumes and several companies getting rid of year-end stocks.

Commodity	Dec 2022 £/t	Nov 2022 £/t	% Difference Monthly	Dec 2021 £/t	% Diff 2022-2021
Bulk Cream	£2,042	£2,357	-13	£2,054	-1
Butter	£4,620	£5,280	-13	£4,660	-1
SMP	£2,430	£2,610	-7	£2,750	-12
Mild Cheddar	£4,430	£4,760	-7	£3,600	+23

Source: AHDB Dairy - based on trade agreed from 28th Nov - 22nd Dec 2022. 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.

- Despite the average cream price of £2,042/t for December, it was trading into the £1600's/t just prior to the Christmas shutdown period. The butter price followed the trend in cream price, also falling by 13% over the trading period on the back of higher stocks, falling EU prices and the drop in currency from mid-December onwards (Sterling fell from 1.165 to 1.135 against the Euro from 14th to 22nd December).

- There was less of a drop in prices for SMP and cheese, with lower trade of both products over the reporting period.

- The market indicator AMPE showed a 5.06ppl drop from November, mainly driven by the fall in the butter component from 24.94ppl to 21.63ppl. MCVE showed a less but still significant drop of 4.44ppl, with the mild cheddar component falling from 47.71ppl to 44.09ppl. The Milk Market Value of milk also plunged from its November price of 50.77ppl to 46.20ppl for December. MMV prices tend to closely compare with changes to the farmgate milk price in three months' time.

	Dec 2022	Nov 2022	12 months previously	Net amount less 2.4ppl average haulage – Dec 2022
AMPE	39.63ppl	44.69ppl	44.70ppl	*37.23ppl*
MCVE	47.85ppl	52.29ppl	40.98ppl	*45.45ppl*

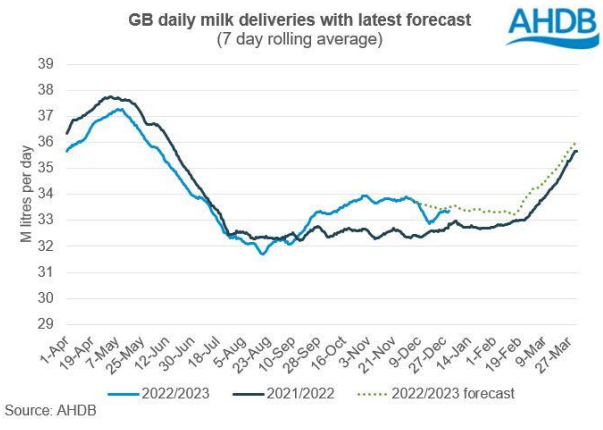
Source: AHDB Dairy

- Defra put the UK average farmgate milk price at 50.44ppl for October, up 1.64ppl from September and 54% higher than October 2021. The volume for October was 1,222 million litres which was 5.6% more than the previous month and 2.2% higher than October 2021.

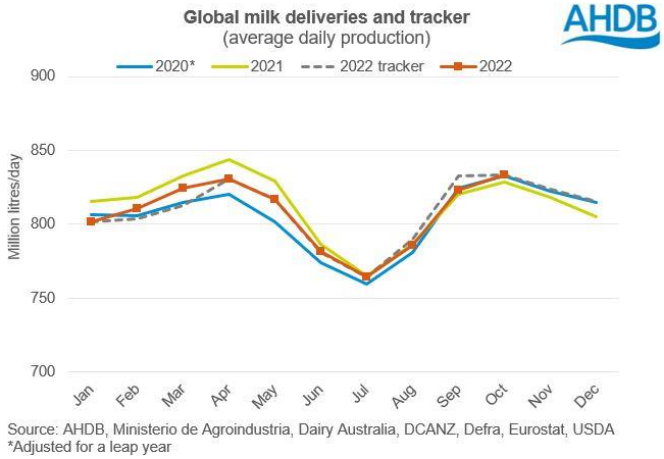
- For the week ending 6th January, cream prices ranged from £1.80 to £2.00/kg ex works, with the majority trading around £1.85/kg. There was a wide range of prices for milk on the spot market, fluctuating between the low 30's to 42ppl delivered. This is up a good bit from the week ending 22nd December, where it was trading as low as 20 to 25ppl for those needing to find a quick home. In comparison, at the beginning of December cream was trading at £2.00 to £2.15/kg and spot milk was between 38 to 48ppl.

GB Milk Deliveries and Global Production

- For the week ending 31st December, deliveries were up 0.2% on the previous week with a daily average of 33.37 million litres. Deliveries are now 1.6% above the same week last year, equivalent to an extra 510,000 litres/day.



- Global milk production averaged 833 million litres/day for October across the key six producing milk regions (EU-27, UK, USA, Australia, New Zealand and Argentina). This is an increase of 4.5 million litres/day compared to October 2021 (+0.5%) but on par with the 2022 forecast. Increases in October production were seen in the EU-27, UK and USA, with substantial growth from Ireland (+7.5%), the Netherlands (+4.8%) and Germany (+2.3%). A reduction in output was seen in Australia (-6.6%) due to excessive rainfall and flooding, and New Zealand (-3.5%) on the back of a cooler spring and lower grass growth rates.



Source: AHDB, Ministerio de Agroindustria, Dairy Australia, DCANZ, Defra, Eurostat, USDA
*Adjusted for a leap year

- Looking ahead, both AHDB and Rabobank expect a slight increase in milk production of around 1% from the key exporting regions in 2023. Increasing milk supply and declining commodity prices are currently impacting farmgate prices, and global markets could be further affected by the uncertainty around product demand with the recent relaxation of covid restrictions in China, along with the effects of food inflation on consumer spending.

Monthly Price Movements for January 2023

- Despite the drop in commodity prices and the various milk market indicators, there is little change to January milk prices from the major Scottish milk buyers, although some price drops for February have already been announced. However, forward market indicators are predicting a sizable milk price drop with estimates of 10 to 12ppl less by the end of quarter 2 (www.milkprices.com).

Commodity Produced	Company Contract	Price Change from Dec 2022	Standard Litre Price Jan 2023
Liquid & Cheese	**Arla Farmers UK**	*-1.13ppl liquid -1.12ppl manufacture*	49.11ppl liquid 51.12ppl manufacture
Cheese, Liquid & Brokered Milk	**First Milk**	*No change*	49.69ppl manufacture
Cheese	**Fresh Milk Company (Lactalis)**	*No change*	48.21ppl liquid 50.12ppl manufacture
Liquid & Manufacture	**Grahams**	*No change*	46.0ppl
Liquid & Manufacture	**Müller Direct**	*No change*	47.75ppl (includes 1ppl direct premium and -0.25ppl Scottish haulage charge)
Liquid & Manufacture	**Müller (Co-op)**	*No change*	47.83ppl
Liquid & Manufacture	**Müller (Tesco)**	*No change*	48ppl
Liquid, Powder & Brokered	**Yew Tree Dairies**	*No change*	48ppl Standard A litre price

Other News

- Of the main Scottish milk buyers detailed in the above table, only Arla has announced a price cut for January but still top the table for the best price. However, Yew Tree, Müller and TSDG have already announced a 1ppl price cut for February (with Lactalis cutting their price by 1.4ppl for February). Before Christmas, First Milk announced that it would hold its members price until 1st March.

- From 1st April Müller will implement an A/B pricing system for its Direct farm suppliers. On average, the A price will cover about 94% of Müller's total direct milk supply and this will be on fresh milk and other processed products like yogurt and butter to supply retail contracts linked to various premiums and standards and paid for at a contracted price. The remaining 6%, which is mainly spring milk going into the drier and powder market will have a price based on global market indicators and will be independently audited by Steven Bradley (www.milkprices.com).

- First Milk has upgraded its Aspatria creamery following a £20 million investment. The facility is now able to process up to 1 million litres of milk a day and capacity has jumped by over 40% over the last four years. The investment includes five high-capacity cheese blockformers, which can pack cheese at 7t/hour, two new milk pasteurisers and two new whey pasteurisers, a robotic stacking and palletisation system and a 120t automated cooling store, along with an upgrade to the milk intake and milk storage facilities.

- The French Livestock Farming Institute (IDELE) has predicted that the number of dairy cows could decrease by 441,000 by 2030. This comes on the back of the French Ministry's agricultural census showing a decline of 13,000 dairy farms (more than one quarter) between 2010 and 2020. According to IDELE, there were about 3.6 million dairy cows and 736,000 heifers in France in 2020, which was 82% and 15% less than 2015 respectively. Ten years ago only 32% of dairy farmers were over 50 years of age but that has increased to 48% in 2020, with the replacement rate for dairy farmers being only 45%, indicating a worrying trend for the future of French milk production.

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Straights Update

Global News

- Competitive Russian exports are adding downward pressure to the global and European wheat futures market. With a record sized crop and a combination of a weaker rouble and high global prices, Russian wheat exports have been very competitively priced, and exports are expected to continue to be above average levels until the end of the season. On 30th December, Sovecon increased its Russian wheat export forecast to 44.1MT (up by 200,000t).

- Grain exports from Ukraine are back 32% year-on-year as of 2nd January, reaching just 22.8MT. While maize exports were up 9%, wheat and barley exports were back 48% (to 8.4MT) and 70% (to 1.6MT) respectively. There is likely to be continued volatility in the cereal markets going forward with the ongoing conflict in Ukraine, and the lack of insurance for ships going into the Black Sea region may also impact exports.

- It is yet unknown what the impact will be of the extreme sub-zero temperatures experienced in the US over the Christmas period on their 2023 winter wheat crop, although it is expected to be minimal. However, crop condition scores for several states have fallen since the end of November. US weather remains a critical influencing factor on global wheat prices going forward, with dryness continuing in the southern plains.

- Australia is set for another record year with its wheat harvest now estimated at a massive 42MT, up from the previous estimate of 36.6MT on the back of high rainfall boosting yields. Record volumes of wheat will likely be exported, with ports currently fully booked until the end of April.

- Maize markets are also being supported by drought in Argentina, which is thought to be one of the worst droughts in 30 years. However, a large Brazilian crop is expected and so South America is anticipating overall a sizable maize crop.

- Soyabean prices have been firming in response to dry conditions in Argentina (and a decrease in UK currency which has increased the UK price considerably), with plantings at 82% complete by the end of the 1st week in January. At the same time last year plantings were 94% complete and the 5-year average was 93%.

UK and Scottish News

- After a lift in wheat prices over the festive holiday period, the New Year has so far seen a reversal with prices declining and futures markets dropping back down toward multi-month lows. With domestic production pegged at 15.5MT from the 2022 harvest (+10% on 2021 production), there is an exportable surplus of feed wheat still to move and the associated price pressure to remain competitive abroad is also being exacerbated by the slow export pace. The situation is compounded too by the ample supply of grain continuing to come out of Russia at very low prices. Come March, we may see a lift in prices as domestic surplus stocks are cleared and particularly if Russia decide to

limit exports to third world countries thereafter. Further upsides may well develop out of the Argentinian drought (wheat production already cut by 50%) and the ongoing surging demand for biofuels. January and February might therefore be the months to consider locking into forward livestock compound supply contracts. The feed barley market remains quiet; demand is slow across Europe, and North Africa markets are opting for maize and wheat over barley. Ireland is favouring maize, and France is the cheapest option for the Low Countries. Domestic markets in the UK are currently only notable by their absence.

- The results of AHDB's Early Bird Survey for cropping intentions show that the wheat area for the 2023 harvest is very similar to last year at 1,821kha, while the total barley area is estimated to be 2% less at 1,082kha due to indications of less spring plantings. While the UK winter barley area is 4% higher than in 2021, the decline in Scotland's winter barley area is 13% and its spring barley area is estimated to be down 10kha on the previous year. The UK area for oilseed rape is expected to be 52kha up on last year to 416kha, due to favourable conditions for drilling the crop and high prices. However, it is still well below historic levels (756kha in 2012).

- Ex farm prices for cereals are as follows:

Ex farm Scotland only	Feed wheat £/t	Feed Barley £/t
January 2023	236	215
February 2023	240	217
March - April 2023	245	221
May - October 2023	243	225

Source: AHDB corn returns and futures prices

- The protein markets have been firming on the back of the rise in soya prices and the lack of distillers dark grains from Vivergo. It may be worth looking to take cover for protein required in the short-term, especially soya, due to risk to supply from Argentina.

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Key Performance Indicators for Measuring Fertility

Keeping up-to-date records and monitoring performance is key to identifying fertility issues within the herd. Addressing problems early on will keep you on track to meet your herd's breeding and production targets. There are a variety of KPI's (key performance indicators) which can be used to measure fertility, but which ones provide the most current and reliable feedback?

Calving Interval

Calving interval is the length of time between two calving events and is shown as an average across the milking portion of the herd. It is used on most farms as a benchmarking tool, and it shows how the herd was performing over 12 months ago.

Not only does this KPI fail to reflect present performance, but it also has the capacity to provide misleading results. A cow/heifer needs to have calved more than once before a figure can be generated, therefore any animals that fail to get back in calf are excluded from the calculation. By culling challenging cows, you can make the calving interval look better, whereas successfully getting repeat breeders back in-calf can make it look worse.

Target: Between 370-390 days

Conception Rate

This is the number of confirmed pregnancies, expressed as a percentage of the cows that were initially served. For example, if 10 cows were inseminated and 5 are confirmed in-calf, it would result in a conception rate of 50%.

This KPI can be useful for highlighting issues with stock bulls, the competency of the inseminators, or poor semen quality. However, what it fails to show is the farm's ability to identify cows in heat. High conception rates don't always mean good heat detection rates. Serving more 'questionable' cows may result in lower conception rates but could result in more pregnancies overall.

Target: >35%

Heat Detection Rate

Also known as submission rate, heat detection rate is the number of cows that are inseminated as a percentage of those that are eligible to be served.

Eligible cows have gone beyond the voluntary waiting period, aren't considered to be a cull cow, and haven't already been confirmed in-calf. If there are 30 cows eligible to be served in a 3-week period, and 20 of those are inseminated, it would result in a heat detection rate of 67%.

It provides quick feedback on the farm's ability to detect heat in cows but does not take into account pregnancy success.

Target: >65%

21-Day Pregnancy Rate
Probably the most effective way of monitoring fertility, the 21-day pregnancy rate combines how many cows were eligible to be served, and how many pregnancies were generated for each 3-week period. For example, if 30 cows were eligible to be served, and of those inseminated 6 resulted in a pregnancy, this would result in a pregnancy rate of 20%.

It provides an ongoing and a relatively up-to-date insight into both the ability to detect heat and pregnancy success on farm. However, different software packages may display slightly different results. This is due to how the program divides the calendar into 21-day intervals and the assumptions it will make regarding non-return rates.

Target: 20% AYR calving. 30% block calving

Average Days to First Service
This indicates how long it takes for cows to return to normal cycling behaviour after calving. Problems such as metritis, anoestrous (not displaying signs of heat) and ovarian cysts will impact when cows receive their first service. Differing voluntary waiting periods and misinterpreted heats may lead to unreliable results.

Target: between 60-80 days

Percentage Pregnant at Pregnancy Diagnosis
Ideally, at least, 70% of animals selected for pregnancy diagnosis would be confirmed in-calf (if chosen cows are between 32-39 days since last service). Farms that scan less frequently, presenting longer dated animals at scanning should aim for results in excess of 80%.

Non-Return Rate
Measuring non-return rate can give an early indication of heat detection and conception issues. Ideally 75% of cows that fail to conceive would be inseminated within the next service interval.

In conclusion, the KPI that provides the most effective overview of herd fertility is the 21-day pregnancy rate, closely followed by the non-return rate, which will give the earliest indication of arising problems. Using farm management software to measure conception rates from individual sources, such as batches of semen or groups of cows can help narrow down fertility issues to specific causes.

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Managing the Thermoduric Count in Milk

Thermoduric count is one of the measures of milk hygiene quality. It refers to "heat-resistant" spore-forming bacteria that can survive the pasteurisation process. While most bacteria in milk are killed by pasteurisation, other micro-organisms, such as bacillus and clostridium which are present in the form of spores, can survive higher temperatures up to 65°C. The thermoduric count is of importance to milk processors as a high count can reduce the shelf life of milk and milk products and cause them to spoil. In recent years some processors have added thermoduric count to their payment schedule and so if it is above a certain threshold, a penalty will be applied. The threshold varies depending on the processor; some incur penalties once the count is over 1000 cells/ml.

Thermoduric bacteria can arise from the cow's environment but can also be attributed to poor maintenance and cleaning of the milking parlour and milk cooling/storage facilities. Sources of thermoduric bacteria in housed cows include slurry, silage and bedding, and for grazing cows, soil is the main source.

The starting point to tackle a high thermoduric count is cow cleanliness and the cleaning/disinfection of teats before milking. A pre-dip product with a rapid bacterial kill should be used to disinfect teats and the teats must be dry before applying the milking unit. If cows are particularly dirty when coming into the parlour, then look at the environment and consider how often passages are scraped, how clean the cubicles are and dryness of the beds. For

straw yards, mucking out every three weeks is recommended to minimise environmental bacterial numbers on the teat skin.

The milking machine and plant can also harbour thermodurics. Firstly, ensure that liners are replaced regularly. If the rubber is cracked, it will be impossible to clean. Also inspect the long milk tube from the cluster to the milk line and replace if cracks are evident. These tend to have a shelf life of around three years.

When it comes to cleaning the milking plant, the pre-rinse is vital to ensure milk residues are removed, enabling detergents to work effectively and 12-15 litres of water per unit should be used. Detergents can be rendered ineffective when biofilms build up. Biofilm is a brown, waxy film produced by bacteria which attaches to the inside of rubberware and the milk line due to inadequate cleaning and builds up over time. The presence of biofilm can make detergents ineffective and indicates that the hot wash is not at a high enough temperature, which should be between 77 to 85°C.

Initially thermoduric bacteria enter the milking plant from contaminated teats during milking and then poor cleaning of the plant and bulk tank allows multiplication of these bacteria, leading to problems with the thermoduric count. Inspect the milk sock after milking; if it is soiled then teat preparation could be improved. A high thermoduric count can also be due to inadequate cleaning of the bulk tank.

The following publication from Teagasc provides tips for controlling thermoduric bacteria in the cow's environment, as well as milking plant and bulk tank hygiene measures.
https://www.teagasc.ie/media/website/publications/2019/Thermodurics-tips-to-minimize-thermoduric-bacteria-in-bulk-tank-milk.pdf

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Mineral Relationship to Foot Health

Nutrition is a significant factor in healthy hoof horn growth. Some minerals, amino acids, and vitamins are involved in the keratinisation process, which ensures healthy horn growth and the structural binding of keratin proteins to aid hoof hardness.

Lameness is currently one of the most important and economically demanding diseases in dairy cattle. Important factors that influence the health of the limbs include nutrition, animal hygiene and genetic predispositions. Nutrition is one of the basic preventive factors affecting the quality and growth of the hoof horn, and the associated prevalence of hoof disease. The strength and structure of the hoof horn are affected by the composition of the feed ration (amino acids, minerals, vitamins, and toxic substances contaminating the feed ration).

Chelated Minerals
Chelated minerals are a way of presenting the essential trace minerals to the cow in a form that is more readily absorbed and utilised and not subject to the same interactions commonly experienced with inorganic elemental forms. This chelation process involves the chemical bonding of the trace mineral to an amino acid or small peptides.

Chelation refers to a bonding formed between a metal ion (mineral) and ligand (protein or amino acid). The biological role of chelated trace minerals is important. To be beneficial in dairy cows, the product should be stable in the rumen and digestive tract.

Zinc
Zinc is crucial for hoof formation, structural, and regulatory functions in keratinisation. Playing a considerable role in the creation of structural keratin proteins, zinc is significant for maintaining the health and integrity of the skin due to its role in cell repair and replacement and it plays a crucial role in wound healing.

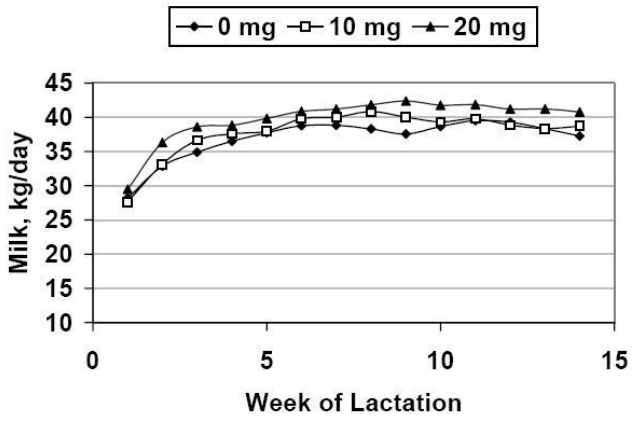
Copper
Copper is involved in protein synthesis, vitamin metabolism, connective tissue formation, and the immune system. Cattle that suffer from subclinical copper deficiency are more susceptible to hoof diseases, such as heel cracks, footrot and sole ulcers.

Selenium
Selenium plays a role in protecting the structure of the horn from oxidative damage due to the binding of keratin proteins. Herds with medium concentrations of selenium in the blood have higher milk production and better reproductive performance.

Calcium
Calcium plays a significant role in keratinisation, and it is essential for the final stage of mature horn cell formation. Higher calcium concentrations in the hooves of dairy cows increases their hardness.

Biotin
Biotin (a B vitamin) is essential to produce lipids in the intercellular mass, together with zinc and copper, and enables the growth of resistant horn tissue. It is also essential for normal keratinisation. Biotin is associated with a reduction in the incidence of lameness, specifically reducing the prevalence of white line disease. Biotin has been found to increase the rate of lesion healing in cows and it has a positive effect on the structure and quality of the new horn healing process. Feeding biotin at 20mg/cow/day has shown increased hoof quality and an increase in milk production (see graph below). Look at your dairy mineral in the vitamin section to see whether biotin is included. For a mineral fed at 150g/cow/day, biotin needs to be included at 133mg/kg to provide the recommended 20mg intake. Note that it can take up to six months to see an improvement in horn hardness and hoof health when feeding biotin due to the slow growth rate of new horn tissue.

The effect of biotin supplementation on milk yield



Source: (Zimmerly and Weiss, 2001, J. Dairy Sci. 84:498-506)

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How Does Cold Weather Affect Milking Cows?

We hear a lot over the winter months about the impact of cold weather on calf health and growth performance, but how does cold weather affect the milking herd? Cows are much less susceptible to cold stress, being comfortable within the temperature range between -4 to 18°C. However, it is thought that cold stress can occur at temperatures between 0 to -7°C depending on draughts and coat condition. During periods of colder weather, more energy will be required to maintain body temperature, diverting energy away from milk production.

Available water supply is essential for milk production, so it is important to ensure that the water supply is not frozen and that cows have access 24 hours a day. Excessively cold water can limit intake; cows prefer to drink water between 5 to 18°C.

Ensuring plenty of clean dry bedding will help protect against cold weather, both in straw yards and cubicle bedding. A good depth of bedding will help keep cows warmer and reduce the risk of chapping/damage to teat skin and hyperkeratosis. This is where a pre-dip with a high emollient content is of benefit. Keep cows clean and dry, as wet skin will increase the rate of heat loss and lead to chilling. This is where cow brushes can help.

As temperatures drop to freezing and below, maintenance requirements can increase by around 10% as more energy is required to maintain body temperature. In draughty sheds the wind chill factor will increase maintenance requirements further. Below freezing, dry matter intake will increase in the region of 5 to 10% as the cow tries to consume more energy. Combined with lower water intakes with cold water, milk yield can decline. However, the drop in yield is likely to go unnoticed, even down to temperatures of -6°C, but body condition will start to be lost to maintain milk output and core body temperature. The following table shows the relative changes in daily requirements of milking cows at various environmental temperatures compared to temperate environmental conditions set at 100%:

The effect of cold temperatures on maintenance, dry matter intake, water intake and milk output

Air temp.	Mainten-ance energy (%)	Dry matter intake (%)	Water intake (%)	Daily milk yield (%)
10°C	100	100	100	100
5°C	103	100	100	100
0°C	110	101	96	100
-5°C	118	106	94	100
-10°C	126	109	87	93
-15°C	133	111	82	85

Source: International Dairy Topics Vol 20, No. 1 (adapted from NRC 1981)

It is worth observing the amount of refusals and whether they reduce with colder weather. If so, increase the number of portions fed to reduce the risk of running out of feed, especially for transition cow groups.

If there is a prolonged spell of cold weather and milk output is being sustained, keep an eye on body condition and milk protein percentage. A decline in either or both is an indication that cows are lacking in energy, and it will be newly calved cows that are most susceptible to extended periods of cold weather.

In countries where below freezing temperatures are common for long periods of time, some farmers change their feeding time. By providing fresh feed mid-afternoon, this means the cow will spend a significant proportion of the evening hours ruminating, which is when the rumen is producing heat, and when temperatures are most likely falling.

While concerns around prolonged spells of cold weather are not so relevant to typical Scottish winters, what we should be mindful of is slippery walking surfaces if ice forms in passageways and in the collecting yard. Putting down salt or sand/grit on the main walkways that are most susceptible to freezing will help prevent injuries from slipping.

From a production point of view, prolonged cold temperatures in Scotland are unlikely to significantly impact the milking herd in terms of milk output. However, from a health point of view some diseases are more likely to occur during the winter months and should be looked out for:

- Pneumonia (both viral and bacterial causes): any cows that appear listless and depressed should be carefully monitored. An increase in respiration rate and loss of appetite are indicative of more advanced pneumonia and require prompt treatment.
- Winter dysentery: caused by a coronavirus and causes significant and sudden milk drop along with extremely loose faeces, which can have a blackish-greenish colour (sometimes blood may be present). While there is no treatment for this disease, electrolytes and proper nutrition will help improve recovery time.
- Abortions: these can be more common from bacterial sources over the winter.

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Planning for Youngstock Grazing this Spring

Regardless of the management of the milking herd, the majority of dairy youngstock will be turned out to grass this spring. By planning your grazing strategy now, there is potential to reduce rearing costs by increasing grassland utilisation and maximising growth rates.

Heifer Rearing gross margins from the Farm Management Handbook estimate the following grazing requirement for heifers assuming a set stocking regime from birth to calving.

	Calving at 24 months		Calving at 27 months	
Born	**Early autumn**	**Early spring**	**Early autumn**	**Early spring**
Total grazing days	225	61	306	232
Grazing required (ha)	0.21	0.06	0.29	0.23
Area required for 40 heifers (ha)	10.5	3	14.5	11.5

Adopting a rotational or paddock grazing system can increase grassland utilisation by up to 92%, so there is potential on every farm to reduce the amount of grazing acres required for youngstock.

	Annual yield (t DM/ha)	Utilisation (%)	Usable yield (t DM/ha)	Increase (%)
Set stocking	8.5	50	4.3	
Rotational grazing (3-day moves)	10.2	65	6.6	56%
Paddock (daily moves)	10.7	78	8.3	92%

Rotational grazing works on the basic principle of grazing at the 3-leaf stage, for 3 days, then rest for 3 weeks to allow plant recovery.

A group of 40, 200kg heifers (6 months old) turned out in March and aiming to bull at 390kg at 15 months in September have the following grazing requirement:

Intake per head	200kg x 2.2% BW	4.4kg DM/head/day
40 heifers	40 x 4.4	176kg/DM grass demand per day
Rotational grazing – 3-day requirement	3 x 176kg	528kg/DM
Grass available (pre-grazing cover less post-grazing cover)	2500 – 1500	1000kg/DM/ha
Paddock size required	528/1000	0.5ha
Area required for 21-day rotation	3.5ha or 8.7 acres	
Compared with set-stocking requirement, 56% more grass	5.5ha or 13.6 acres	

Focusing on grassland management for dairy youngstock can increase the area on farm available for silage and crop if required, reduce the need for rented grazing and reduce fertiliser requirement. Take action now to invest in an electric fencing kit and water troughs, identify a suitable field and give it a go with a group this spring. This has the potential to be a very cost-effective way to rear beef calves for those of you who retain them to sell as bigger stores.

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Dates for Your Diary

- 15th - 17th January - **Semex Conference 2023**. Radisson Blu Hotel, 301 Argyle Street, Glasgow, G2 8DL. For more information please visit: https://www.semexmarketing.co.uk/conference-2023-new

- 16th January - **Fodderbeet Roadshow 1 - Highlands**. Fearn Farm, Fearn, Ross-shire, IV20 1TL. Time: 10.30-15.30. For more information and to book your place please visit: https://www.fas.scot/events/event/fodder-beet-roadshow-1-highland/

- 17th January - **Fodderbeet Roadshow 2 - Aberdeenshire**. Arnage Farm, Mains of Arnage, Ellon, AB41 8PU. Time: 10.30-15.30. For more information and to book your place please visit: https://www.fas.scot/events/event/fodder-beet-roadshow-2-aberdeenshire/

- 17th January - **How Soil Health Can make Your Farm Business More Profitable**. Park Hotel, Kilmarnock, Ayrshire, KA1 1UR. Time: 10.30. To book your place please visit: https://ahdb.org.uk/events/ayrshire-how-soil-health-can-make-your-farm-business-more-profitable

- 18th January - **Agronomy Winter Roadshow - Aberdeenshire**. Thainstone House Hotel and Spa, Inverurie, AB51 5NT. Time: 10.30-15.50. For more information and to book your place please visit: https://www.fas.scot/events/event/agronomy-winter-roadshow-aberdeenshire/

- 20th January - **Fodderbeet Roadshow 3 - Wigtown.** Culbrae Farm, Whauphill, Newton Stewart, DG8 9PG. Time: 10.30-15.30. For more information and to book your place please visit: https://www.fas.scot/events/event/fodder-beet-roadshow-3-wigtown/

- 23rd - 25th January - **British Cattle Breeding Conference**. Telford Hotel and Golf Resort, Sutton Heights, TF7 4DT. For more information on how to register and the conference programme please visit: https://www.cattlebreeders.org.uk/conference/

- 26th January - **The Trading Market for Farmland Carbon**. On-line event. Time: 12.30-13.30. For more information and to book your place please visit: https://www.fas.scot/events/event/the-trading-market-for-farmland-carbon/

- 26th January - **Safe Use of Veterinary Medicines**. On-line course. For more information contact event organiser Embryonics on 01606 854411 or email: courses@embryonicsltd.co.uk

- 1st February - **Dairy-Tech 2023**. Stoneleigh Park, Coventry, CV8 2LG

- 16th February - **Safe Use of Veterinary Medicines**. On-line course. For more information contact event organiser Embryonics on 01606 854411 or email: courses@embryonicsltd.co.uk

- 16th February - **Talking Leaders: The Rising Role of Social Media within UK Agriculture**. On-line event. Time: 11.30-12.15. For more information and to book your place please visit: https://ahdb.org.uk/events/talking-leaders-the-rising-role-of-social-media-within-uk-agriculture

- 28th February - **Reducing Inputs: An Integrated Approach**. Balbirnie Home Farms, Cupar, Fife. Time: 10.30-14.30. For more information and to book your place please visit: https://www.soilassociation.org/our-work-in-scotland/scotland-farming-programmes/events/reducing-inputs-an-integrated-approach/

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

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