

TOMORROW'S FARMER

OCTOBER-NOVEMBER / 2026 / ISSUE 81



Darkness matters: the role of sleep in hen health and production

When we talk about laying hens, we often focus on diet, egg quality, or disease prevention. Yet one crucial factor often gets overlooked: sleep. Just like humans, chickens have biological rhythms, and ensuring they get at least eight hours of sleep each night is essential to their health, productivity, and welfare.

Chickens, like many animals, rely on a natural circadian rhythm: an internal clock that governs when they sleep and wake. Under natural conditions, chickens would sync their patterns with the rising and setting of the sun. But in modern poultry houses, especially where artificial lighting is used to maximise egg production, sleep can easily be disrupted if we don't manage their environment carefully.

So, why does sleep matter? Firstly, sleep plays a critical role in a hen's immune system. Chickens that don't get enough sleep are more susceptible to stress and disease. Rest is when their bodies repair, recover, and maintain strong immunity. Lack of sleep can weaken their defences, potentially leading to outbreaks of illness that could otherwise be prevented. Sleep also affects a hen's

behaviour. Well-rested hens are calmer and less prone to pecking or aggression. If hens get restless due to insufficient sleep, it can lead to problems like feather pecking, bullying, and even injuries. Chickens that sleep well are more likely to form stable, peaceful flock dynamics, reducing stress across the group.

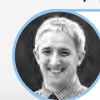
One often-ignored benefit of sleep is its role in overall growth and maintenance. Even though adult laying hens are fully grown, their muscles, bones, and systems still undergo constant repair. Sleep is when a chicken's body regulates hormones, repairs tissues, and stores energy for the next day's activities. Without adequate sleep, hens might struggle with long-term health, potentially shortening their productive lifespan.

Beyond flock health and behaviour, sleep directly impacts egg production. Hens need rest to maintain consistent lay rates. The reproductive system is closely linked to a hen's overall well-being. Without proper sleep, hens may lay fewer eggs or experience irregular laying patterns. Over time, disrupted sleep can lead to decreased egg quality, resulting in thinner shells, smaller eggs, or fewer altogether.

To ensure hens get their full sleep, lighting programmes must be carefully

managed. Commercial flocks often operate with precise light schedules. Typically, producers simulate sunrise and sunset, ensuring darkness for at least eight hours. Chickens need complete darkness, not just dim lighting. True darkness encourages the brain to release melatonin, the hormone that signals it's time to rest. Noise and disturbances should also be minimised during their sleep hours. A calm, quiet environment helps hens fully settle down. When hens feel safe and undisturbed, they sleep deeper, reaping all the benefits that restorative rest provides.

Ultimately, prioritising sleep is a win-win. For producers, well-rested hens translate into consistent, high-quality egg production. For the hens themselves, sleep is a cornerstone of a healthy, low-stress life. By ensuring chickens get their full eight hours of sleep each night, we are doing more than simply respecting a natural need; we are actively fostering optimal health, productivity, and welfare. It's a simple, natural solution to help keep each hen at her best. In the end, good sleep truly makes for good eggs and for happy, healthy hens.



WILL WHITE 07545 504138
POULTRY SPECIALIST



Were we wrong about transition cows?

How our advice has evolved

Some of the nutritional advice we once gave was not entirely correct. Before anyone requests a refund, it reflected the best knowledge available at the time. But science moves and good technical advice must move with it.

That is why a progressive, inquisitive nutritional team at CMC matters: continually questioning assumptions, following the evidence and turning better understanding into better outcomes for our customers.

Below I have used three examples from transition-cow nutrition that illustrate the point.

Ketosis: not just an empty fuel tank

We traditionally described ketosis as a simple energy problem. After calving, the cow cannot eat enough to meet the demands of milk production. She mobilises body fat, the liver becomes overwhelmed and ketones accumulate. The obvious answer was more energy. This information is still useful but no longer enough.

We now recognise inflammation and cortisol as important drivers of metabolic dysfunction. Over-conditioned cows can enter transition with chronic, low-grade inflammation; intermittent dry matter intake creates stress and raises cortisol; lameness adds both inflammation and stress. These pressures impair insulin signalling, increase insulin resistance and accelerate body-fat mobilisation. Fatty acids flood the liver, fat accumulates and liver function deteriorates, compromising glucose production and fat export. A self-reinforcing cycle develops that simply adding dietary energy may not resolve.

The challenge is not just how much energy enters the cow, but how effectively she can use and partition it.

Calcium: more than milk fever maths

Our traditional approach to milk fever was reassuringly mechanical. The cow suddenly requires large amounts of calcium for colostrum and milk. If absorption from the gut and mobilisation from bone cannot respond quickly enough, blood calcium falls. Again, correct but incomplete.

Calcium regulation and inflammation are closely connected. Inflammation can interfere with the cow's normal metabolic response around calving, while low calcium can reduce feed intake, impair muscle and rumen function and weaken immune-cell activity. Each can therefore make the other worse.

Managing calcium remains essential, but successful transition management must also reduce the wider pressures driving inflammation and metabolic stress.

Methionine and choline: not just another brick in the wall

Methionine was once discussed mainly as an amino acid – a building block for milk protein. Choline was viewed separately, principally as a nutrient supporting liver function.

We now understand they are also connected through methylation. Methylation is a vital cellular control system, passing tiny chemical "tags" between molecules. These help regulate genes and metabolic pathways, process fats in the liver, build important compounds and respond to oxidative and inflammatory stress.

Methionine provides methylation capacity. Choline can also contribute methyl groups and may therefore spare methionine for some of its other essential roles. But they are partners, not substitutes: methionine is still required for protein production, while choline has distinct roles in exporting

fat from the liver.

The objective is no longer simply to add more protein or an isolated amino acid. It is to support the connected metabolic system.

So, were we wrong?

Occasionally. More often, we were describing the part of the picture we could see at the time. The important thing is to keep making that picture bigger, clearer, more detailed, and to change our advice when the evidence tells us we should.

At Crediton Milling, we have a team ready to meet these challenges, whether that's our nutritionists optimising the diet, our focus team providing mobility and condition scoring, or our forage team helping you get the most out of your farm's resources. We are always investing in knowledge and information to help you see the picture more clearly and prepare for the challenges of an ever-changing world.



STUART GOUGH 07854 955778
RUMINANT DEVELOPMENT



Could zinc help cows weather the hoof health consequences of heat stress?

This summer's heat has left many farms battling increased cases of lameness, decreased performance and fertility concerns, and heat stress is a common trigger behind many of these challenges.

One area worth keeping a close eye on this autumn is hoof health...

During hot spells, cows stand for longer and bunch around water troughs, collecting yards and cooler areas. This puts extra physical and environmental strain on their feet, while the heat itself triggers immune responses and raises inflammation and oxidative pressure.

Hoof horn starts from within

Healthy hooves and good-quality horn depend on the tissues beneath, and those tissues need the right nutrients for cell division, keratinisation and normal tissue integrity. Zinc is essential for all three of these functions.

The hoof grows from the coronary band to the toe, taking around 11-12 months to grow through. What we see in the hoof today can therefore reflect nutritional and environmental challenges from months ago, and these often show up in the horn as stress lines, also known as hardship lines. Once damage is done it is very difficult to reverse, so prevention is key.

How does zinc fit in?

Stronger hoof horn – Zinc plays a central role in keratin formation, cellular repair and the structural integrity of the claw horn. Put simply, it helps the cow build tougher, better-quality horn.

Better resilience to heat-induced oxidative stress

Heat stress increases oxidative and inflammatory pressure within the cow. Zinc is a component of key antioxidant enzymes, so it contributes to antioxidant defence and helps protect cells from that pressure.

Immune defence

Zinc supports normal immune-cell function and tissue repair. This matters most when hot weather is accompanied by wet or difficult underfoot conditions, hygiene challenges or increased exposure to infectious foot problems.

Are background zinc levels enough?

When it comes to supplementing minerals such as zinc, there isn't always a clear picture of what is already available on farm, and that picture changes from year to year with forage type and quality, herd performance, water sources and other feedstuffs. That is why we always recommend a full mineral audit, so you know your cows are getting the level of supplementation they actually need.

Once we know your herd's specific requirements, the next step is making sure the cow can actually use the zinc we put in front of her. To do that, a mineral needs to be:

- Soluble – able to dissolve so it can be taken up
- Stable – able to withstand the pH range of 2-7.4 it meets through the digestive tract
- Absorbable – able to pass through the gut wall
- Metabolically available – able to reach the target tissues and organs once in the bloodstream

Zinpro Availa and ProPathway minerals are combined with different naturally occurring amino acids, which are designed to help carry them through the rumen and abomasum to the intestine. From there, they can use several different pathways to cross the intestinal wall and enter the bloodstream. The aim is to make better use of these uptake pathways, rather than simply increasing the amount of zinc being fed.

Put your best hoof forward...

After a difficult summer, don't wait for hoof problems to appear. Review the whole mineral programme, assess forage and water supply, and consider not just how much zinc is being supplied but the form in which it is delivered.

Remember that lameness is multifactorial. Cow comfort, lying time, flooring, hygiene, transition management, rumen health and routine foot care all remain key, and cows should ideally be supported through every stage of the cycle, from heifer through to dry, fresh and late lactation. Mineral nutrition supports those measures; it doesn't replace them.

Good hoof horn isn't built when the foot trimmer arrives. It's built months earlier, from the inside out.



TORI FURNISS 07885 367440
RUMINANT SPECIALIST



Managing the transition from grazing to winter housing

As cattle begin to move from grazing into their winter housing, the transition period is an opportunity to set up both the animals and the housing environment to ensure a productive and trouble-free winter.

With most areas receiving rain through September, grass growth returned, but grazing has remained variable. Heavy dews and passing showers have caused inconsistent dry matter intakes, and many farms are still supplementing with hard feed after the dry summer. The change from a variable, grazing-based diet outdoors to a more controlled indoor system has some important factors to consider: nutrition, animal health, housing conditions and daily management.

Plan for the housing transition rather than simply changing the diet

Grazed grass can provide a highly digestible source of energy and protein, particularly in autumn when swards are still actively growing. Moving suddenly onto conserved forages and concentrates can be a significant nutritional change, but it gives us the opportunity to provide beef cattle and youngstock with some prolonged consistency through their winter diets.

Where possible, avoid an abrupt switch. Introduce any concentrate gradually and allow cattle time to adapt to the new forage and feeding system.

For finishing cattle, this is particularly

important where higher levels of cereal or compound feed will be introduced. Rumen adaptation takes time, and a controlled transition can help reduce the risk of acidosis and inconsistent intakes. A rumen buffer can help, but increasing cereals slowly is critical.

Make the most of forage analysis

Once cattle are housed, forage becomes the foundation of the diet, so knowing its nutritional value is critical. Silage quality can vary considerably between cuts, fields and years. A forage analysis provides useful information on dry matter, energy, protein and fibre. This gives a good guide to the potential intakes of a forage, the performance we can expect and what needs to be fed alongside it to achieve that performance. Weighing cattle when they come in and monthly thereafter is the best way to monitor growth rates and performance.

Consider water and feed access

Housing cattle increases reliance on the water supply, particularly where dry feeds and concentrates are being fed. Check troughs before housing and ensure sufficient flow rates and access for all animals.

Feed space is one of the most important factors with housing cattle,

yet it is often overlooked. Overstocked pens where animals must compete for feed will reduce average performance, and the smaller, more timid animals in a group will be the first to suffer.

Please make sure all animals can feed at once; adequate feed space and consistent feeding times help cattle establish a stable feeding pattern.

Housing conditions matter

Good nutrition cannot compensate for poor housing. Before cattle come inside, check ventilation, drainage, lying areas, handling facilities and stocking density. Housing should provide a clean, dry and comfortable environment with sufficient airflow without creating draughts at animal level.

Ultimately, a successful winter housing period starts before cattle walk through the shed door. A gradual nutritional transition, good-quality forage, appropriate supplementation, reliable water and well-managed housing provide the foundations for maintaining health, performance and feed efficiency throughout the winter.



MATT HOLMES 07751 743079
RUMINANT SPECIALIST