AUSFARM NUTRITION NEWS

An informative news bulletin designed to bring the latest topical and technical nutrition product news and information to cattle and sheep producers

This newsletter comprises articles about seasonally significant metabolic diseases, production opportunities and general nutritional advice to assist producers in growing their best animals. Please read articles relevant to your business and contact our team if you have any enquiries.

Contents

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AusFarm Company News

WE HAVE EXPANDED OUR TEAM WITH TWO NEW PEOPLE

The growing demand for our products and services has spurred ANP to grow our team. As a growing business focused on technical sales and customer service, we are always looking to add the right people to our team and continue building our value for customers. After a thorough search and rigorous selection process, we are excited to welcome two new members to our technical sales team.

ANIKA HATTY: TECHNICAL NUTRITIONAL SALES MANAGER

It is with great excitement that we welcome Anika Hatty to our growing technical nutrition team.
Anika joins our team in a Technical Nutrition Sales Manager role and will be looking after our dairy, feedlot and custom nutrition business. In a sales capacity, Anika will also manage the Upper Murray region, including Victoria's high country.

Anika brings a wealth of on-farm and industry experience, including working with the well-known northern Australian pastoral company Australian Country Choice (ACC) and nutrition businesses Top Stock Agencies and Top Country in Queensland. In Anika's most recent role, she was the NSW Sales Representative for Performance Feeds, managing sales, distribution and customer service. These roles strengthened her passion for helping beef, sheep and dairy producers improve productivity and profitability through practical, targeted nutrition strategies.

To complement Anika's experience, she holds a Bachelor of Animal Science degree from Charles Sturt University and is currently studying to become a qualified nutritionist and AARN member by exam.
Anika particularly enjoys working alongside producers on-farm, building lasting relationships and tailoring nutritional solutions to suit individual production systems. Outside of work, Anika enjoys spending time with her horses, pets, family and friends.

We're excited to have Anika on board and look forward to the knowledge, enthusiasm and support she will bring to our team and customers.

MATILDA HELPS: SALES SUPPORT CONSULTANT AND OFFICE MANAGER

We're delighted to introduce the aptly named Matilda Helps, who recently joined the AusFarm Nutrition team as our Sales Support Consultant and Office Manager.

Matilda brings a strong combination of administration expertise and customer service experience to the role. She holds a Bachelor of Animal Science degree from the University of New England and has hands-on experience in grazing and feedlot systems, working within her family's sheep operation near Hillston, NSW.

Matilda's passion for livestock production and her organised approach, attention to detail, and commitment to delivering excellent service to producers make her a valuable addition to our growing team.

As Sales Support Consultant and Office Manager, Matilda will be working closely with our customers and sales team, assisting with enquiries, coordinating orders, and ensuring the smooth day-to-day running of our office. Her focus is on making every customer interaction as efficient and enjoyable as possible.

Matilda is also keen to take on a sales role so she can get out on-farm and in-stores to learn more about our business on the front line. In the next few months, you may see Matilda out on the road as Steph shows her the ropes.

We're thrilled to have Matilda on board and know her knowledge, professionalism, and friendly nature will be a great asset to both our team and our customers.

Seasonal Nutrition News

KEY NUTRITIONAL LEARNINGS FROM THE WET YEAR OF 2022

It's always surprising how each season brings with it new challenges and learning opportunities. With the return to a "normal" winter, the splash of late autumn rainfall has not only given us a good feed bank for winter but has also thrown us another challenge, albeit one that we faced a few years ago: wet pastures.

You may notice that animals that are on the best green feed that you have seen in a few years are not performing. If we look back to 2022, the last wet winter, one of the key learnings was that although rainfall drives pasture growth, too much rainfall can cause pastures to become waterlogged and significantly reduce their value as feed. This is also the case for emerging green feed with very little dry matter.

Why is this?
Pasture value is calculated on a dry matter (DM) basis, where the water component of the pasture is discounted. For instance, a highly digestible lush ryegrass/clover mix in a normal season would have a DM of around 20%, meaning an 80% water content. However, throughout 2022, plant tissue tests commonly recorded DM's of between 11 and 15% (see Figure 1).

	Sample 1 Plot 1	**Sample 2** Plot 2
Dry Matter (%)	11.9	13.8
Moisture (%)	88.1	86.2
ME calculation (MJ/kg DM)	10.3	10.4
Crude Protein (%)	19.7	24.2
Neutral Detergent Fibre (%)	45.6	44.1
Acid Detergent Fibre (%)	27.6	26.9

	Sample 3 Plot 3	**Sample 4** Plot 4
Dry Matter (%)	12.2	12.7
Moisture (%)	87.8	87.3
ME calculation (MJ/kg DM)	10.1	10.2
Crude Protein (%)	20.5	21.7
Neutral Detergent Fibre (%)	46.2	45.4
Acid Detergent Fibre (%)	28.4	27.8

Figure 1: Plant tissue test forage barley and ryegrass/clover mix

What does high water content mean for feed value?
An increase in the water content of pastures significantly reduces the concentration of protein, energy, and minerals within the pasture. For example, a pasture with a 20% DM becoming 10% DM essentially halves in nutritional value on a 'fresh-matter basis', seeing livestock lose condition whilst grazing what is believed to be highly productive feed.

So, an animal needs to consume double the volume of 10% DM feed to achieve the same level of nutrition as the same feed at 20% DM. Animals only graze for a certain number of hours a day, and this would mean grazing for double the time that they usually would graze, which is physically impossible. This is why performance suffers.

What can we do about it?
We first recommend feeding a palatable cereal hay or straw on an ad-lib basis. This will give the animals some dry matter that will assist with slowing the passage rate of highly digestible green feed. From Figure 1 above, we can see that the protein level of fresh pasture and cereal crops is way above the requirements of livestock. By feeding a roughage source, the protein supply is diluted more towards the needs of the animals. Energy requirements can somewhat be corrected by feeding cereal hay, silage or grain in conjunction with grazing the pasture, although energy in fresh pasture is also high, providing enough can be consumed.

However, this supplementary feeding will have little impact on minerals, vitamins and trace elements that will grow increasingly deficient, especially major minerals like calcium, magnesium, sodium and phosphorus.
To correct mineral deficiencies, we recommend offering a palatable targeted supplement to meet specific production needs.

Ideally, a high magnesium supplement from our **StockGro**, **StockMins** or **Bovi** ranges, or at the very least, use **StockMins-CLS** to cover off on some of the major macro minerals.

Seasonal Nutrition News

BOOST LIVESTOCK PERFORMANCE ON LUSH GREEN PASTURES AND CROPS

Key Points

- If your animals are not performing well on lush green feed, there is a good reason for it
- High digestibility, high protein and low mineralisation are key protagonists in poor production
- Balancing dietary protein and energy, providing roughage and correcting mineral deficiencies improve performance

After the late autumn break, many producers in southern NSW, Victoria and South Australia are flush with established crops and lush green pastures to graze. Whether boosting milk production in lactating cows and ewes or growing out weaners, it's fantastic to have a decent feed base leading into the heart of winter.

However, have you ever noticed that, although your animals are on the best feed they've had in years, they're not breaking the scales in weight gain; on the contrary, they're just doing okay?

Here's why

Crops and lush green pastures are a highly digestible form of protein and energy that can significantly boost production. However, the digestibility of lush green feed can be too high, which can see feed pass quickly through the GIT, reducing feed use efficiency. This is generally seen in animals scouring on lush green feed and is commonly paired with poor performance.

Furthermore, common deficiencies in key minerals like magnesium, sodium, calcium and phosphorus prevent livestock from utilising the feed to its full potential. High levels of potassium in crops have an antagonistic effect on magnesium, where it interrupts absorption into the bloodstream, which can lead to blood magnesium deficiencies (see fig 1).

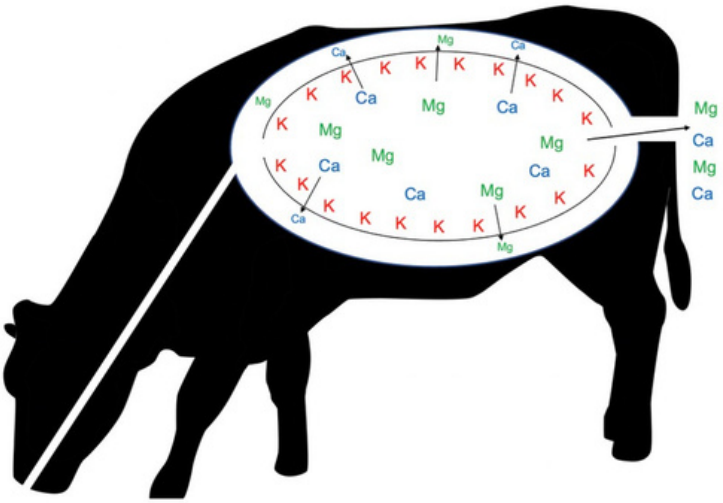

Figure 1: Interactions between Mg and K in the rumen

What to do about it

To help slow the passage rate, increase feed utilisation and get animals performing as they should on the best feed available, we recommend the following:

1. **Supplement with a source of effective fibre**
   - Feed a source of palatable roughage, like cereal hay, while grazing lush green feed. This builds a rumen mat that enables effective rumination, fermentation and utilisation of feed consumed.
2. **Supplement with grain to boost performance**
   - For extra performance, feeding grain can complement lush feed really well, as the additional source of energy can help balance high-protein pastures and boost live weight gain.
3. **Supplement with minerals, vitamins & trace elements**
   - When animals receive recommended daily intakes of minerals, vitamins, and trace elements, the antinutrient factors associated with grazing lush green feed can be overcome, and the production response can be exceptional.

Recent studies on livestock grazing dual-purpose cereals highlighted that offering the right feed supplement can boost mineral levels in the diet and significantly improve feed-use efficiency and liveweight gain.
One Australian study in particular, involving young, crossbred sheep grazing dual-purpose wheat crops, reported marked liveweight gain responses (30-50%) when grazing was paired with a mineral supplement containing MgO, lime and salt.[1]

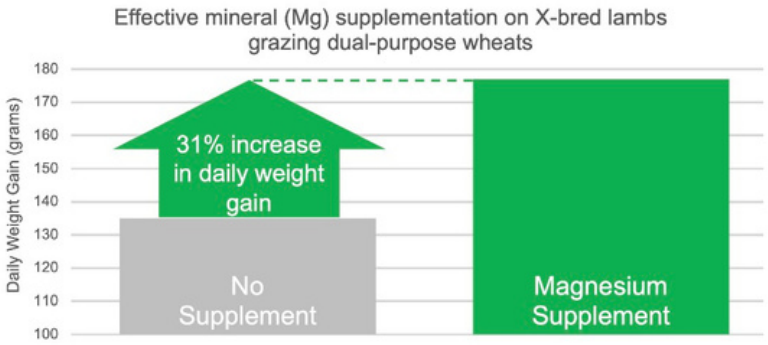

Figure 2: Growth response to magnesium supplementation[1]

These results were verified in two recent user experience studies run by ANP that measured liveweight gain in lambs grazing a wheat crop and a lucerne, clover, ryegrass pasture when effectively supplemented with ANP's **StockMins-Crop Grazer Plus**. The studies found that lambs supplemented with **StockMins-Crop Grazer Plus** saw improved growth of 12% and 14% on the crop and pasture, respectively, when compared with lambs supplemented with MgO, lime and salt.

ANP's range of green feed supplements is specifically designed to elevate the essential mineral, vitamin and trace element status of grazing livestock, promoting greater feed conversion efficiency, immune function and energy metabolism to generate rapid growth. ANP's green feed supplement range is built with Bovatec® to elevate rumen function and increase liveweight gain. Bovatec has been shown to boost daily weight gains of livestock grazing green feed by up to 14%.[2]

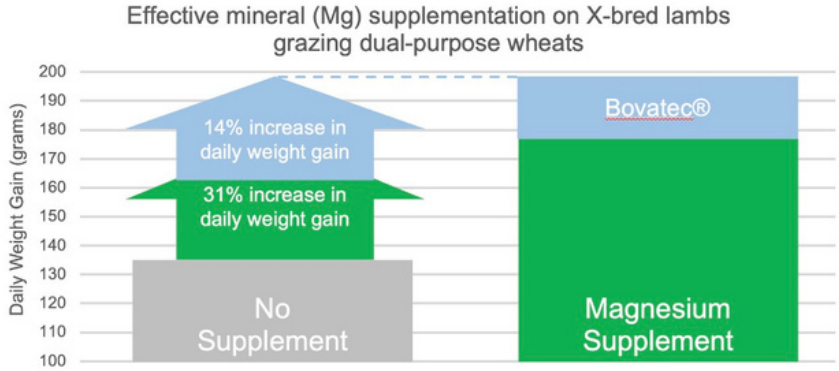

Figure 3: Growth response to magnesium and Bovatec supplementation[1,2]

StockMins – Crop Grazer Plus
A weatherproof, granular, mineral supplement specifically designed to elevate the performance of sheep grazing cereals and lush green pasture. Contains 6% magnesium from multiple different sources and Bovatec.

StockMins – BoviMag Plus
A weatherproof, granular, mineral supplement specifically designed to elevate the performance of cattle grazing cereals and lush green pasture. Contains 9.5% magnesium from multiple different sources and Bovatec.

StockMins – BoviMag
An ionophore-free, weatherproof, granular, mineral supplement specifically designed to elevate the performance of cattle grazing cereals and lush green pasture. Contains 9.5% magnesium from multiple sources.

Turbocharge your livestock this winter with **StockMins-Crop Grazer Plus** and **StockMins-BoviMag Plus**, and grow your best animals with AusFarm Nutrition Products.

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1. H Dove, KG McMullen - Animal Production Science, 2009 - CSIRO Publishing.
2. Zoetis Data on file.

Sheep Nutrition News

FOCUS ON EWE NUTRITION FOR GREATER LAMB PRODUCTION

Key Points

- Ewe nutrition is extremely important for lamb survival and performance
- Dystocia is most common for single-bearing ewes, while pregnancy toxaemia is common in twinners
- Positive lambing results involve managing the nutritional needs of single and twin-bearing ewes effectively

On the back of reports of mixed scanning results so far this season, estimated record-low sheep numbers, and record-high prices tipped to extend late into the year, it has never been more important to maximise weaning percentage than this year. Get lambs on the ground, stacking on weight and into the market or reproducing as soon as possible.

The trick is understanding the physiological requirements of ewes throughout the lambing period and meeting those requirements so they can carry a successful pregnancy and support growing lambs until weaning. A large part of this is nutrition.

Ewe nutrition is key for lamb survival

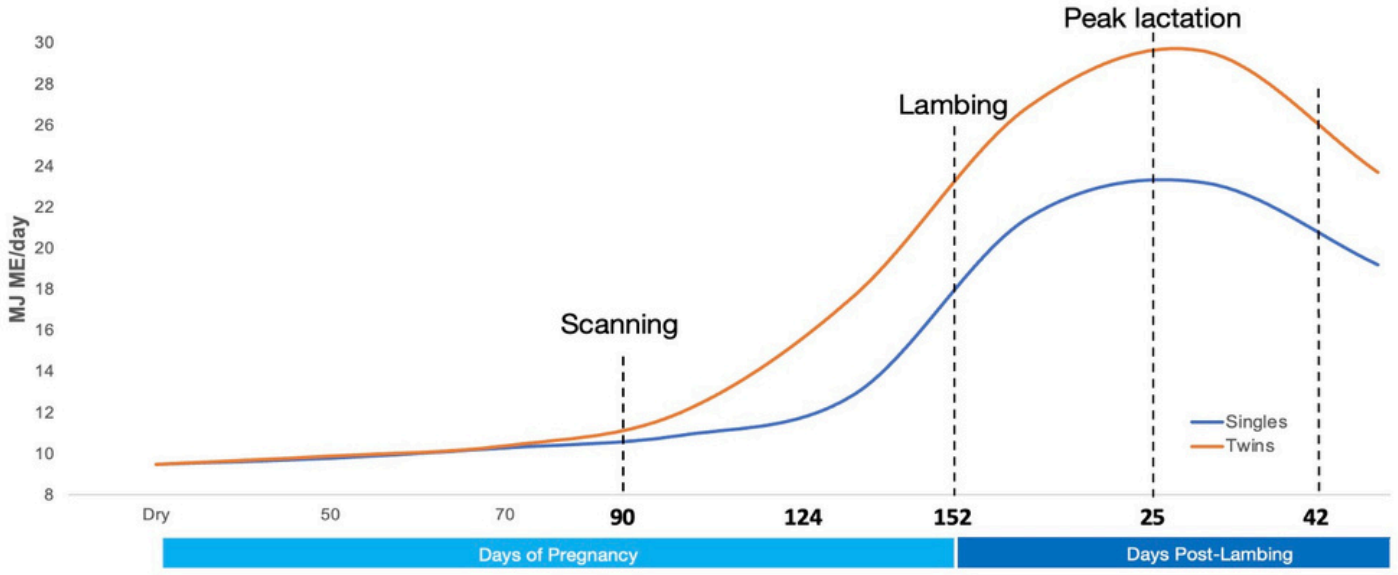
It's commonly known and widely reported that birth weight is the largest determinant of lamb survival, and that foetal development, milk production and lamb growth are all strongly linked to ewe nutrition.[1,2]

So, focusing on improving ewe nutrition pre- and post-lambing can increase lamb survival and lamb growth rates at the same time. This goes a long way towards weaning more lambs at a higher average weight. In combination, significantly increases the amount of saleable lamb produced at weaning.

What are the requirements of ewes during pregnancy and lactation?

The nutritional requirements of pregnant ewes begin to ramp up around four weeks pre-lambing and continue to grow at an increasing rate until peak lactation, four weeks post-lambing.

The chart and table below illustrate this well in terms of the energy requirements for maintenance of 60kg pregnant and lactating ewes throughout the lambing period. They also illustrate the large difference between the requirements of twin- and single-bearing ewes throughout this period.



Days of Pregnancy and Lactation	120	130	140	Lambing	10	20	30	40
Singles - Maintenance Energy Requirements (Mj/hd/day)	12.3	13	13.9	14.7	21.7	24	23.4	21.6
Twins - Maintenance Energy Requirements (Mj/hd/day)	14.1	15.2	16.2	17.2	27.1	30.9	29.9	27.1

Figure 1: Energy requirements of twin- and single-bearing ewes throughout pregnancy and lactation

Single-bearing ewes
Given there is plenty of food on offer (FOO), single-bearing ewes grazing a lush green pasture like early vegetative ryegrass should have little difficulty meeting pre-lambing energy and protein requirements. However, energy may become limiting during lactation, where supplementary energy can improve milk production to assist in lamb growth and development.

Like energy requirements, mineral, vitamin and trace element requirements increase significantly throughout pregnancy and lactation, with the requirements for minerals, in particular, more than tripling from pregnancy to peak lactation. Lush green feed is commonly low in sodium, magnesium and trace elements and has dangerously high levels of potassium. These mineral imbalances can be easily corrected with an effective mineral, vitamin and trace element supplement like **StockMins-EweLamLac**.

Twin-bearing ewes
Despite the energy requirements of twin-bearing ewes in late pregnancy being somewhat close to those of single-bearing ewes, a significant reduction in dry matter intake (DMI), due to a reduced rumen capacity of twin-bearing ewes in late gestation, makes it practically impossible for ewes to satisfy these requirements without effective feed supplementation.

Although DMI jumps by around 30% post-lambing, energy requirements increase at a larger rate as lactation kicks in, with ewes now requiring close to 30MJME/day just to maintain weight. This is another impossible task on grass alone, especially this season with high moisture levels of green feed impacting quality.

Ewes commonly lose condition over the lambing period, especially during lactation, when they partition almost all their nutrition into producing milk for the lamb. So, although we look to feed to minimum maintenance requirements for pregnant and lactating ewes, falling short of maintenance is acceptable if weight loss is controlled and is not too large.

Supplementary energy involves feeding a high-density energy grain like whole barley or wheat at rates that can close the energy gap between requirement and availability. In some cases, when FOO or quality is lacking, this can involve feeding more than 1kg/hd/day of barley.

The mineral, vitamin, and trace element requirements again follow a trajectory similar to energy throughout pregnancy and lactation. Magnesium, calcium, phosphorus, and trace element requirements outstrip dietary supply, causing deficiencies. Supplementing with **StockMins-EweLamLac** helps correct these deficiencies and boosts energy utilisation and muscle function, while the inclusion of vitamins A, D and E at RDI levels supports immune function, tissue repair and general animal health.

For more information about the **StockMins-EweLamLac** range of lambing supplements, talk to the team at ANP today.

References

1. Roca Fraga FJ, Lagisz M, Nakagawa S, Lopez-Villalobos N, Blair HT, Kenyon PR. Meta-analysis of lamb birth weight as influenced by pregnancy nutrition of multiparous ewes. J Anim Sci. 2018 May 4;96(5):1962-1977.
2. G.E. Banchero, J.T.B. Milton, D.R. Lindsay, G.B. Martin, G. Quintans. Colostrum production in ewes: a review of regulation mechanisms and of energy supply. Animal. 2015; 9(5):831-837.

Sheep Nutrition News

THE MULTIPLE CAUSES OF LAMENESS AND HOW TO ADDRESS THEM

In the article “Key learnings from the wet winter of 2022”, we discuss how the excessive moisture levels in lush green feed this season reduce dry matter intake (DMI) and dilute the nutritional value of feed. This can be seen in the paddock where healthy sheep lose condition on the best feed available. However, there is another lesson from the wet winter of 2022 that will help us manage a much more obvious issue: hoof health.

Key Points

- High moisture in feed and the soil, high protein and low minerals lead to hoof issues
- Integrated management, including physical, chemical and nutritional strategies, has proven effective
- Don’t be fooled by ineffective supplements - the most expensive supplement is one that doesn't work

High soil moisture, excessive protein, and low mineral levels in green feed have led to increasing reports of hoof health issues this winter. Generally, one or two limping animals indicate a broader flock-wide problem that can affect more than just mobility. The flow-on effects are linked to low immune defence, pregnancy toxaemia and fertility issues.

What causes the disease?

When thinking about lameness in ewes, one question to ask yourself is: “Why is it more prevalent in high-producing livestock or in paddocks of improved feed?” Although wet hooves are a large part of the problem, the disease is more nuanced than just ewes grazing wet paddocks.

The reason is that many variables contribute to lameness, including:

- High-protein diets cause rapid hoof growth, sometimes too quick for the supporting tissue
- Rapidly digestible diets can cause subacute ruminal acidosis (SARA), leading to inflammation of hoof tissue (laminitis)
- Reduced blood flow to the hooves. This can be caused by two different modes of action
  - Waterlogged pastures can cause ewes to spend more time grazing and standing
  - Excessively high protein feed increases ammonia in the blood, reducing oxygen circulation
- Deficiencies in key trace elements contribute to poor hoof structure and development, commonly leading to cracking

Although keeping feet dry is a huge task this season, many of these other contributing factors can be mitigated by a few changes in the animal’s diet.

Integrated hoof health management

When managing hoof health and lameness, there are physical, chemical and nutritional control measures that have proven to be successful in different environments. With each control measure playing an important role, it is recommended to introduce an integrated program utilising all of these controls to get the best results.

1. **Physical**
   Trimming hooves and avoiding grazing of low-lying, damp paddocks on the farm are good practices for reducing the disease pressure on sheep. It is important to pay special attention to heavier rams and multiple lamb-bearing ewes whose hooves would most likely have been under greater pressure throughout pregnancy. It is good practice to perform regular random hoof checks and, if possible, avoid boggy yards that can be a haven for the indicated bacteria, such as *Actinomycetes* and *Fusobacterium Necrophorum*.

   Similarly, effective shelter from wind and rain (trees, bushes, hills and large bales) can assist with keeping the sheep off their feet and reducing stress on the hooves.

2. **Chemical**
   Foot bathing in zinc sulphate (10 to 20% solution) has been a common practice and successful for many years. It is recommended to perform bathing every few weeks in high-challenge environments to manage infection and prevent the spread throughout the flock. The inclusion of lauryl sulphate (a wetting agent at 1 to 2%) has also been met with positive feedback from producers.

3. **Nutritional**
   Palatable straw or cereal hay can be put to great use on green feed, as it can help slow the fermentation process and passage rate of the highly digestible green feed. It can also somewhat dilute the protein, helping to correct excessive levels.

Offering a supplementary source of energy in the form of grain can also help to mop up excess protein in the diet, while also helping to support the high energy requirements of production.

Studies have shown significant value and success in effective mineral, vitamin and trace element supplementation when managing lameness. Mineral supplements can not only boost mineral status, animal health and immune response, but specific actives can also target healthy hoof growth and structure and assist in managing infections.[1]

Choosing the right supplement matters

Hoof health management supplements can provide a high level of assistance when managing lameness, but the key is to include the right actives at the right levels to be effective. Research has shown that for the best results, supplements need to provide effective and available levels of essential minerals, vitamins and trace elements, plus biotin at a consumption level of 5mg/hd/day and zinc consumption of at least 80mg/hd/day, with a large component of that zinc in organic form.[1]

These ingredients are expensive, especially when included at the levels that have been shown to yield results. The most expensive inputs are ones that don't work, so if there's a cheap hoof health supplement out there, it is probably too good to be true.

StockMins-Hoof n Horn is a high-specification, weatherproof, loose-lick supplement specifically designed to be fed to livestock to assist in hoof damage and repair, fortify hooves and boost immunity during times of high production and stress.

On top of essential minerals, vitamins and trace elements, **StockMins-Hoof n Horn** provides sheep with 5mg of biotin and 143mg of zinc per day (including organic zinc), which has been proven to improve hoof health since being launched by AusFarm Nutrition Products over 15 years ago.

StockMins-Hoof n Horn is not just a hoof health supplement, as hoof issues are commonly associated with lambing ewes, **StockMins-Hoof n Horn** is also a highly effective lambing supplement, containing all the same ingredients as our popular lambing supplement, **StockMins-EweLamLac**.

For more information on how **StockMins-Hoof n Horn** can help boost your flock performance this season, call the team at AusFarm Nutrition Products today.

References

1. Bampidis V.A, Lymberopoulos A.G, Christodoulou V and Belibasaki S. Impacts of supplemental dietary biotin on lameness in sheep. Animal Feed Science and Technology 134 (2007) 162-169.

Sheep Nutrition News

A SMALL CHANGE DURING LAMBING CAN INCREASE PRODUCTION BY 30%

It's commonly known and widely reported that birth weight is the largest determinant of lamb survival and that foetal growth, milk production and lamb performance are all strongly linked to pre- and post-natal ewe nutrition.[1,2]

Key Points

- Lamb survival and production are closely related to ewe nutrition
- The drivers of lamb survival also increase lamb growth
- Supplementing ewes with **StockMins-EweLamLac HE** has been shown to boost lambing performance by 30% compared to CLS
- In today's market, a 30% increase in production could mean $40 per ewe

Focusing on improving ewe nutrition pre- and post-lambing can increase lamb survival and average lamb growth rates at the same time. This means that you can wean more lambs and wean at a higher average weight. This is how you can achieve a 30%, or even greater, increase in lamb production.

As an integral part of lambing nutrition, correcting common perinatal deficiencies in ewes with an effective mineral, vitamin and trace element supplement, like **StockMins-EweLamLac HE**, can improve energy utilisation and immunity, boost foetal development and milk production and reduce lambing stress. In doing so, this can have a significant impact on lamb survival, growth and development.

This concept was very well illustrated in a recent independent study comparing single-bearing ewes supplemented with Causmag (MgO), lime and salt to ewes supplemented with **StockMins-EweLamLac HE** pre- and post-lambing. In this study, ewes supplemented with **StockMins-EweLamLac HE**: Lambing Supplement for Sheep weaned 3.3% more lambs with an average weaning weight of 6.1kg heavier – A combined 30% more lamb production at weaning.[3]

StockMins-EweLamLac HE is a weatherproof, granular loose-lick supplement designed to support pregnant and lactating ewes by correcting deficiencies in essential minerals, vitamins and trace elements at times when these elements are in high demand.

StockMins-EweLamLac HE Trial Summary[3]

Purpose: Compare the lambing and weaning performance of single-bearing Merino ewes supplemented with StockMins-EweLamLac HE (ELL) versus a commonly used, traditional mix of 1:1:1 Causmag, lime and salt (CLS).
Class of Livestock: Merino ewes producing Merino lambs.
Number of Livestock: Control Flock (CLS) 228 ewes. Trial Flock (ELL) 197 ewes.
Feed on Offer (Average): CLS - Lucerne 750kg/ha DM. ELL - Lucerne 702kg/ha DM.
Supplementation Period: A total of 98 days (4 weeks pre-lambing, 6 weeks lambing, 4 weeks post-lambing)
Feeding Method: Free access in clean tubs (20L drums cut in half). 1 tub per 50 ewes.
Key Dates: Scanning (15/1/2016). Lamb Marking (10/6/2016). Weaning (15/7/2016).
Data Collection: Live weight of all ewes at scanning, lamb marking and weaning. Live weight of lambs at lamb marking and weaning. Number of lambs weaned

Results

The compounding effect of more lambs and heavier lambs

- **Total lamb production per 100 CLS-supplemented ewes**
  92.1 lambs weaned x 24.1 average lamb weaning weight = 2,220kg of lamb lwt
- **Total lamb production per 100 of ELL-supplemented ewes**
  95.4 lambs weaned x 30.2 average lamb weaning weight = 2,881kg of lamb lwt
  Difference = 2,881 – 2,220 = 661kg lwt
  Ewes supplemented with ELL produced 29.7% more lamb at weaning.

29.7% greater production means $40 more revenue per ewe

- In today's market restocker lambs sell for more than $6/kg lwt
- 100 CLS supplemented ewes would return = $13,320
- Average return per ewe = $133.20
- 100 ELL supplemented ewes would return = $17,286
- Average return per ewe = $172.86
- Net benefit of ELL over CLS per ewe = $39.66

What's the catch?

The catch is that you supplement pregnant and lactating ewes with StockMins-EweLamLac: Lambing Supplement for Sheep, and that you follow the recommended supplementation program.

- 4 weeks pre-lambing + Lambing Period + 4 weeks post-lambing.
- A cost of around $6/hd for the full program or 7 cents/hd/day.

References

1. Roca Fraga FJ, Lagisz M, Nakagawa S, Lopez-Villalobos N, Blair HT, Kenyon PR. Meta-analysis of lamb birth weight as influenced by pregnancy nutrition of multiparous ewes. J Anim Sci. 2018 May 4;96(5):1962-1977.
2. G.E. Banchero, J.T.B. Milton, D.R. Lindsay, G.B. Martin, G. Quintans. Colostrum production in ewes: a review of regulation mechanisms and of energy supply. Animal. 2015; 9(5):831-837.
3. StockMins-EweLamLac HE Trial - Data on file.

Cattle Nutrition News

GRASS TETANY ALERT! - GRASS TETANY IS LOOKING TO RESURFACE AGAIN IN 2026

Key Points

- Grass tetany is one of the leading causes of cow mortality in southern Australia
- It is caused by low blood magnesium due to a misalignment of supply and demand in lactating cows
- Potassium (K) reduces the absorption of magnesium (Mg) into the bloodstream
- Effective control of grass tetany involves providing bioavailable forms of magnesium

It's fantastic to have a genuine winter in many parts of southern Australia, with a late autumn break bringing reprieve to a dry summer. So far, warmer-than-normal conditions have kept pasture growing well into winter; however, as we get further into winter, the combination of cooler daytime temperatures, lactating cows, and lush green feed increases the risk of grass tetany.

Grass tetany (hypomagnesaemia) is one of the leading causes of mortality in adult cows in south-eastern Australia and is estimated to cost $13.7 million in lost production annually.[1]

The winters of 2021 and 2022 were two of the most challenging grass tetany seasons on record, with some regions in southern Australia reporting cattle losses in the thousands.

Due to increasing reports of grass tetany, and as we approach the high-risk period, we believe that it is a good exercise to return to the basics, understand the disease, and adopt proactive grass tetany risk-mitigation measures when managing cattle grazing lush green feed throughout winter.

Causes of grass tetany

Although grass tetany is caused by low concentrations of magnesium (Mg) in the blood, it is important to understand the underlying cause. There is a common belief that low levels of Mg in feed is to blame. This is true to an extent, but it's missing a key part of the story. Low blood Mg, in most cases, is caused by the misalignment of Mg ingested in feed and absorbed in the rumen and the amount of Mg used in the body and lost through milk. As Mg is continually drawn from lactating cows into the calf, it is important to secure adequate supplies to replace that which is lost. In many cases, growing green winter pasture contains enough Mg to satisfy lactation; however, two similar interactions between Mg and potassium, one within the rumen and the other in the soil, limit the availability of Mg to the animal.

Interactions within the rumen

Potassium (K) has an antagonistic relationship with magnesium, where a high concentration of K in the diet can interfere with the major sites of magnesium absorption. As a result, high levels of K reduce Mg absorption into the bloodstream and therefore its ability to be used by the animal (See fig 1).

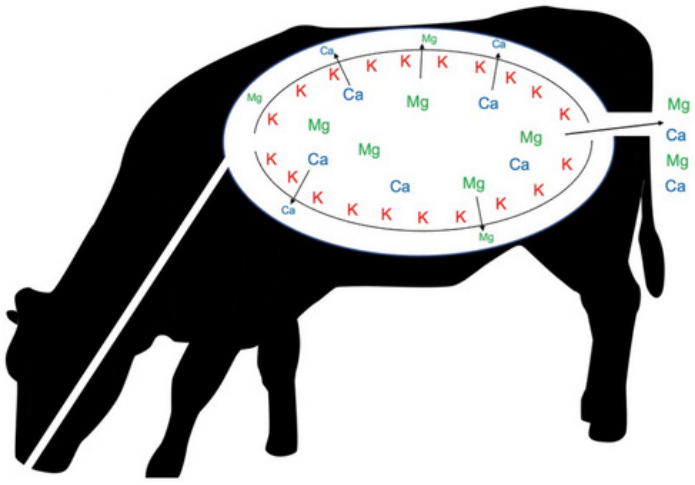


Figure 1: Interactions between Mg and K in the rumen

Interactions in the soil

Similarly, studies of interactions between Mg and K within the soil have revealed that K also has a negative impact on magnesium absorption by the roots. The same impact can also be seen in balanced K soils on wet, cold days, where pasture growth significantly slows. In these circumstances, the concentration of K builds around the roots of the plant, replacing the Mg (see fig 2). As the wet and cold days continue with limited plant growth, the concentration of K continues to build. It is the following warm, sunny day when grass tetany issues are realised. This is because when the plant begins to grow, it absorbs a high concentration of K, which then impacts Mg absorption in the rumen.

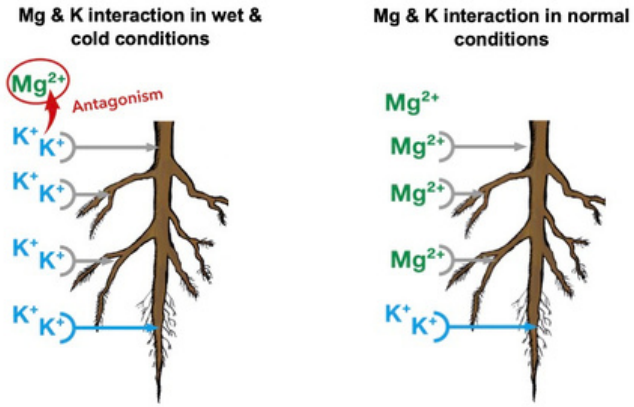


Figure 2: Interactions between Mg and K in the soil

Prevention and control

Management strategies should aim at preventing grass tetany rather than treating the disease. Acute forms of the disease are rapid, and death is often the first observed symptom. Successful prevention of grass tetany involves a multi-factorial approach that aims at:

- Allowing animals access to continuous supplies of adequate levels of effective magnesium
- Maximising absorption of magnesium in the rumen by delivering highly available sources of magnesium that can flood the sites of absorption and easily enter the bloodstream
- Offering an available magnesium supplement well ahead of the danger period to give animals time to adjust to the supplement and elevate the mineral status of the animals before a challenge
- Identifying agronomic practises that can reduce absorption or interfere with normal magnesium metabolism, e.g., application of potash or urea and feeding dual-purpose forage cereals to lactating cows.

Magnesium supplementation should be delivered daily, as most magnesium is stored within the bones and, unlike calcium and phosphorus, is not easily accessed to correct dietary deficiencies. Furthermore, daily obligatory losses associated with maintenance (3mg/kg LW) and lactation (120mg/kg of milk) can quickly cause a significant deficiency when dietary magnesium supply is limited.

Supplying a supplement with highly bioavailable magnesium is the most common and efficient method used to meet daily requirements.

The source of magnesium is important for maximising the availability of magnesium to the animal.

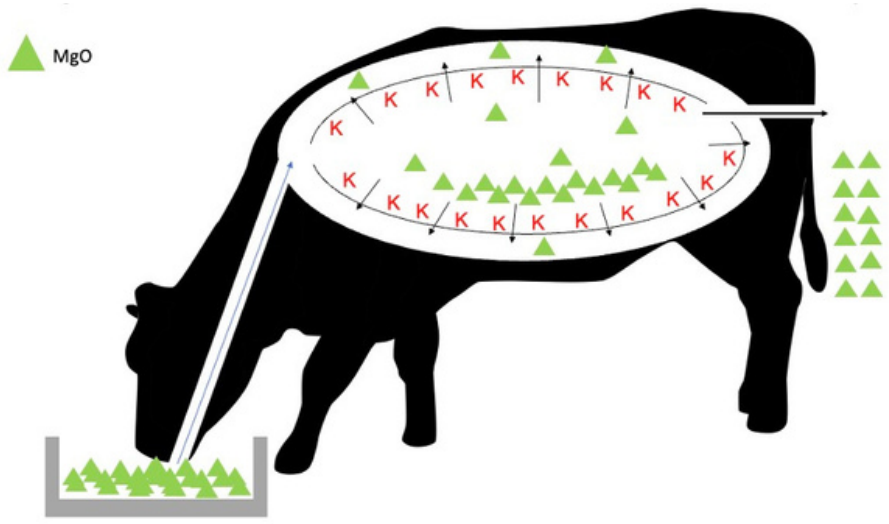


Figure 3: Magnesium oxide is less available than other sources of magnesium

Although MgO (Causmag) has a high concentration of magnesium (around 50%), MgO is not very soluble and bioavailable in the rumen. Furthermore, the low palatability of MgO can also impact consumption; therefore, the effectiveness of this form of supplementation.

ANP's magnesium products, **StockGro-HiMag** (a molasses-based liquid feed supplement), **BoviMag** and **BoviMag Plus** (highly palatable loose-lick supplements), contain multiple, highly available sources of magnesium, including MgSO4, MgCO3 and MgO. This blend ensures that the magnesium consumed is highly available to the animal and quickly absorbed into the bloodstream, thus rapidly correcting deficiency.

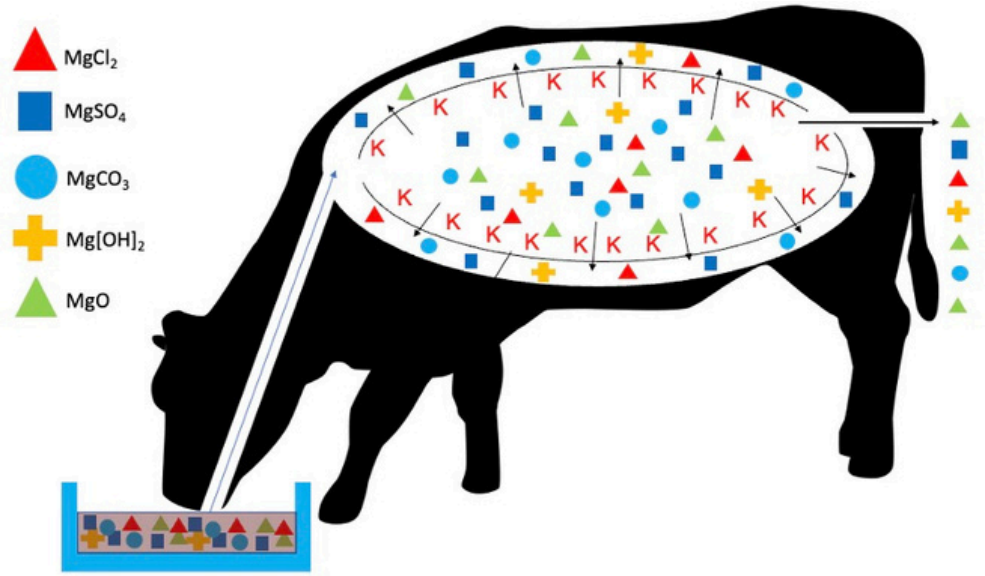


Figure 4: StockGro-HiMag for optimising magnesium absorption

Where farm history and prevailing conditions suggest a high magnesium challenge, **StockGro-HiMag**, **BoviMag** and **BoviMag Plus** supplements are highly effective in cattle. These supplements not only deliver a continuous supply of available magnesium in the form of soluble salts to increase absorption across the whole gastro-intestinal tract but are also fortified with acid salts to encourage magnesium mobilisation and availability, a complete blend of trace elements and the option for the addition of Bovatec®.

It should be noted that sodium is also key to magnesium absorption, and many fast-growing cereal crops are very low in sodium. Salt is an integral part of all of ANP's mineral supplements.
ANP's **HiMag** range not only reduces the risk of grass tetany but also boosts feed efficiency, live weight gain and milk production.

AusFarm Nutrition grass tetany prevention products

- **BoviMag**: A palatable granular loose-lick supplement containing 9.5% available magnesium from multiple sources to enhance metabolism, boost growth and prevent the onset of magnesium deficiencies such as grass tetany.
- **BoviMag Plus**: A palatable granular loose-lick supplement containing 9.5% available magnesium from multiple sources to effectively prevent the onset of magnesium deficiencies such as grass tetany. Bovatec is also added to boost liveweight gain and lactation.
- **StockGro - HiMag**: A molasses-based liquid feed supplement containing 3.5% available magnesium to enhance metabolism and prevent the onset of magnesium deficiencies such as grass tetany.

If you would like more information regarding our products, please contact one of the team at ANP.

References

1. Priority list of endemic diseases for the red meat industry – 2022 update. Meat and Livestock Australia, 2022.

Cattle Nutrition News

PROACTIVELY MANAGE BLOAT AT NO COST

Key Points

- Bloat accounts for a high cost to producers annually
- Bloat-controlling actives work in different ways; some are more effective than others
- A combination of actives with different actions can provide high efficacy
- BoviBloat Plus is a dual-active supplement that can help manage bloat and cost you $0

Savvy cattle producers who proactively manage bloat are seeing production gains that not only offset the cost of bloat and its treatment but also deliver additional financial returns.

Bloat is estimated to cost southern cattle producers $49.6 million annually in production losses and control.[1] Although $15.2 million of this is spent on bloat prevention, with varying efficacy, ANP are confident in a highly effective solution to bloat, which also has been shown to boost live weight gain on green feed by up to 14%. At today's cattle prices, 14% extra production more than accounts for the cost of the bloat control itself.

Common bloat-reducing active ingredients

Bloat is a complicated metabolic disease with many environmental and internal variables that contribute to its onset and severity. Although there are different actives that have been shown to reduce the incidence and severity of bloat, some do this through very different modes of action.

Ionophores (Bovatec® and Monensin) reduce bloat by changing the microbial population in the rumen to decrease methane production and, in addition, offer a significant performance response.[2]

Surfactants like poloxalene (Teric) reduce bloat by actively breaking down stable foam within the rumen and enabling the gas to be expelled through the cow belching.[3,4]

A combination of actives can do both at the same time

The combination of each active is believed to reduce bloat development at the same time as breaking down the build-up of stable foam. This can only be provided by **BoviBloat Plus**.

BoviBloat Plus is a weatherproof loose-lick supplement that is designed to provide cattle grazing green feed with a full effective dose of poloxalene in combination with Bovatec® to help reduce bloat through two different modes of action – reducing gas produced and actively dispersing foam.

What if your bloat treatment also increased liveweight gain?

In addition to a registered bloat claim, Bovatec® has production claims[5] including:

- Aiding in the improvement of milk production in cows fed high-protein pastures
- Improves liveweight gain and feed conversion efficiency in growing cattle, and
- Controls clinical signs of coccidiosis

Particularly related to growing cattle, trials on Bovatec® have shown to increase liveweight gain in livestock grazing green feed by up to 14%.[6]

Although 14% extra growth may not seem like much, 140g/day extra on a steer growing at around 1kg/day equates to around 66 cents. This more than pays for the product that costs around 42 cents/hd/day.

Don't wait to lose cattle to bloat. Get **BoviBloat Plus** out in front of your cattle now and reduce your bloat risk this winter and spring while your animals stack on the weight.

References

1. Priority list of endemic diseases for the red meat industry — 2022 update
2. Meta-analysis of the effects of monensin on growth and bloat of cattle on pasture
3. Cattle Handbook: Pasture Bloat Prevention and Treatment
4. Evaluation of two supplements for the prevention of alfalfa bloat
5. Bovatec label
6. Zoetis Data on File