



x  zelit[®]

Optimised Transition Feeding

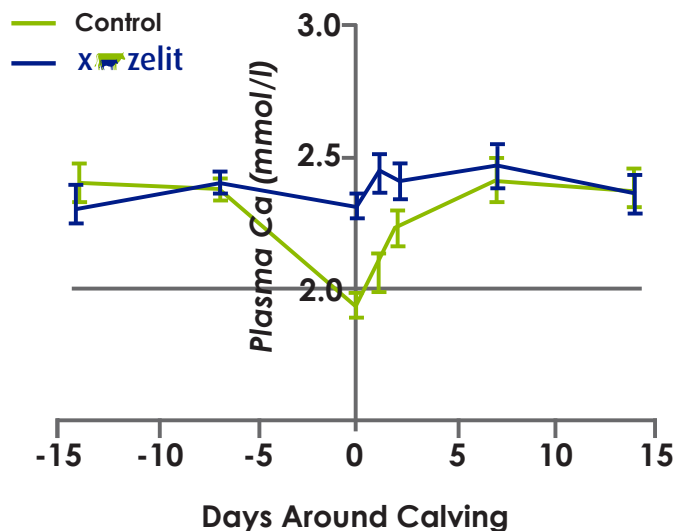
 x-zelit  @x_zelit www.x-zelit.com

 **HARPERS
FEEDS**
Focused on nutrition

X-Zelit[®]

Optimised Transition Feeding

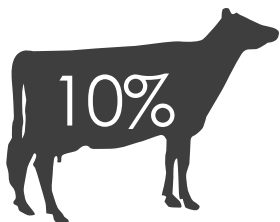
The benefits of X-Zelit[®] go far beyond milk fever prevention. Best of all it's simple, effective and improves profitability. X-Zelit stimulates the cow's own hormonal system to allow better control of calcium throughout the transition period - the benefits of which are detailed throughout this booklet.



X-Zelit[®] is a granular feed supplement, which binds the calcium from the diet in the small intestine.

X-Zelit®

Inside this brochure we've put together a great selection of articles, testimonials and case studies showing how X-Zelit® can benefit your herd.



Clinical milk fever is currently running around **10%** in UK dairy herds.



Subclinical milk fever can affect up to **75%** of the herd.



Cost of milk fever **£209** per incidence.



Cost of retained fetal membrane **£265** per incidence.



Displaced abomasums at **£500** per incidence.



Cost of metritis **£132** per incidence.

X-Zelit[®]

Optimised Transition Feeding

Benefits for the herd

- Reduced cases of milk fever and sub-clinical milk fever
- Better quality of colostrum
- Better calf health
- No hassle of calcium boluses and injections having to be used
- Effective, even on grass-only diets

Benefits for the Farmer

Simple

- Gives protection from milk fever and sub-clinical milk fever
- Easy to feed
- No need for urine pH testing as with DCAD systems
- Not affected by changes to forage

Effective

- Cows have more energy post-calving
- Increases the cows appetite
- Calving is quicker with fewer problems
- Gives you more time to get on with other jobs

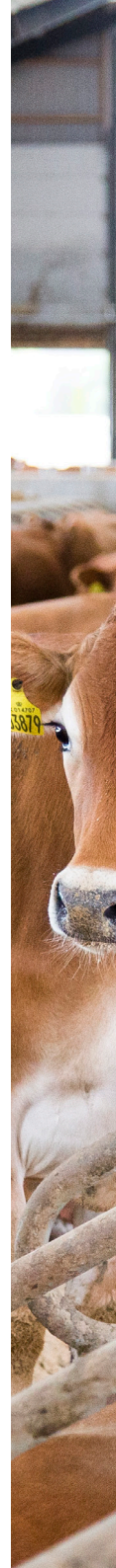
Profitable

- Less metritis and retained cleansings
- Reduced calving interval

Metabolic Disorder Calculator

Based on a herd of 250 dairy cows

| DISORDER | Example Farm No. Cases | Cost/Case (£) | Example Farm (%) | Target |
|--|---------------------------|---------------|---------------------|-----------|
| Milk Fever | 14 | 210 | 5.6% | 1% |
| Sub Clinical Milk Fever | 100 | 85 | 40% | 5% |
| Retained Foetal Membrane | 20 | 265 | 8% | 2% |
| Metritis | 50 | 132 | 20% | 7% |
| Left Displaced Abomasum | 15 | 500 | 6% | 1% |
| Ketosis | 28 | 120 | 11.2% | 2% |
| Annual Total Cost (£) | | | £34,200 | £7,072.50 |
| Annual Cost of X-Zelit Treatment (£) | | | £4,721 | £4,721 |
| Potential Herd Margin Increase (£) | | | | £22,337 |
| Potential Margin Increase per Cow in herd (£) | | | | £89.35 |



Feeding Requirements



X-Zelit® Form: Granular
Amount per cow per day: 0.5kg.
Feeding Instruction: Mix in TMR or top dress with concentrate.
Bags & Delivery: 25kg bags.



MF Eliminator Form: Blend
Applications: High quality protein and energy to meet pre-calver requirements in a blend form.
Amount per cow per day: 2.5kg.
Feeding Instruction: Top dress or feed in trough.
Bags & Delivery: 25kg bags.



MF Eliminator
Form: 6mm nut or 12mm roll
Applications: High quality protein and energy to meet pre-calver requirements in a pelleted form.
Amount per cow per day: 2.5kg.
Feeding Instruction: Top dress or feed in trough.
Bags & Delivery: 25kg bags.

Do's & Don'ts

- **Do** feed the full rate
- **Do** feed for 14 days
- **Do** make sure cows can access it when feeding
- **Don't** continue to feed after calving
- **Don't** feed less than the recommended amount
- **Don't** feed for a shorter period than stated



Milk Fever

Clinical milk fever incidence is currently running close to 10% in UK dairy herds. It's costing approximately £200 per cow, while subclinical milk fever can affect up to 75% of the herd, it's unrecognisable and generally remains untreated

Milk fever - both clinical and subclinical, occurs when a cow calves. Calving is probably the most stressful time in a cow's life; she will be changing environment, diet and groups all at the same time, as well as undergoing a massive physical challenge. Milk fever incidents also increase with the number of lactations.

That's not all. Cows suffering from milk fever are between four and nine times more likely to suffer from a miscellany of other metabolic disorders, many of which are related to each other. They each come with a significant price tag, not only in treatment and vet costs, but also with losses from future milk and fertility delays.

Treatment

Intravenous calcium will give a quick response to a clinical case and often save a cow's life however, it doesn't reduce the problem; IV calcium, may cause fatal cardiac problems and perhaps more significantly, shut down the cow's own ability to mobilise the calcium she requires at this critical time. Cows treated with IV calcium often suffer a hypocalcaemic relapse 12 to 18 hours later.

Subcutaneous and oral calcium supplementations can be given around calving but are often not given as required and there is only a small amount of absorption. Energy drenches can be used to provide a quick response to energy deficiency. Neither of these offer a preventative effect and both are poor for reducing subclinical hypocalcaemia.

During the final six to eight weeks of pregnancy, most dry cow diets contain more calcium than is required, consequently the cow is only passively absorbing calcium. However, at calving there is a sudden demand for calcium for colostrum production and also for muscle contractions relating to calving and udder function, and the required level simply cannot be met by passive absorption alone.

Active calcium absorption and mobilisation is required, yet it takes between 24 and 48 hours for her to change to active absorption, consequently there is always a drop in calcium levels around calving.





Prevention

Since both clinical and subclinical milk fever and consequential metabolic disorders are mainly related to the cow's diet, the challenge is to maintain her feed intake and rumen balance around, and shortly after calving. However, it is important to manage the cow carefully during the entire dry period to minimise fat deposition in the liver and maximise liver health. This also improves ovarian development for the next lactation and fertility cycle.

1. Maintaining cow condition is critical:

Target condition score 3 at drying off and calving will prevent fat being laid down inside the cow, particularly in her liver. Otherwise it will reduce her ability to control her own mineral balances, in particular calcium. During the dry period, target feeding 9MJ/kg ME with a 12kg DM intake.

2. Achieving the correct calcium balance around calving:

Various preventative measures have been tried and tested including the following two options:

- A new prevention strategy featuring X-Zelit[®], a calcium binding additive containing synthetic zeolite - a product initially designed to reduce the build-up of limestone from hard water in washing machines. Since then, X-Zelit[®] has been developed to bind calcium from the diet during the two weeks prior to calving. X-Zelit[®] has officially trialled in herds in Denmark. The additive stimulates the cow's hormonal system to actively absorb and mobilise calcium to ensure she is fully 'fired up' at the time of calving. Cows are subsequently more energetic; have higher feed intakes; and are 'ready to go'. Consequently, they are less likely to fall in to energy deficit and to suffer fewer metabolic issues.
- DCAB diets work reasonably well. However, they require good management and monitoring and are not suitable for all farms. They can also reduce appetite at this critical time.

3. Paying attention to detailed feed management:

Housed dry cows should be stocked at approximately 75% normal rate, ideally 10m² for the average Holstein cow. At least 80cm trough space should be provided per cow with food pushed up at least four times per day.

X-Zelit[®] FAQs

We have compiled some answers to some frequently asked questions

What is it?

A synthetic zeolite which is an aluminosilicate, an absorbent.

How does it work?

X-Zelit[®] reduces the quantity of available calcium from the cow's feed in the small intestines. The cow then utilises her body's calcium resources which reduces the risk of calcium levels dipping at calving, a period when demand increases.

Any side effects? None.

Is it cost effective?

Definitely. Not only will you reduce losses from milk fever and other metabolic disorders, it also drives intakes and, therefore, fertility, and production. Even with a lower milk price, the cow reliably gets going better. X-Zelit[®] should continue being fed to the cows two weeks prior to calving to ensure maintained milk and fertility post-calving.

Can I feed it with any type of forage?

Yes, but you'll see best results with grass silage in the diet.

Does it work with a high straw diet?

Yes, as it still helps with calcium balance from the rest of the diet.

If it blocks calcium, what else does it block?

Inorganic phosphorous temporarily decreases slightly, but if other minerals and vitamins are supplemented at a normal level, we've not found any issues.

What happens if the cow is fed X-Zelit[®] after it calves?

The calcium continues to be bound so it can potentially cause milk fever.

How does it compare to DCAD diets?

Do I need to measure pH?

It is a lot simpler than DCAD diets. Changes in forage do not alter the effectiveness of the X-Zelit[®]. pH does not need to be measured in urine as we are not trying to balance anions. The X-Zelit[®] system is much simpler and much more flexible.

Is it the same as DCAD?

No, DCAD works by balancing anions and can be affected by the diet. X-Zelit[®] actually binds the calcium, causing a low calcium effect and is therefore not affected by the diets fed.

Can I feed it at a lower rate for longer?

It has to be fed at 500 grams per head to ensure enough calcium is bound out of the diet for full efficiency; lower doses have been tried but have not been as successful.

I can't manage a 2 week close up diet is that a problem?

The product can be fed safely for longer, but this increases the cost without any extra benefits.

I don't get milk fevers and a low % held cleansings but metritis is an issue, will it help?

Yes, because the cow is in the same hormonal state after calving as she is pre-calving. She's driven to want to eat straight after birth. Intakes are therefore higher, giving more energy, which helps reduce metritis.

Do I need to feed dry cow minerals?

Yes, adequate mineral and vitamin supplementation should be supplied as X-Zelit[®] does not provide minerals/vitamins unless using MF Eliminator.

From a Vet's perspective

Vet's are seeing the benefits of X-Zelit® by improving cow health in the transition period



Penbode Farm Vets

Andy Stokes BVSc MRCVS
Penbode Farm Vets
Holsworthy
Devon

We describe milk fever as a gateway disease as it can lead to so many other problems; retained cleansing, whites, mastitis, displaced stomach, impaired fertility; the list goes on. There is a huge cost attached to all of this. For every clinical case seen, there are several subclinical cases; less obvious, but even more costly to the herd as it affects more cows. It is for this reason that I make sure that all my dairy clients take control of their pre-calving nutrition to prevent milk fever.

I have a number of dairy clients using X-Zelit® to really good effect. It is simple and reliable to use, unlike many other prevention strategies. They have seen vast improvements in cow health through the transition period and beyond, and some have forgotten what milk fever is!



X-Zelit[®] Testimonials

We know that X-Zelit[®] has benefits beyond milk fever prevention, but don't take our word for it, read what the farmers using it have to say!



170 Holstein Cows

RJ & DE Pomeroy Ley Farm Bradworthy Holsworthy Devon

Roger (centre) and Wayne Pomeroy calves 170 Holsteins a year on their farm in Bradworthy, Devon. The herd currently averages 9000 litres and calves in two blocks August to November and January to April. They are grazed heavily and supplemented with grass silage, wholecrop, maize and parlour fed to yield.

The Pomeroy's have just started calving the eighth block of cows since the introduction of MF Eliminator into the dry cow transition diet and in Roger's own words "I wouldn't calve cows on my farm without it"

Richard Waters (Ruminant Feed Specialist at Harper Feeds) explains that the key to keeping tight calving blocks is a smooth transition with no metabolic problems so cows calve with an aggressive appetite to raise to peak yield as quickly as possible and get back in to "Positive energy" to cycle and conceive.





165 Jersey Cows

B & J Ravenhill-White
Great Blakewell Farm
Umberleigh
Devon

Bruce and Jenny Ravenhill- White from Great Blakewell Farm milk 165 Jerseys who as a breed are notorious for both clinical and sub clinical cases of milk fever. Bruce used Harper Feeds MF Eliminator and commented " I've tried many milk fever remedies over the years with no success X-Zelit® is the only product I have used that has actually worked"

Contact your X-Zelit merchant:



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