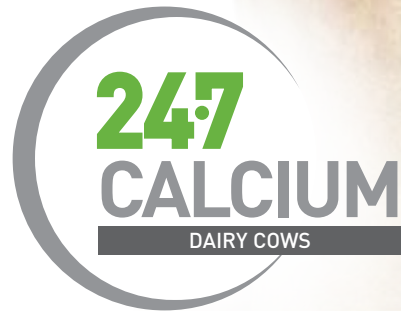




WORLD LEADERS
IN BOLUS
TECHNOLOGY



MILK FEVER - REDUCE THE RISK WITH CALCIUM BOLUSES...



**FAST
ACTION**

50 minutes from
administration

**SLOW
RELEASE**

A 2 bolus regime, equals
24 hour cover

**NATURAL
CALCIUM**

Cow's own reserves
remain mobilised



MILK FEVER

With increased demand for cows to produce more milk, cows are under increasing pressure at both the pre and post stage of calving.

Milk fever or hypocalcaemia, is a disorder caused by low blood calcium levels. Milk fever occurs because the cow has an imbalance between her demand for calcium and her ability to mobilise her own calcium reserves quickly enough, so she can go into 'negative calcium balance' for a time. If she gets into this state milk fever develops.

ISSUES & FACTS

CLINICAL MILK FEVER

affects **5 to 7%** of cows in the first one to two days after calving. Clinical milk fever can have a rapid onset within **4 hours** of calving, and if left untreated can result in the death of the cow within **10-24 hours**.

Symptoms include:

- Cold extremities
- Low temperature
- Poor appetite
- Unsteadiness on their feet and the inability to stand

SUB-CLINICAL MILK FEVER

affects up to a further **60%** of cows post calving. Sub-clinical milk fever is **harder to detect**. Signs of sub-clinical milk fever post calving include:

- Calcium levels just below “normal” levels
- Poor health and productivity

OTHER ASSOCIATED ISSUES

- Calving difficulties
- Retained membranes (cleansings)
- Metritis
- Displaced abomasums (DA)
- Reduced feed intakes – energy related disorders such as, fatty liver or ketosis
- Reduced milk yield
- Fertility

All animals are susceptible to milk fever, but some are at **greater risk**:

- Cows with a history of milk fever
- Channel Island breeds, such as Jerseys
- 2nd lactation cows and older
- High yielding cows
- Cows with a high body condition score > 3.5 BCS

Milk fever is preventable to a large degree when the herd has a dedicated transition cow management plan.

The table below sets out the costs and contributory difficulties of conditions associated with milk fever:

MILK FEVER

- 8% of cases die
- 12% of affected cows are culled
- Average milk loss is 500 litres

Average cost per case is

£230

DISPLACED ABOMASUM

- 2% of cases die
- 10% of affected cows are culled
- Average milk loss is 380 litres

Average cost per case is

£400

RETAINED PLACENTA

- 1% of cases die
- 18% of affected cows are culled
- Average milk loss is 205 litres
- Discarded milk is 135 litres

Average cost per case is

£250

2

The rest of the body's calcium circulates in the blood stream

1

98% of the cow's calcium is stored in bones and is mobilised into the bloodstream when required

4

High calcium demand means calcium from bones needs to be mobilised into the blood stream

If this mechanism doesn't work effectively blood calcium levels will fall = milk fever. Intervention is required.



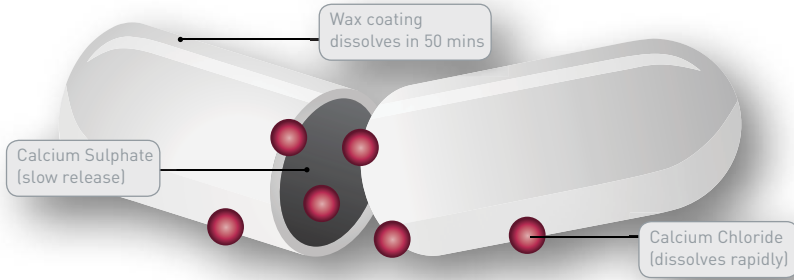
MANAGING THE PROBLEM

To get an idea of the magnitude of the problem for the modern dairy cow, the production of 10 kg of colostrum requires 23 g of calcium. A cow producing 25 kg of colostrum would have to replace her total blood calcium level every hour. Helping animals cope with 'the delay' in adjusting to this huge change in the demand for calcium by using slow release calcium boluses is now proving to be both popular and effective.

3

At calving blood calcium is diverted to the udder for milk production





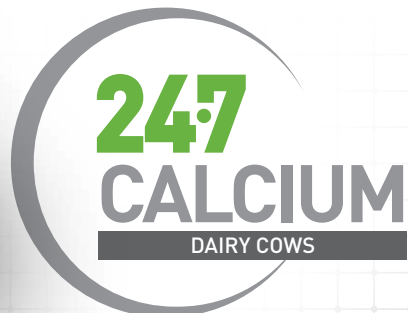
AGRIMIN 247 CALCIUM BOLUSES HOW DO THEY WORK?

A combination of academic and industry research is behind the design of Agrimin's 247 CALCIUM boluses, which dissolve within 50 minutes and quickly deliver 43 g of calcium to the rumen. Calcium is then released in two forms, calcium chloride and calcium sulphate, which is available over a 24 hour period. Furthermore, Agrimin 247 CALCIUM boluses have been designed to avoid the palatability problems associated with gels and pastes.

What is of critical importance with any supplementary calcium is that it does

not interfere with the innate control mechanism. The freshly calved cow will need to access both the supplementary calcium and her own mobilised reserves.

Agrimin 247 CALCIUM boluses ensure that the control mechanism remains active so that natural body reserves of calcium are available to the animal AND that the supplementary calcium from the bolus is effective within 50 minutes of administration and has an active life of up to 24 hours.



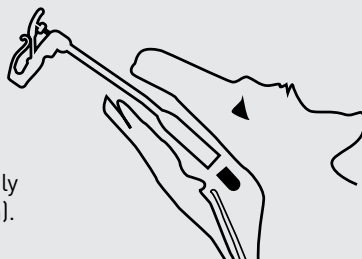
ADMINISTRATION

Pre and post calving regime: Administer one bolus per animal at the first sign of calving.

Follow up with a second bolus 12-15 hours later if necessary. On-farm recommendation - 'If she's got cold ears, she needs another bolus'.

Post calving regime: Administer one bolus immediately after calving (or after sub-cutaneous calcium injection).

Follow up with a second bolus 12-15 hours later if necessary. On-farm recommendation - 'If she's got cold ears, she needs another bolus.'



ALWAYS use Agrimin's cattle bolus Applicator C

AGRIMIN 247 CALCIUM BOLUSES EFFECTIVE IN PRACTICE

Emeritus Professor Jim Parkins, formerly Professor of Animal Health at the University of Glasgow and Director of the University Farm and Research Centre has been impressed with calcium boluses. After several milk fever fatalities, he started using Agrimin 247 CALCIUM on the Institute's herds with extremely positive results. He says:

"In the Glasgow herd, one adverse effect of our programme of genetic and nutritional improvement has been an increase in the incidence of hypocalcaemia and clinical cases of milk fever. As the individual milk yield increased so did the problem of metabolic disorders.

Administering a bolus is quick and easy - there are no excuses and so, as a result, there are fewer subsequent problems."

PRESENTATION

A 203 g bolus containing 43 g of calcium in two forms:

Calcium chloride and calcium sulphate.

Calcium chloride dissolves rapidly, calcium sulphate is slow release.

USES

Agrimin 247 CALCIUM boluses help to manage the calcium status of the herd during and after calving. The bolus dissolves and supplies calcium within 50 minutes of administration and has an active life of up to 24 hours.



LEGAL CATEGORY A Dietetic Complementary Feed for the reduction of the risk of milk fever in dairy cows.

FURTHER INFORMATION Agrimin 24:7 CALCIUM dissolves completely in the reticulo/rumen. The coating of the bolus protects against irritation of the epithelial surface of the throat and oesophagus. Furthermore, the bolus has a neutral taste, which makes it easy to administer.

