ASK YOUR VET

PERFORMANCEREADY.CO.NZ

Virbac

Shaping the future of **animal health**

GET YOUR HERD PERFORMANCE READY

1. Bates, A.J., Wells, M., Laven, R.A., Simpson, M. (2018). Effect of an injectable trace mineral supplement containing selenium, copper, zinc, manganese and chromium on health, and growth of dairy calves on four pastural dairy farms in New Zealand. June 2018. 2. Hawkins (2007). The Effect of Injectable Trace Elements (MULTIMIN®) on Health & Reproduction Parameters in NZ Dairy Herds; DCV Newsletter March 2007.

TRACE ELEMENTS

MORE THAN JUST GROWTH RATES

Deficiencies of trace elements have a long history in New Zealand, with names like white muscle disease, bush sickness and peat scours part of farming folklore. Thankfully, modern farming methods have largely consigned these devastating diseases to the past.

However, we now understand that trace elements have roles throughout multiple body systems, and that trace elements such as manganese, zinc and chromium are more important than previously thought.

While we've traditionally focussed on improving growth rates and milk production through supplementation, the focus is now on the less obvious (but equally important) gains in fertility and immunity that can be achieved.

30 Zn Zinc

- Reproduction/fertility
- Healthy feet/hooves
- Healthy skin/coat
- Spermatogenesis
- Cell division

29 Cu Copper

- Reproduction/fertility
- Reduced retained placenta
- Disease resistance
- Coat colour

34 Se Selenium

- Reproduction/fertility
- Reduced retained placenta
- Disease resistance
- Embryo survival

25 Mn Manganese

- Spermatogenesis
- Reproduction/fertility
- Embryo survival
- Ovulation
- Bone development

SUPPLEMENTING AT TIMES OF PEAK DEMAND

Most farmers have well-managed trace element programmes, and these work well for the majority of the year. However, there are times when the requirements for trace elements rapidly increase, often coinciding with reduced feed intake. When this occurs even well-supplemented herds can temporarily dip into a slight deficiency.

These periods of high demand often lead to higher levels of disease, and sometimes short-term drops in production, growth or fertility. Calving, mating, weaning, transport or early life are all good examples of high-stress periods where demand increases. As trace element levels decline immunity is often affected first - so for example increased levels of mastitis and calf scours are seen well before drops in milk production or calf growth.

Many farmers now recognise the need to supplement trace elements prior to these events, to maintain levels in animals and reduce the risk to health and productivity.

MULTIMIN®

- An injection containing copper, selenium, zinc and manganese
- Chelated formulation that is safe and tissue friendly
- Absorbed into blood within 8 hours and transferred to liver within 24 hours
- Scientifically proven in NZ conditions

Oral supplementation can be very effective for maintenance, but absorption through the gut can be slow, and complicated by interference from other elements in the diet. For many elements only a fraction of what is in the diet is absorbed – for example 1-10% of dietary copper is absorbed, and less than 1% of manganese.

Injectable trace elements provide rapid, targeted and sustained increases in animal levels, so are more suitable for use prior to a high demand period.

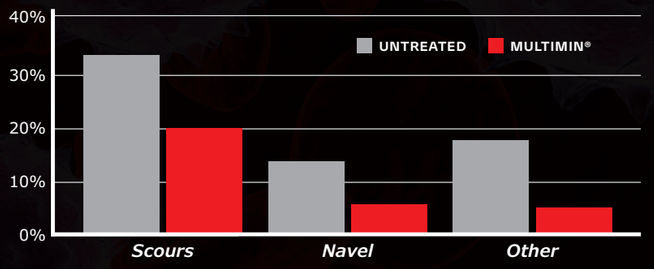
ENHANCING IMMUNITY

Trace elements are critical for immunity, and are used in large quantities when the body is under stress and the immune system is working harder. As trace elements are depleted the immune system becomes less effective, and disease more likely – just as we become more susceptible to the 'flu when stressed or during a cold and wet spell of weather.

Recent research on New Zealand farms has shown the potential immune effects of supplementing trace elements prior to a high demand period[1]. In this study calves from fully supplemented herds were injected with MULTIMIN®^ at birth, and/or day 35, and/or day 70. The greatest benefit was seen from treating at birth, as the highest levels of disease occur in the first few weeks of life. Disease was reduced by 52%, and death rates dropped by 58% in calves treated with MULTIMIN®.

As pressure on antibiotic use grows, products such as MULTIMIN® that are proven to reduce disease will become increasingly important.

Reduction in disease from 3-35 days of age after MULTIMIN® treatment in first 24 hours[1].



▼52%
REDUCTION IN DISEASE

▼58%
REDUCTION IN DEATHS

IMPROVING FERTILITY

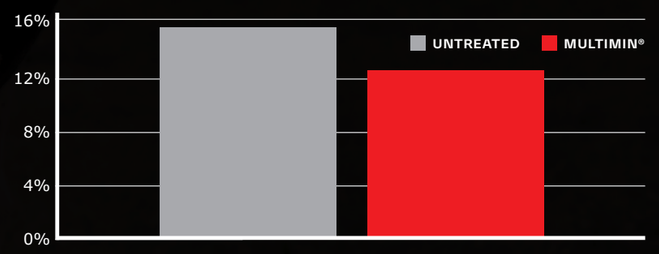
The reproductive system also uses many trace elements, with some of the roles only recently being discovered. For example, manganese protects the developing egg within the ovary, zinc helps to produce a healthy uterine lining and selenium is important for protecting a growing embryo.

A New Zealand study[2] has shown the benefit of supplementing with MULTIMIN® prior to calving and mating, even where blood and liver testing has not identified a deficiency. Treated cows got in calf 3.4 days earlier on average and had a 3.3% higher final in-calf rate.

Use of MULTIMIN® prior to periods of high demand has been proven on New Zealand farms. Large gains in calf health and reproductive efficiency make for extremely good returns on investment.

Improve the reproductive performance of bulls by injecting them at least 12 weeks prior to joining the herd, to improve semen quality and quantity.

Empty rates in untreated vs MULTIMIN® cows[2].



» 4:1 ROI

EST. AT $4.00/KGMS PAYOUT

» 3.4 DAYS

EARLIER IN CALF

HOW TO USE MULTIMIN®

DOSAGE

MULTIMIN® is administered as a subcutaneous injection in cattle and deer, at the below recommended doses.

CALVES	**up to 1 year**	**1 ml/50 kg**
CATTLE	**1-2 years**	**1 ml/75 kg**
CATTLE	**over 2 years**	**1 ml/100 kg**
DEER	**–**	**1 ml/100 kg**

WITHHOLDING PERIODS

No withholding period is required when used as directed.

PACK SIZES

MULTIMIN® is available in 200 ml packs (200 x 1 ml new-born calf doses), and 500 ml packs (100 x 5 ml 500 kg cow doses).

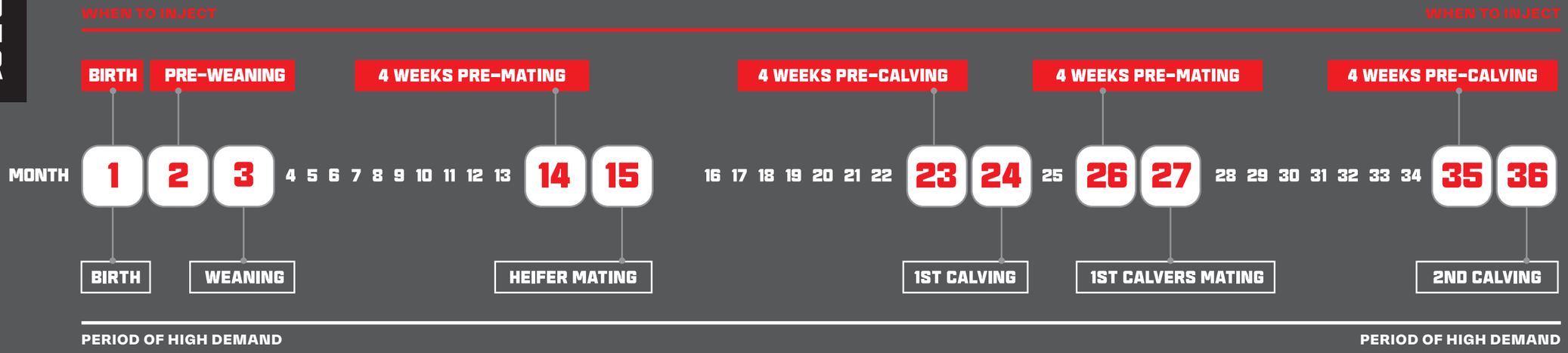
CONTRAINDICATIONS

Not to be used concurrently with any other form of copper supplementation. Do not administer to animals suffering from liver disease, fascioliasis or which have been grazing on plants which may cause liver disease. Do not use at the same time as any other selenised fertiliser, prill, or product without consulting a veterinarian. Do not exceed the stated dose. Do not administer to emaciated animals of body condition score less than 3/10.

The safety of MULTIMIN® when used concurrently with other veterinary medicines has not been established in deer. Therefore, MULTIMIN® should not be given at the same time as any other treatments, e.g. anthelmintics or vaccines, in this species.

Registered pursuant to the ACVM Act 1997, No. A9374.
See www.foodsafety.govt.nz for registration conditions.

RECOMMENDED ADMINISTRATION CALENDAR



General advice only. Contact your vet for more specific information or to develop a customised program.