MIXRITE

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Effectiveness of trace minerals for ruminants in wet conditions

Ever wondered if the level of rainfall affects how effective trace minerals actually are?

Recent US research (Wiebuschet al., 2015) from the university of Florida has demonstrated that rainfall certainly does have an impact on the efficacy of trace minerals in the animal's diet. The source of trace mineral makes a huge difference, for example whether it is of sulphate, organic or hydroxy chloride origin.

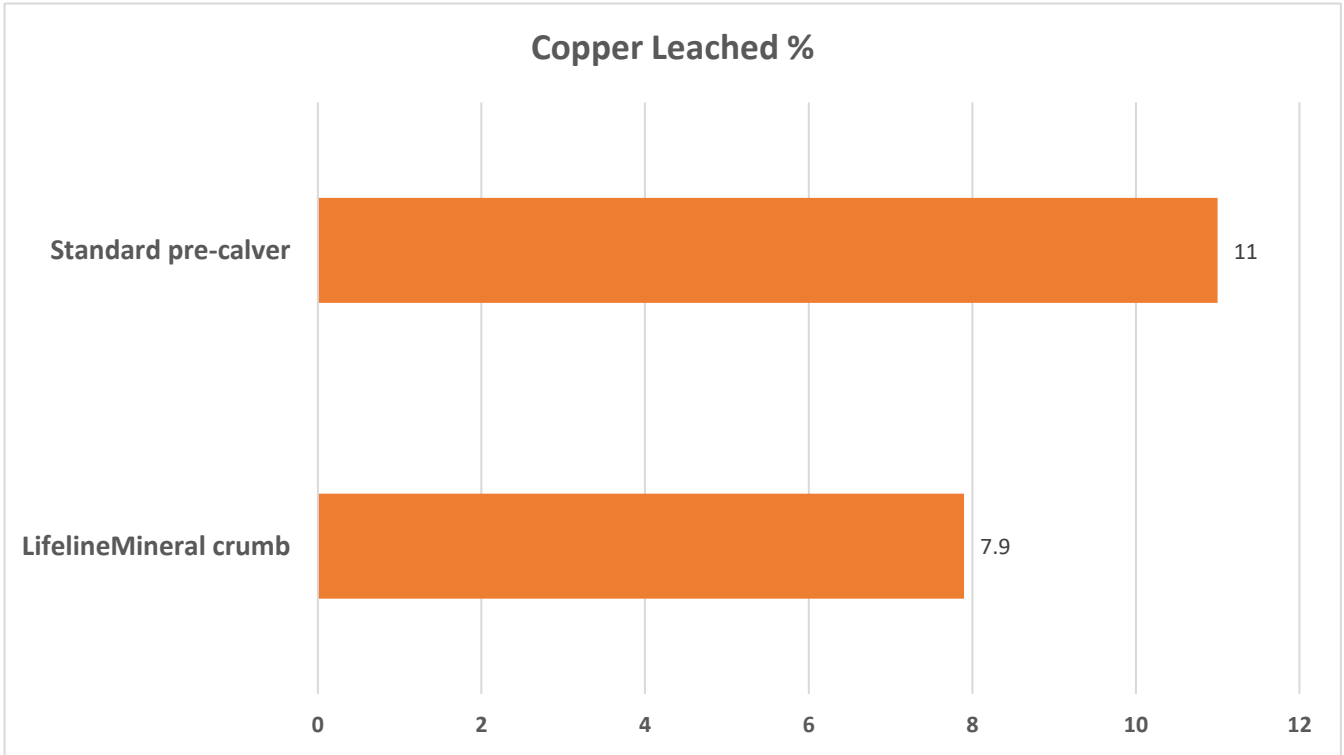
Trace minerals such as copper, zinc and manganese can clump together when exposed to heavy rain and later leach into the environment. This often takes place when a soluble trace mineral is used in the supplement e.g., Copper/zinc/manganese sulphates.

Using a less soluble trace mineral source is advisable to help prevent this from occurring e.g., hydroxy minerals are much less soluble due to their tightly bonded structure – this helps to protect the mineral in the feed and keeps it from separating until it reaches its destination within the animal. Increased bioavailability of the minerals increases the availability for metabolism.

When the comparison was made between mineral sources and rainfall levels – trial results illustrated both sulphate and organic trace minerals were greatly reduced compared to the losses seen by hydroxy-based trace minerals.

Uniblock uses hydroxy minerals within their products and can therefore withstand Irish weather better than others. Uniblock trialled and tested the amount of copper leached out of their lifeline mineral crumb which contains a 100% protected hydroxy copper source versus a pre-calver containing a copper sulphate source. Results are illustrated in the graph below. It is clear from the results that more copper was leached from the sulphate source compared to the hydroxy in this trial also.

Figure 1: Percentage of copper leached from a hydroxy source (Lifeline mineral crumb) versus a sulphate (Standard pre-calver)



Hydroxy minerals are also much more palatable compared to bitter tasting sulphate sources, this aids with better intakes in the animals promoting good health and better growth rates.

Good intakes are important for all stages in production, although it is especially important in growing animals such as calves to help them reach their full potential as they make their way through the production process. Increased feed stability (less interactions with other minerals and nutrients in the feed) is another benefit of using hydroxy trace minerals.

Most mineral supplements which are free access are generally for stock outdoors and therefore needs to be stable whatever the weather to allow for optimum intakes.