



Supplement your knowledge of supplements

compiled by Liza Bohlmann

Be open-minded enough to benefit from new information on supplements for dairy herds, but be careful of following supplement trends without sound knowledge of the pros and cons.

The first rule is to leave a professional job to the professionals, or at least to get an advisor on board when you plan to change a ration or add supplements. Animal feed nutritionists can help you balance rations, address mineral deficiencies or remedy chronic health, production and reproductive problems related to feed.

Of course it helps to know enough about nutrition to know when it is time to call in

the help of professionals. If you don't know that something is wrong, you will definitely not know that it needs fixing. It is therefore prudent to know the basics of nutrition and which supplements are commonly used for problems like lameness or milk fever.

Many websites offer valuable information on dairy herd nutrition, including those of Chemunique (www.chemunique.co.za) and

Alltech (www.alltech.com). There are also popular information websites like www.dairy-herd.com that might nudge your mind in the right direction.

On some of the sites you need to register to access the information, but this process is usually free. The web offers you access to interesting and relevant technical articles from a library with the latest innovative research. Read up on new and well-known products, as some 'new' products are sometimes similar, but not the same, as existing ones.

However, the proof is in the pudding and it remains for each farmer to find the perfectly balanced ration for his herd and individual cows.

Chromium comfort

Some ingredients in supplements sound intimidating, such as chromium methionine. However, fear not: in the right dosage and application, these have been shown to improve immune function and increase postpartum dry matter intake. It can also help improve milk production of early and mid-lactation cows fed silage and concentrates.

Feedstuffs that typically contain chromium (in parts per million found on average in dry matter):

Pasture	0,8
Wheat silage	2,2
Dehydrated alfalfa	0,2
Corn silage	2
Ryegrass	0,4
Barley	0,8
Corn	0,9
Wheat bran	0,6
Fish meal	0,6
Soybean meal	0,2
Brewer's yeast	1
Brewer's grains	0,2

The addition of the right dietary amount of chromium in the diet of stressed cows is also showing positive results. The natural chromium content of feed needs to be understood and before adding or changing any feed ration, the feed and water should first be analysed to make the right choice for a balanced diet.

Then there is also cobalt, which has beneficial effects on cows in early lactation.

Cobalt and the cow

Cobalt (Co) requirements seem to be dependent on the level of milk production, the non-fibre carbohydrate (NFC) content of the diet and the NFC source.

Feeding higher levels of supplemental Co to dairy cattle can realise the following benefits:

- Improved fibre digestion
- Improved vitamin B12 synthesis
- Higher milk production
- More efficient milk production

According to Zinpro Performance Minerals' position statement regarding cobalt as part of the diet of dairy cows, cobalt is an essential and unique trace element that is only required in the diets of ruminants for the synthesis of vitamin B12.

"The signs of a Co deficiency in ruminants include decreased feed intake, weight loss, fatty liver, anaemia and decreased immune status. The Co requirement amounts to 0,11 ppm DM. However, research conducted since publication of the Dairy NRC (2001) has indicated that this level of Co fortification may be inadequate for high production dairy cows."

In conjunction with the findings of your feed consultant, Zinpro recommends supplementing 12mg to 25mg of Co per head per day, which equals 0,6mg to 1,2mg Co per kilogram dry matter of the ration.

Mineral status

A carefully mixed cocktail of useful minerals and trace minerals can be highly effective. Products like Availa4 from Zinpro Performance Minerals combine and balance the benefits of zinc, manganese, copper and cobalt. Improving the trace mineral status of heifers through feeding the combination of trace minerals like this, can help dairy producers grow replacements that are less prone to health problems, are more efficient at converting feed to gain and have fewer claw lesions.

Because dairy replacement heifers generally do not generate revenue until after first parturition, the management and nutritional needs of heifers sometimes receive lower priority than those of the lactating cows.

However, taking care of heifers from an early age can turn them into better performing and more profitable animals.

Minimising health disorders of replacement heifers decreases mortality before first parturition and increases the likelihood that they will enter the milking herd on a trot.

With the right feed, care and supplements, the farmer can also lessen the incidence of respiratory diseases in calves, which has been correlated with decreased age at first calving.

Taking care of hoof health has its own benefits. Minimising the incidence of claw lesions in heifers has been shown to generally result in increased milk production during first lactation.

Quality check

It is prudent to keep good records and samples of any feed and supplements. Traceability is not only your responsibility in the food chain, but keeps you in the loop regarding quality feed additives.

With the issue of traceability currently dominating discussions in the agricultural sector; global animal nutrition company, Alltech has launched a rigorous quality control programme for its Bioplex range of organic trace minerals.

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The Q+ or Quality Plus programme will supplement the company's existing quality system, AQS (Alltech Quality System), which incorporates standards set by all major regulatory bodies.

The programme adopts a multifaceted approach, combining several different quality control measures, including the Bioplex quality measures developed over the last 18 years, which guarantee total chelation and mineral content.

Speak to your feed and supplement supplier about the right boost of mineral power for your herd and reap the huge benefits of only a few grains of trace minerals. [TDM](#)