"The most expensive mineral is the one that does not work"

Zeno Bester, Chemuniqué

The feedlot producer's main interest is to grow cattle efficiently, slaughter them and generate a profit. Feeding trace minerals to keep cattle in good shape with a shiny coat won't cut it. Let's consider the real need for trace mineral supplementation.

Lameness

Up to 70% of all cattle are slaughtered for non-performance and up to 16% of health problems recorded in the feedlot are due to lameness issues. The ADG of lame beef cattle is reduced by 5,5%.

Solution: Zinc is required for synthesis of structural proteins in the hoof wall tissue, maintains cell integrity, repairs epithelial tissue and has been proven to maintain hoof health. Availa-Zn® significantly ($p<0,06$) decreases the incidence of foot problems and increases ADG.

Poor growth rate

Meat deposition requires a large amount of nutrients of which zinc is crucial to maintain a satisfactory growth rate. Zinc requirements further increase when a beta agonist is fed in the final ration.

Solution: A summary of 22 scientifically conducted feedlot trials (6 000 head of cattle fed Availa -Zn®) proved a highly significant consistent, measurable response in both ADG of 3,26% and feed conversion of 4,05% ($p<0,01$). Feeding Availa -Zn® in addition to a beta agonist during the last 28 days of the feeding period results in a 19 kg additional final live weight and 14 kg hot carcass weight response ($p<0,01$).

Poor receiver cattle performance

Receiver calves are prone to disease and inadequate feed intake is a common problem resulting in underperformance over the entire feeding period.

Solution: Supplementing Availa-4® (zinc, manganese, copper and cobalt) in the starter ration improves ADG, decreases morbidity and treatment costs by 72% over the entire feeding period ($p<0,05$). Cobalt is an essential trace mineral for receiver cattle. It is required for vitamin B12 production, enables rumen microbes to attach to fibre particles and thus aids in fibre digestion, energy availability and feed intake. MiCroplex 3%® is a highly available chromium supplement fed only in the starter ration in addition to either Availa-4® or a stand-alone Availa-Zn® and has been proven to increase ADG, improve FCR, and immune function. Chromium increases the amount of energy available for production during stress. Backed by research, feeding additional chromium in the starter ration is recommended. However, no scientifically published research is available to validate a recommendation for inclusion of chromium during the growing and finishing phase in the feedlot that will benefit the producer economically.

Cheap inorganic mineral vs a more available mineral supplement?

When cattle ingest an inorganic mineral, it follows one of three routes:

- it can interact and bind with an antagonist and be excreted unabsorbed or
- the mineral does not bind to any ligand and is excreted in the manure or
- the mineral binds to a ligand like an amino acid and is absorbed across the intestinal wall.

Inclusion of a highly available trace mineral complex such as Zinpro Performance Minerals® guarantees absorption. Zinpro has a unique patented production process binding the amino acid to the mineral under low pH conditions, ensuring it stays bound when passing through the

harsh rumen environment and acidic abomasum. Not all mineral-amino acid complexes are equal. Attaching a mineral to an amino acid does not mean it stays intact through the GIT nor does it guarantee absorption, resulting in no animal performance or economic benefit to the producer. The most expensive mineral is the one that does not work and only a production response is proof that the mineral delivers, because cattle don't lie about trace mineral results.

How to choose a trace mineral

With low South African feedlot margins, producers can't afford to invest in a ration unless there is a real economic benefit. Feedlots do not have the infrastructure nor time to investigate mineral supplements and therefore should rely on proven research results provided by their mineral supplier – proof that the additive results in a production response (as proven by research studies conducted on feedlot cattle at credible research institutes) delivering a significant economic benefit. Research that merits inclusion in feedlot rations should not be extrapolated from species other than ruminants.

Who are Zinpro and Chemuniqué?

Chemuniqué is the local distributor for Zinpro Performance Minerals®, the market leaders in trace mineral supplementation with regards to return on investment, research, response, Repeatability and reassurance. The Chemuniqué team is a group of qualified, dedicated animal nutritionists with a keen interest in the animal feed industry. Zinpro has its foundation cemented in the feedlot industry in the USA and has been a well-established mineral of choice in the South African poultry and dairy sector for many years. The South African feedlot sector is on par with the best in the world in terms of management and efficiency but has been neglected concerning access and exposure to information. Therefore, Chemuniqué is now focusing on this important market wishing to provide knowledge and expertise about feedlot nutrition.

FACT:
Zinpro Performance Minerals® Deliver.
QUESTION:
When are you making the shift to Zinpro?