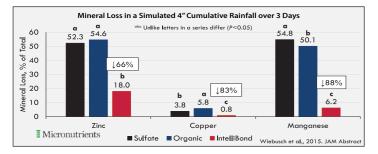
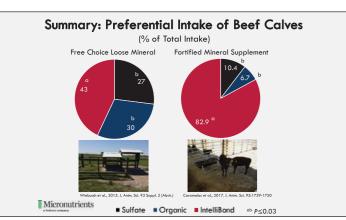
### **Stability**

- Sulphate trace minerals are water soluble and are more hydroscopic (absorb water). IntelliBond® has a strong covalent bond, decreasing mineral leaching,
- IntelliBond® offers stability vs. sulphates/oxides because of the strength of its covalent bonds.
- Soluble minerals can leach out of feed when exposed to precipitation.
- Vitamins are more stable when IntelliBond<sup>®</sup> is used. Vitamin levels are retained for a longer period of time within a mineral.



### Palatability

- Weak ionic bonds from sulphates cause dissociation of metal when exposed to moisture.
- Animals have evolved with an aversion to metallic tasting compounds which are associated with toxic plants. These free metal ions activate bitter-sensing receptors.
- The bond stability of IntelliBond® provides improved palatability of the mineral.





### **Stability**

IntelliBond® avoids negative interactions with moisture and other essential nutrients.

### **Bioavailability**

The unique crystalline structure of IntelliBond® limits interactions with antagonists and therefore minerals are more available for use by the animal.

## **Fibre Digestibility**

IntelliBond<sup>®</sup> has been shown to increase total tract nutrient digestibility and fiber digestibility in the rumen.

## Palatability

Beef animals prefer minerals with IntelliBond®.



## **SELECT BEEF** MINERAL PROGRAM

Optimized with ...... IntelliBond



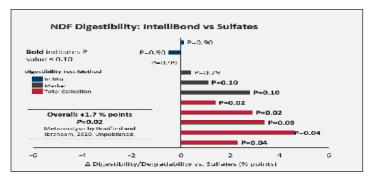


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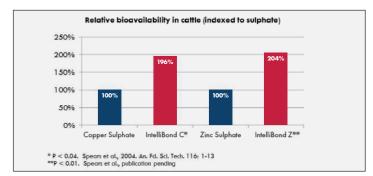
## **Fibre Digestibility**

- Weak sulphate ionic bonds cause dissociation of metals when exposed to moisture (saliva and rumen fluid) and release free metal ions.
- Free metals may negatively affect microbe function.
- Free metalions are highly oxidative and antimicrobial which can impact fibre digesting microbes in the rumen.
- Because of the strong covalent bonds of IntelliBond, there is minimal antimicrobial effect on the fibre digesting microbes.

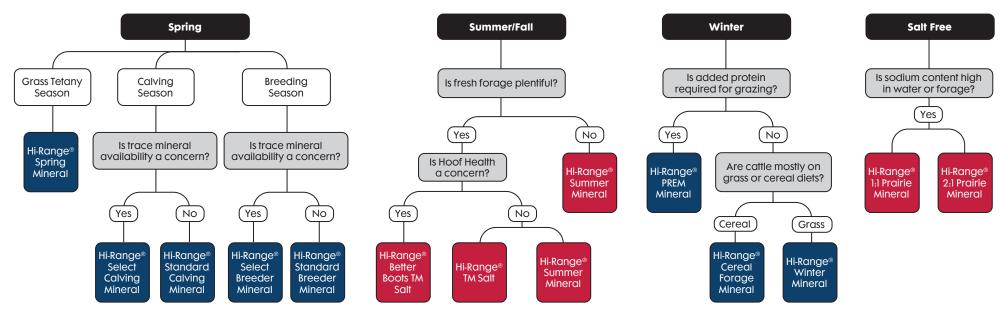


### **Bioavailability**

- Mineral absorption is dynamic and depends on many factors - both animal related (mineral status and homeostatic control) and dietary related (source and antagonists).
- Bioavailability is a measure of how much mineral is available to be absorbed by an animal relative to other sources of mineral.
- IntelliBond<sup>®</sup> has a better availability because of its covalent bonds which cause it to stay intact through the rumen allowing for improved animal utilization.



# Hi-Range<sup>®</sup> Beef Mineral Finder





Features and Benefits of SELECT and STANDARD Minerals:

#### A. Select Mineral

- i. Contains IntelliBond which has been shown to be more stable, palatable, bioavailable and increases the digestibility of forages
- ii. Fortified with essential vitamins and minerals (twice NRC recommended levels)
- iii. Unique flavour enhancers to ensure product palatability
- iv. Minerals designed for pasture feeding

### B. Standard Mineral

- i. Cost conscious option
- ii. Fortified with essential vitamins and minerals (twice NRC recommended levels)
- iii. Unique flavour enhancers to ensure product palatability
- iv. Minerals designed for pasture feeding

The Hi-Range<sup>®</sup> beef mineral program is designed to meet the nutrition requirements for every season and stage of life. As animals change, nutrient requirements change and as seasons change, nutritional availability changes. Hi-Range<sup>®</sup> is designed to eliminate nutritional gaps and help producers maximize performance.

Individual results from the use of this product may vary as a result of differences in management, environment, genetics, health, sanitation, and other factors. Therefore, Trouw Nutrition Canada Inc., its affiliates or its distributors do not warrant or guarantee individual results and shall not be held liable for any gaps in the results.

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HI-RANGE

Mineral

FOR ALL STAGES OF