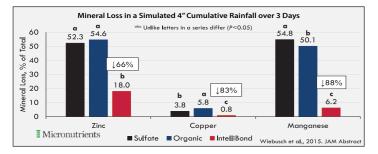
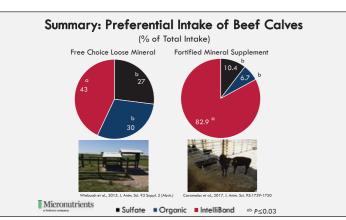
Stability

- 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[®] 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[®] 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



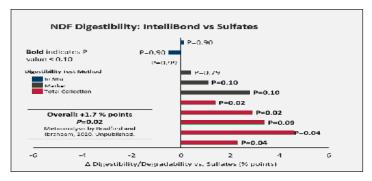


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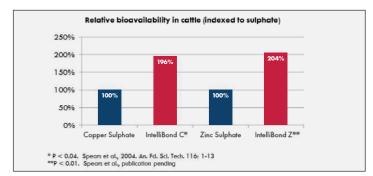
Fibre Digestibility

- 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[®] has a better availability because of its covalent bonds which cause it to stay intact through the rumen allowing for improved animal utilization.



"Ability Matters - it's all about the bonds"



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IF IT'S ALL ABOUT THE BONDS, WHAT'S THE DIFFERENCE?

Hydroxy (IntelliBond®)

Hydroxys bound to metals with COVALENT BONDS.

Sugar: COVALENT bonds keep atoms together when sugar dissolves.

Salt: IONIC bonds allow atoms to dissociate when salt dissolves.

Hi-Range[®] Beef Mineral Program

The Hi-Range® Beef Mineral Program was specifically formulated to meet the nutritional requirements of beef cattle for all stages of production.

Product	Ca %	P %	Salt %	Mg %	Cu mg/kg	Mn mg/kg	Zn mg/kg	l mg∕kg	Co mg/kg	Se mg/kg	Vit A IU/kg	Vit D IU/kg	Vit E IU/kg	6	M	 Comments
TRACE MINERAL SALT			90		5,000	8,000	10,000	150	50	120				6		Basic trace mineral salt for pasture.
BETTER BOOTS TRACE MINERAL SALT			90		5,000	8,000	12,000	1,250	50	120				\$	M	 Trace mineral salt with increased lodine and Zinc for hoof health.
SPRING MINERAL	10	5	33	5	3,000	7,000	9,000	400	50	30	500,000	50,000	400		M	High Magnesium mineral for prevention of grass tetany.
SUMMER MINERAL	10	5	40	1.5	3,000	7,000	9,000	400	50	30	500,000	50,000	400	6	M	 Pasture mineral for dry or late summer grass. Also a multipurpose 2:1 mineral all year round
WINTER MINERAL	12	9	26	1.5	3,000	7,000	9,000	150	50	30	750,000	75,000	2,500		M	Winter pasture mineral used when protein supp is adequate.
CEREAL FORAGE MINERAL	20	2	26	3	3,000	7,000	9,000	150	50	30	600,000	100,000	3,000		M	 High Calcium mineral for confined cattle or grazing corn.
CALVING MINERAL	10	8	28	3	3,000	7,000	10,900	150	50	30	750,000	100,000	5,000		M	 Select line of calving mineral contains chelated Manganese, Zinc, Copper and Selenium.
BREEDER MINERAL	12	10	21	1.5	3,000	8,400	10,900	150	50	30	700,000	100,000	1,000	φ	M	Select line of breeder mineral contains chelate Manganese, Zinc, Copper and Selenium.
PREM* MINERAL	10	6	29	3	2,500	5,330	8,000	200	10	22.5	400,000	40,000	400		M	 42% protein, provides supplemental nitrogen on dormant pastures.
1:1 PRAIRIE MINERAL	16	14	0	2	3,000	7,000	9,000	150	50	30	500,000	75,000	2,500	6	M	Salt free option for use with high Sodium water of forage
2:1 PRAIRIE MINERAL	16	8	0	2	3,000	7,000	9,000	150	50	30	500,000	75,000	2,500	6	M	Salt free option for use with high Sodium water o forage

Recommended Mineral Intake = 85-100g/head/day

Trace Mineral Salt Intake = 20-25g/head/day

All minerals available in SELECT and STANDARD formulations * PREM = Protein Enriched Mineral

 ϕ = Garlic Flavouring Agent **M** = Monensin

Available in 'Select Minerals' Only.





PREM Mineral Intake = 125g/head/day