



Calving & Breeding Mineral

A Mineral Supplement for Beef Cattle
During the Calving and Breeding Season

-GUARANTEED ANALYSIS-

Calcium	(Min) 12.6 % (Max)	15.1 %
Phosphorus	(Min)	6.0 %
Salt	(Min) 23.4 % (Max)	28.0 %
Magnesium	(Min)	1.0 %
Zinc	(Min)	4,260.0 ppm
Copper	(Min)	2,000.0 ppm
Selenium	(Min)	26.4 ppm
Vitamin A	(Min)	400,000.0 IU/lb
Vitamin E	(Min)	400.0 IU/lb



Avg. Consumption of 2-4 oz./hd/day depending on season and nutritional status

Features and Benefits

- Fine ground with dust control
 - ✓ **Improves digestibility and absorption of Calcium and Phosphorus into the body**
- Balanced Calcium and Phosphorus
 - ✓ Balanced Calcium and Phosphorus for lactating cows and ovulating cows with Phosphorus content of grass
 - ✓ **SAVES \$\$\$ and the environment**
- Increased vitamin level
 - ✓ **Maintains healthy eyes and tissues**
 - ✓ Increases Calcium and Phosphorus absorption
 - ✓ Improves health and immune function
- Added organic "chelates" trace minerals
 - ✓ **Improves mineral absorption by preventing antagonists from tying up the minerals**
 - ✓ Improves hoof health and quality
- Live yeast and probiotic
 - ✓ Maintains gastrointestinal health
 - ✓ Improves feed efficiency and production

Product No.: **46040 000**

Product No.: **46020 000** (High Mag)



Calving, Breeding, and Fescue Mineral

A Mineral Supplement for Beef Cattle Fed Fescue Grass
(Chlortetracycline.....2800g/ton)

-GUARANTEED ANALYSIS-

Calcium	(Min) 11.0 % (Max)	13.0 %
Phosphorus	(Min)	6.0 %
Salt	(Min) 16.2 % (Max)	19.4 %
Magnesium	(Min)	1.0 %
Zinc	(Min)	4,260.0 ppm
Copper	(Min)	2,000.0 ppm
Selenium	(Min)	26.4 ppm
Vitamin A	(Min)	400,000.0 IU/lb
Vitamin E	(Min)	400.0 IU/lb



Avg. Consumption of 2-4 oz./hd/day to provide 350mg of CTC per head per day

Features and Benefits

- **Contains CTC for improved health of the cows**
 - ✓ **Reduces body temperature**
- Fine ground with dust control
 - ✓ Improves digestibility and absorption of Calcium and Phosphorus into the body
- Balanced Calcium and Phosphorus
 - ✓ **Balanced Calcium and Phosphorus for lactating cows and ovulating cows with Phosphorus content of grass**
 - ✓ **SAVES \$\$\$ and the environment**
- Increased vitamin level
 - ✓ Maintains healthy eyes and tissues
 - ✓ Increases Calcium and Phosphorus absorption
 - ✓ Improves health and immune function
- Added organic "chelates" trace minerals
 - ✓ Improves mineral absorption by preventing antagonists from tying up the minerals
 - ✓ Improves hoof health and quality
- Live yeast and probiotic
 - ✓ Maintains gastrointestinal health
 - ✓ Improves feed efficiency and production

Product No.: **46010 A28**

Product No.: **46018 A28** (Fescue Mate Plus)

Product No.: **46030 A28** (High Mag)



Gestation Mineral

A Mineral Supplement for Beef Cattle

-GUARANTEED ANALYSIS-

Calcium	(Min) 14.4 % (Max)	17.2 %
Phosphorus	(Min)	3.0 %
Salt	(Min) 21.6 % (Max)	25.9 %
Magnesium	(Min)	1.0 %
Zinc	(Min)	3,800.0 ppm
Copper	(Min)	1,800.0 ppm
Selenium	(Min)	26.4 ppm
Vitamin A	(Min)	300,000.0 IU/lb
Vitamin E	(Min)	300.0 IU/lb

Avg. Consumption of 2-4 oz./hd/day depending on season and nutritional status

Features and Benefits

- Fine ground with dust control
 - ✓ Improves digestibility and absorption of Calcium and Phosphorus into the body
- Balanced Calcium and Phosphorus
 - ✓ Balances the cows Calcium and Phosphorus requirements for maintenance and fetal development with grass's Phosphorus content
 - ✓ **SAVES \$\$\$ and the environment**
- Maintenance level of vitamins
 - ✓ Maintains healthy eyes and tissues
 - ✓ Increases Calcium and Phosphorus absorption
 - ✓ Improves health and immune function
- Added trace minerals
 - ✓ Maintains cow liver status for minerals and provides minerals for fetal growth
- Live yeast and probiotic
 - ✓ Maintains gastrointestinal health
 - ✓ Improves feed efficiency and production

Product No.: **46005 000**



Co-Product Cow Mineral

A Mineral for Beef Cattle being fed High Phosphorus Feeds
such as Corn Silage, Corn Gluten Feed, DDG, and/or Grains

-GUARANTEED ANALYSIS-

Calcium	(Min) 23.4 % (Max)	28.0 %
Salt	(Min) 15.5 % (Max)	18.6 %
Magnesium	(Min)	1.0 %
Zinc	(Min)	4,000.0 ppm
Copper	(Min)	2,500.0 ppm
Selenium	(Min)	26.4 ppm
Vitamin A	(Min)	400,000.0 IU/lb
Vitamin E	(Min)	400.0 IU/lb
Thiamin	Proprietary Amount Added	



Avg. Consumption of 2-4 oz./hd/day depending on season and nutritional status

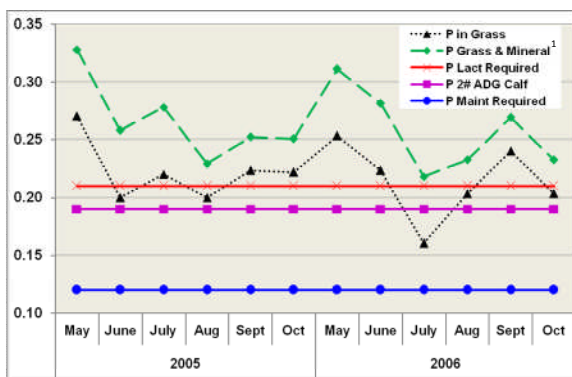
Features and Benefits

- Fine ground with dust control
 - ✓ Improves digestibility and absorption of Calcium and Phosphorus into the body
- High Calcium with NO Phosphorus
 - ✓ **Utilizes the natural phosphorus in feedstuffs** to meet the reproductive and lactating cows needs
 - ✓ **SAVES \$\$\$ and the environment**
- Increased vitamin level
 - ✓ Maintains healthy eyes and tissues
 - ✓ Increases Calcium and Phosphorus absorption
 - ✓ Improves health and immune function
- Added organic "chelates" trace minerals
 - ✓ **Co-products contain a high amount of Sulfur that ties up Copper and Zinc unless they are organic**
 - ✓ Improves mineral absorption by reducing antagonists from tying up the minerals
 - ✓ Improves hoof health and quality
- Added Thiamin
 - ✓ Prevents Thiamin deficiency caused by Sulfur levels in the co-products
 - ✓ **Prevents Polio (Brainers)**

Product No.: **46160 000** (Cow Mineral)

Product No.: **46162 000** (Yearling Mineral)

Chart 1. Phosphorus (P) levels of grass compared to lactating / gestating cows and calf requirements



¹Phosphorus of the grass plus a 6% P mineral fed at 4 oz/day from May to July and a 3% P mineral fed at 4 oz/day from August to October.

Dr. Jim Russell and Mathew Haan; Iowa State University

Researchers at Iowa State University reported P content of grass from May through October met requirements of lactating cows in many cases, and minimal supplemental P is needed. Calves gaining 2.0 pounds per day did not need any supplemental P (Chart 1). They also noted that cows selected forages 25% higher in P than manually clipped grass samples (Table 1).

Table 1. Comparison of Phosphorus concentrations of available and selected forage in rotationally stocked cool-season grass pastures.

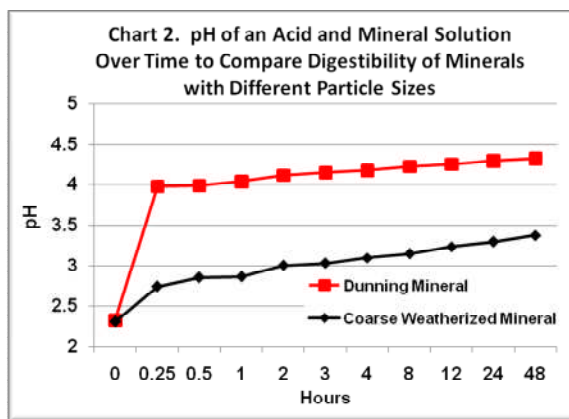
	Phosphorus, %	
	Available Forage ¹	Selected Forage
May	0.47	0.62
July	0.39	0.49
September	0.38	0.65

¹Available Forage = hand clipped to approximately 2 cm above ground level, Selected Forage = collected from a ruminally cannulated steer following a two hour grazing period.

Mineral Digestibility

Mineral is expensive, so higher digestibility means you get return for your money. The swine and poultry industry fine grinds corn to improve its digestibility. The beef industry doesn't use fine ground corn because it is digested too rapidly and causes digestive upsets. **It only makes sense to feed a mineral that is a finer particle and not coarse rocks.** Chart 2 shows a coarse mineral of a major competitor compared with our finer ground mineral with added oil. The finer ground mineral raised the pH of the acid much faster and higher than the coarse mineral resulting in improved digestibility.

Chart 2.



Fanning, K. C., Great Plains Livestock Consulting, Inc.

Mineral Options

- Fly Control: IGR or Rabon
- Antibiotics: CTC
- Magnesium for grass tetany
- Fescue endophyte binder: Fescue Mate Plus

Trace Minerals

Zinc

Required: growth, conception, spermatogenesis, tissue synthesis, wound healing, Vitamin A metabolism, immunity, and hemoglobin & enzyme production
 Deficiency: poor feed efficiency and intake

Iron

Required: growth, immunity & hemoglobin oxygen transport
 High mortality in severe deficiency

Manganese

Required: growth, rumen cellulolytic bacteria, reproduction (conception, estrus, ovulation), protein synthesis, enzyme systems, immunity, & hormonal systems
 Subject to interference by inorganic minerals

Copper

Required: growth, ovulation, spermatogenesis, pigmentation of hair / skin, immunity, & enzyme / collagen synthesis
 Subject to interference by inorganic minerals

Iodine

Required: metabolic regulation
 Component of thyroid hormones (Goiter in deficiency)

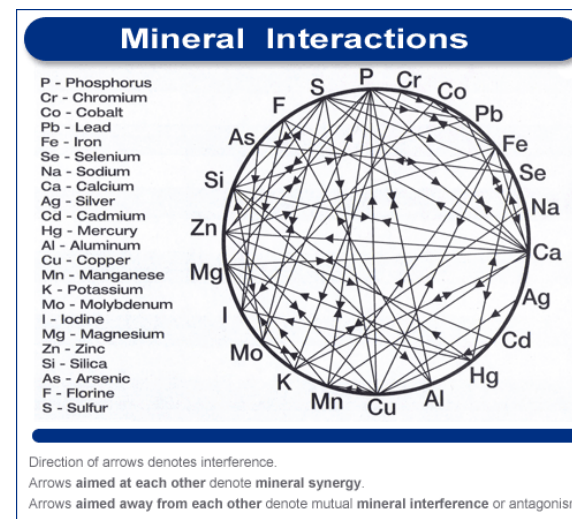
Cobalt

Required: growth, & Vitamin B12 synthesis by rumen bugs
 Deficiency: feed intake depression & Wasting Disease

Selenium

Required: growth, and immunity
 Deficiency: retained placentas, White Muscle Disease & Mulberry Heart

Minerals can bind with other minerals or compete for absorption causing deficiencies. For example, Zn and Cu compete for the same absorption site therefore they should be kept in a proper ratio, Zn and Cu should be increased or a protected form should be used when Mo, Fe, or S levels are high.



All of what the cow needs,
 none of what she doesn't

Precision Minerals

Through field research, university research, a large database of grass and feed samples, and accounting for extreme conditions, a precise level of supplementation can be calculated for each stage of beef production to save you money.



Dunning Feeds, Inc.

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