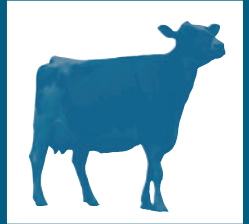


INTRODUCTION



COW-MAG



COW-MAG is a pulverized calcium/magnesium supplement which is mined, processed and bagged right here in Pennsylvania.

COW-MAG is designed to replace the following ingredients:

- ▶ Mag Ox (completely as space in the diet allows)
- ▶ Bicarb (50%)
- ▶ Limestone (amount varies on diet)

COW-MAG is a very cost effective source of Magnesium compared to Mag Ox or other Magnesium sources.

The Magnesium in **COW-MAG** is highly available to the cow:

- ▶ **Blood test results** (Cumberland County, PA dairy herds) are included, which measured Magnesium levels in the blood for Cow-Mag compared to Mag Ox.

When formulating into the dairy supplement:

- ▶ **COW-MAG** replaces 50% of normal bicarb level.
- ▶ **COW-MAG** will “least-cost” to fill the Magnesium requirement.
- ▶ **COW-MAG** will at the same time fill most of the Calcium requirement.

Information included:

- ▶ Nutrient Profile and Feeding Instructions
- ▶ Mineral Purity Analysis
- ▶ Blood Serum Test Results (showing availability of Magnesium)
- ▶ Mineral Formulation (with and without **COW-MAG**)
- ▶ Solubility and pH Adjusting Ability
- ▶ Effect on Butterfat

COW-MAG
Hit two benefits with one ingredient.



Questions?

COW-MAG

54 Brown St., Elizabethtown, PA 17022

Ph: 717-689-1201 Fax: 717-367-2546

Email: cows cud@windstream.net

NUTRIENT PROFILE / FEEDING INSTRUCTIONS



COW-MAG



Calcium 21%-25% guarantee
Magnesium 12% guarantee

<u>Sieve Size</u>	<u>Material % passing</u>
# 20 (0.85 mm)	> 98.00 %
# 60 (0.25 mm)	> 80.00 %
#100 (0.15 mm)	> 75.00 %
#325 (0.05 mm)	> 50.00 %

Feeding instructions: COW-MAG is designed to replace 50% of the normal Bicarb inclusion. When formulating minerals we suggest replacing 50% of the Bicarb, allowing COW-MAG to meet Magnesium needs. Beyond lowering Bicarb inclusion rates, the limestone and Mag oxide inclusion levels are also lowered in the mineral blends that are formulated with COW-MAG.

Alkalizer vs. Buffer

COW-MAG is an Alkalizer - “an agent that counteracts or neutralizes acidity.”

Bicarb - “It has the property that the pH of the solution changes very little when a small amount of strong acid or base is added to it.”

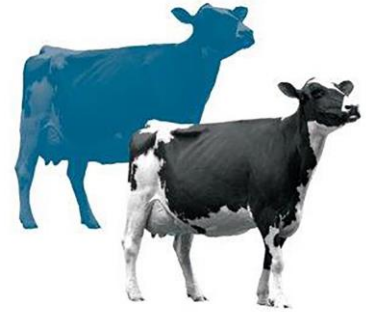
Since a Buffer (bicarb) and an Alkalizer (COW-MAG) each act differently, we suggest using COW-MAG as a replacement for 50% of ration Bicarb.

COW-MAG
Hit two benefits with one ingredient.



COW-MAG

Hit two benefits with one ingredient.



COW-MAG is a pulverized calcium/magnesium supplement which is mined, processed and bagged in Pennsylvania.

COW-MAG is designed to replace the following ingredients:

- ◆ Mag Ox (completely as space in the diet allows)
- ◆ Bicarb (50%)

When comparing products, particles per gram, particle size and surface area are important factors to consider. Products of a smaller particle size have a larger surface area which results in increased absorption, speed of absorption and overall bioavailability.

A test was conducted comparing Cow - Mag leading competitive product. As shown in **Figures 1 – 3**, Cow-Mag, has a much smaller particle size and more than double the number of particles per gram and surface area.

Fig. 1: Surface Area cm²/g

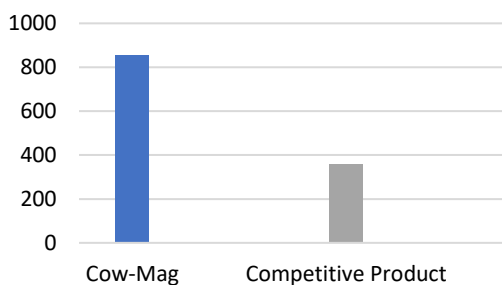


Fig. 2: Particles per Gram

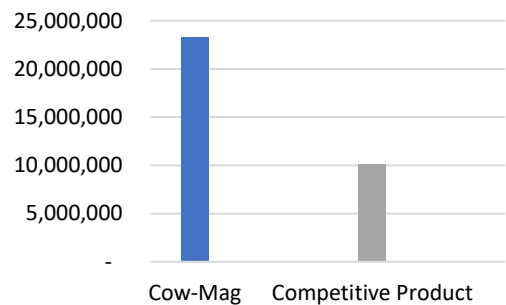
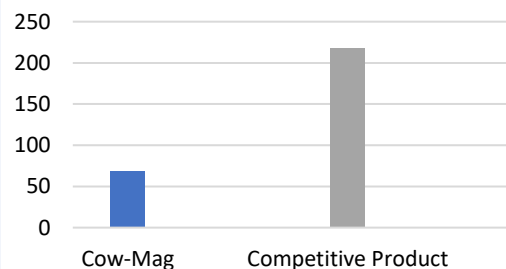


Fig. 3: Mean Particle Size (Microns)



COW-MAG

NUTRIENT PROFILE

Calcium.....21% to 25% Typical

Maognesium..... 11% quarrantee

SUPPORT - SOLUTIONS - RESULTS

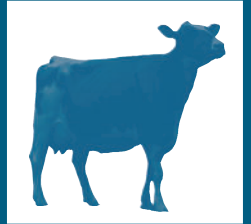
Marsyt

An Agricultural Company
Since 1995

MINERAL PURITY



COW-MAG



COW-MAG MINERAL PURITY

	<u>AAFCO Maximum Tolerance Level in Complete Feed (PPM)</u>	<u>Tested</u>
Arsenic	50	0.6
Barium	20	1.05
Beryllium.....	not defined	0.32
Cadmium	0.50	< 0.05
Lead	30	-0-
Mercury.....	2	-0-
Selenium	2	-0-
Silver.....	not defined	-0-

Mineral purity test completed by an American Laboratory. AOCS, NFTA, AAFCO and AOAC certified.

COW-MAG is a proven safe feed ingredient providing a high quality source of Calcium and Magnesium to the animal feed industry.

COW-MAG

Hit two benefits with one ingredient.

