

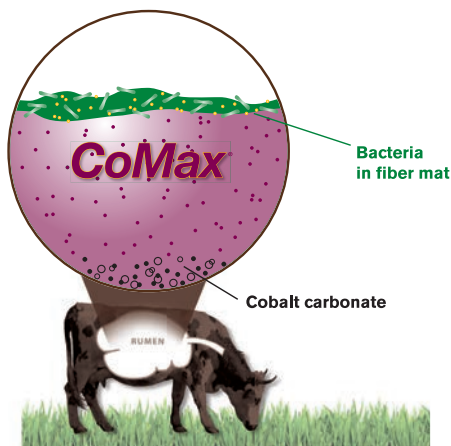


The Mintrate® Advantage

CoMax®* . . . a Strong Return that's Easy to Digest

CoMax is Ralco Animal Nutrition's patented**, proprietary form of cobalt that stimulates rumen microbes, resulting in enhanced fiber digestibility. CoMax is formulated with SoluMin®* technology which makes minerals 100% soluble and available to the animal.

Exclusive Technology



CoMax is a microbial catalyst that is completely rumen soluble and available to all rumen bacteria. CoMax stimulates more bacteria compared with cobalt carbonate which is more apt to settle to the bottom of the rumen.

Get More Energy Out of Forage

Healthy rumen bacteria enable cattle to consume more forage and derive more nutrients from the forage. When fiber digestibility increases with CoMax, cattle are able to derive more energy from hard-to-digest grasses (Figure One), yielding better performance such as body condition and weaning weights. Since cattle break down fiber for more energy there is typically 20%-30% less fecal fiber.

Feeding CoMax = One Pound of Corn: Research shows the additional energy cattle get out of forage when fed CoMax is equivalent to feeding one pound of corn per head daily or 1.2 pounds of range cubes. More energy means:

- Better body condition
- Better reproductive efficiency
- Higher weaning weight
- Possible delayed protein supplementation

Better Performance for More Profit

Better Body Condition: Body condition can affect a cow's ability to rebreed and produce milk, which impacts calf growth. Research shows cows fed CoMax had greater overall body condition score gains compared with control cows during an entire summer grazing season.

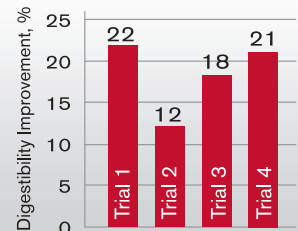
Greater Weaning Weights: Calves from dams supplemented with CoMax had higher weaning weights – a reflection of the forage digestibility advantage CoMax offers.

Better ADG: Research has shown yearlings responded to CoMax with higher ADG.

FIGURE ONE

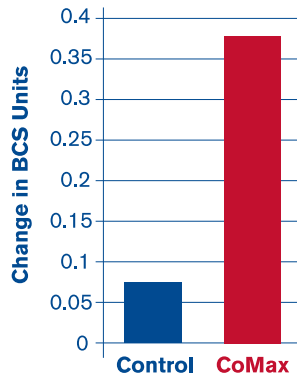
Digestibility Improvement with CoMax

In vitro and *In vivo* research studies with cattle on high-forage diets were conducted at West Virginia University, North Carolina State University and Oklahoma State University. **The results showed fiber digestibility was improved 12-22% when cattle were supplemented with CoMax which acts as a microbial catalyst.**



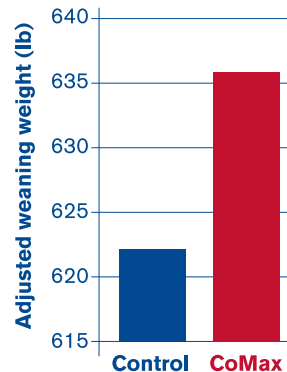
MINTRATE[®]

Cows Fed CoMax have Better Body Condition



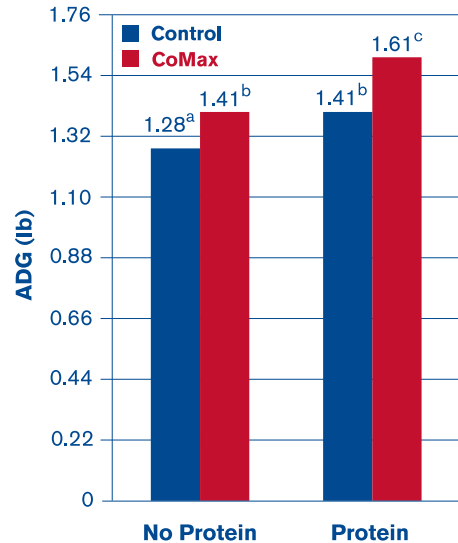
Cow body weights and body condition scores were collected at the beginning, middle and end of the grazing season. Ralco research study R09-02.

Calves with Cows Fed CoMax have Higher Weaning Weights



Cows fed CoMax averaged heavier calves than cows supplemented with control mineral. Ralco research study R09-02.

Effect of CoMax on Performance of Grazing Yearlings



^{a,b,c} Numbers with different superscripts differ P<0.05

An Oklahoma State University (2005) study evaluated the effects of CoMax on ADG of yearling cattle during summer grazing (mid-July through mid-September). Yearlings were supplemented with protein (0.45 lb cottonseed meal) against a control (no protein supplement). The 2x2 Factorial study results indicated a positive ADG response to both protein and CoMax with a resulting interaction of the two.

Target Protein Supplementation

Cattle are better able to utilize supplemental protein when fed CoMax, leading to more gain. The ability of CoMax to enable cattle to maintain better body condition, may impact the protein supplementation program.

Pack Back

CoMax enhances feed utilization and performance for no more than a penny and a half per day. Cattle consuming low-quality forage are better able to maintain body condition when consuming CoMax. Many cattlemen have experienced more than a 10:1 return on investment (ROI) when cattle consumed CoMax.

Summary

By stimulating rumen bacteria, CoMax enables cattle to derive more energy from ingested forages, which has a positive affect on performance (reproduction, lactation, body condition, and weaning weight). And, CoMax is cost-effective with ROI estimated by cattlemen at 10:1.

Mintrate products utilize CoMax to build better performance for cattle on forage-based diets.

CoMax product information provided courtesy of Ralco Animal Nutrition, Inc.

*CoMax and SoluMin are registered trademarks of Ralco Animal Nutrition, Inc.
**Ralco Animal Nutrition, Inc., patent number 8,575,212.

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