

A regular series on cost-effective supplementation strategies, sponsored by CRYSTALYX® Brand Supplements
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Research Again Shows Blocks Save You Money

For seven years, field experiments led by Montana range scientist Derek Bailey have assigned hard numbers to the economics of supplementing cattle grazing high, rough ground. Some of Bailey's findings have shown that cattle will follow low-moisture supplement blocks away from water sources—by more than a mile during fall—to better graze otherwise underutilized range. They'll also spend more time near blocks than they will at similarly placed dry-mineral feeders.

By using a high-quality low-moisture

block as a range-management tool—even though the upfront cost can be more than the per-ton cost of traditional supplements like cubes or range cake—the innovative practice proves more affordable than those alternatives.

Bailey's latest experiment tested whether other highly palatable supplement sources might make more effective alternatives to the blocks. He examined the grazing patterns, performance and economics of cows given liquid 32-percent crude protein supplement in a lick-wheel tank, set up and adjusted by a knowledgeable dealer.

On a comparable set of cows, he offered free-choice 250-pound CRYSTALYX® BGF-30™ blocks, at the rate of one per 20 to 25 cows. As you might expect based on the relative portabilities, while the blocks were transported to the more rugged reaches of the terrain via ATV, the lick tanks were delivered only to terrain that could be handled by two-wheel-drive trucks.

Results for the mid-October through mid-December 2003 study showed:

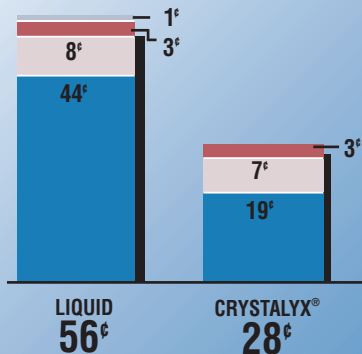
- The molasses-based liquid was equal to CRYSTALYX® in its ability to attract cattle to a supplement site.
- However, cows ate over 4.5 times more of the liquid supplement than they did the CRYSTALYX®.

HOW COSTS COMPARED

Bailey's latest study shows that in spite of its higher per-ton cost, CRYSTALYX's ability to manage consumption makes its actual per-head per-day cost only half that of liquid supplement. CRYSTALYX® beats liquid supplement's cost—even if the dealer delivers it for free.

Cost per head per day

- Tank rental
- Labor
- Travel costs
- Supplement cost



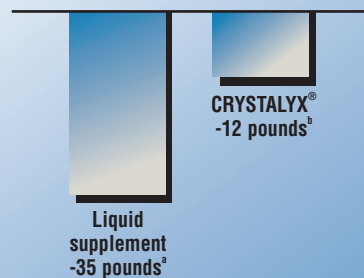
Total may not equal component costs due to rounding.

- Despite the higher consumption of the liquid supplement, CRYSTALYX®-supplemented cows lost significantly less weight during the test.
- And because of that excessive consumption, the liquid supplement cost twice as much per day as the CRYSTALYX® blocks.

IMPROVED PERFORMANCE

Bailey's results found that cows lost relatively less weight when consuming CRYSTALYX® than liquid supplement...this during unseasonably early snows on cows that were not being hayed.

Average body weight change



^{a,b} Means with different superscripts differ (P<0.001)

RESULTS BY THE BARREL™

CRYSTALYX® BGF-30™ offers grazing cattle the supplemental protein, macro-minerals, trace minerals and energy they need to help overcome nutritional inadequacies of fresh and stored forages. Carefully formulated to supply supplemental protein using only non-mammalian sources, BGF-30 combines rumen degradable and bypass protein with non-protein nitrogen. It helps ensure adequate protein is available to extract energy from ruminal

forage digestion while ensuring the reproductive and lactation benefits that research demonstrates comes from supplying adequate bypass protein. The additional phosphorus can help improve reproductive performance.

