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Delicate Balance: Aligning Feed Costs for Profit and Productivity

By Tim Clark, Account Manager, Ridley Block Operations

The current economic situation and declining milk prices require close consideration of feeding decisions. CRYSTALYX® Brand Supplements are an important tool in a dairy's nutrition program and can be part of an overall ration cost reduction program. It is a delicate balancing act of lowering feed cost while maintaining milk production, animal health and reproduction. Below is an evaluation of products and feeding programs with examples of how CRYSTALYX® can help you survive the current economic situation.

Rules of Feed Cost Control

1. Never give up milk yield. Income will drop faster than expenses and have a more dramatic impact on cash flow and profitability than any cost reduction. CRYSTALYX® dairy formulas are research and time proven methods of nutrient delivery to dry, transition and lactating cows as well as the growing heifer. Research and on-farm experience have proven the immediate and long range economic return of CRYSTALYX® products.

2. Don't lose components. BUFFER-LYX® helps maintain proper rumen pH which is vital in maintaining butterfat and proper rumen microbial protein synthesis. Dairy rations are formulated with the assumption of a stable rumen environment. Even brief periods of low rumen pH will impact the rumen digestion of fats, protein and digestible fiber.

3. Avoid changes that will impact long-term health and profitability of the herd. Changes that result in increased fresh cow disorders and reproductive failure will impact the herd for months and some cows for the remainder of the current lactation.

CRYSTALYX® DRY COW FORMULA™, CLOSE-UP FORMULA™, TRANSITION STRESS FORMULA™ and BUFFER-LYX® are proven products that are recognized for providing a high return on investment. These CRYSTALYX® products have also been credited for their ability to reduce involuntary culling due to lower incidence of metabolic disorders in early lactation.

Suggestions on Controlling Feed Cost

1. Maximize forage utilization. Forage quality and improving fiber digestibility are key to feeding high forage diets. Match forage quality to production potential. CRYSTALYX® products will increase forage digestibility through a combination of consistently delivering rumen available carbohydrate, protein and buffering agents while increasing saliva production. The stimulation of saliva production is recognized for the natural buffering properties, but the impact on rumen nitrogen metabolism is often overlooked. Higher haylage diets can lower purchased protein cost, but these diets will have higher rumen soluble protein. Recycling of rumen ammonia through saliva flow is an integral part of rumen nitrogen efficiency.

2. Evaluate feed additives. Will improved dry matter intake (DMI) eliminate or reduce their need? Are you using these additives to compensate for poor rumen health or preventable metabolic disorders? Early lactation cows and high producers often gain the most benefit from these additives, but a challenge is how to deliver them to just these animals.

Can CRYSTALYX® be a more cost effective delivery method of some additives than their inclusion in the mix that is delivered to every cow in the herd? This will allow you to realize the additives benefit on groups of cows that give the highest return.

Common Additives and Associated Costs

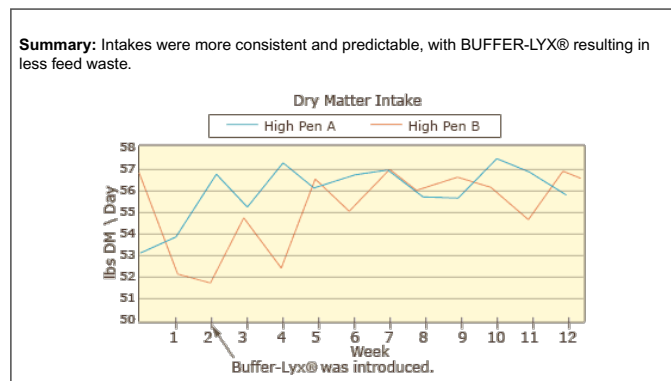
Additive	Inclusion Rate #/hd/day	Cost \$/hd/day	Comments
Sodium based buffer	.25 - .75	.04-.12	A lower base level can be used in the farm's mix and use BUFFER-LYX® in high groups.
Mg based buffers	.06 - .12	.02-.04	A lower base level can be used in the farm's mix and use BUFFER-LYX® in high groups.
Yeast culture	Variable	.03-.05	TRANSITION STRESS FORMULA™ provides the target levels of yeast culture.
Organic trace minerals	0.015-.02	.03-.05	TRANSITION STRESS FORMULA™, CLOSE-UP FORMULA™ and BUFFER-LYX® contain Zinpro Availa-4®.
Niacin/Biotin	Variable	.03-.06	Will improved intakes eliminate the need?
Protected Choline	Variable	.25-35	Will improved intakes eliminate the need? Is the problem over-conditioned cows or low energy intake?
Ca propionate Propylene glycol	Variable	.25-.50	Will improved intakes eliminate the need? Is the problem over-conditioned cows or low energy intake?



Direct fed microbial	Variable	.15-.30	Improved rumen health with CRYSTALYX® will eliminate the need for re-establishing rumen bacterial populations.
Bypass fat	.25-1.0	.13-.50	Will improved intakes eliminate the need? Fats are often needed to concentrate the energy level of the diet due to low feed intakes. Monitor body condition to dictate fat inclusion instead of calculated energy values of the ration.

3. Consider feeding multiple rations verses a single TMR. This can offer savings of \$0.25-\$0.75 hd/day in lower production groups due to feeding higher forage levels. However, the reality is that a single on-farm supplement is used for all groups. Removal or reduction of the above additives from the custom mix can result in additional savings of \$0.15 to \$0.30 hd/day or more depending on the combination. Using CRYSTALYX® is a proven delivery method to deliver these key nutrients to pre-fresh, transition and high group pens. CRYSTALYX® has the advantage of zero waste without possible mixing errors compared to using on-farm bags added at the mixer wagon.

4. Manage and monitor weigh backs. In warm weather, discarding excess refusal is often the best option due to heating and spoilage. Tighten up target weigh backs at 2 to 4 percent. Retain steer calves to feed weigh backs and as an additional revenue stream. BUFFER-LYX® will lead to more consistent and predictable intakes, making the job of scoring bunks much easier. BUFFER-LYX® also provides a safety net for when, not if, intakes are under estimated and cows are without feed for longer than desired. In the chart below, BUFFER-LYX® was started in the high group pens on the second week and intakes were more consistent by the fifth week.



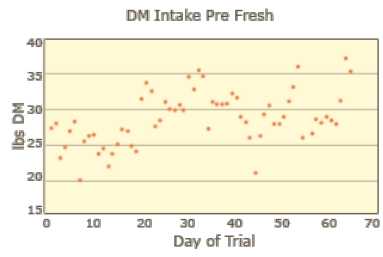
5. On-farm by-products may provide some savings. However, they have the added risk of nutrient variation and on-farm mixing errors. Wet by-products can increase ration moisture levels and carbohydrate digestion rates increasing the risk of SARA. CRYSTALYX® products can provide some consistency and a TMR Safety Net for when, not if, there is variation in these by-products. The negative impact of variable fat and sulfur levels can be minimized if rumen pH is maintained in the proper range.

6. Minimize out-of-pocket and/or variable cost. On-farm products that are already paid for will get preference for inclusion in the diet. We may be inclined or pressured into feeding higher levels of corn silage and corn grain. The risk for SARA may be greater now than ever. Using BUFFER-LYX® will result in better performance of the rations we provide and provide a high return.

7. Consider a 1 ration dry cow program. Many farms have changed to shorter dry periods of 45 days versus the traditional 60 days dry. This has resulted in using a low energy, high fiber dry cow diet throughout the whole dry period. An additional benefit has been less stress on the cow and people due to eliminating the need to move animals into a new group and adjusting to a new ration by a specific time before calving. One ration programs often fit most TMR mixers better than mixing 2 smaller batches. Corn silage, grass hay and straw are commonly fed and the resulting diets are often low in potassium, which reduces the need for high amounts of anionic salts to control milk fever. The low energy target of 0.60 NeL does not require much, if any, grain feeding, resulting in a high forage low cost diet. These bulky diets are rumen healthy and promote high dry matter intake after calving, but they have the challenge of getting a mineral evenly distributed throughout the mix.

CRYSTALYX® DRY COW FORMULA™, CLOSE-UP FORMULA™ and TRANSITION STRESS FORMULA™ work well in these programs. A controlled intake free choice supplement is the best delivery system given the inherent variation in DMI of this group of cows. DRY COW FORMULA™ is the dry cow mineral program for thousands of farms. Upon evaluating the nutrient content of limited pasture, free choice rough hay and limited silage with CRYSTALYX® DRY COW FORMULA™, we find the diets to be very similar to the "new" low energy diets.

In all dry cow programs there is a decline and high variation in ration DMI near the time of calving. Often a pre fresh or calving pen is utilized in both 2 ration and 1 ration systems. CLOSE-UP FORMULA™ and TRANSITION STRESS FORMULA™ deliver key nutrients during this critical period as well as stimulate high TMR intakes. The chart below shows feed intake of a Pre Fresh group. TRANSITION STRESS FORMULA™ was started on day 14 with DMI improving by day 20. Over-crowding of this group on days 45 and 55 caused dramatic drops in DMI. However, target intake of TRANSITION STRESS FORMULA™ was maintained during these times.



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