TECHNICAL BULLETIN
DAIRY

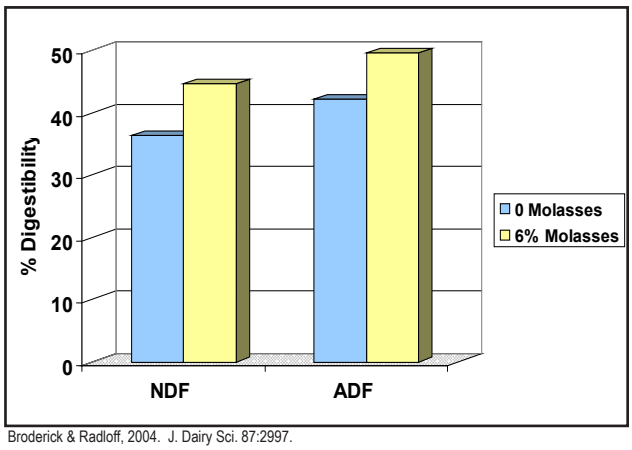
QLF QUALITY LIQUID FEEDS

SOLVING FEEDING CHALLENGES- LIQUID SUPPLEMENTS' ROLE

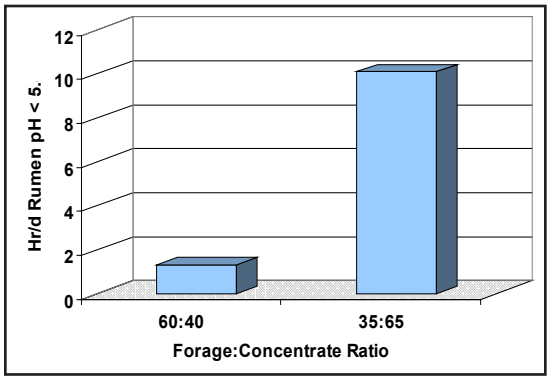
QLF supplements provide valuable benefits to stretch dollars spent on feed, whether traditional feeds are plentiful or in short supply. 2008 has been a year of feeding challenges. Dietary corn levels have fluctuated based on rapid changes in corn price and availability. Likewise, some areas of the country have experienced sub-optimal growing conditions, reducing forage supplies.

QLF Supplements Meet Feeding Challenges:

Limited Forage Supply - Liquid supplements provide sugars and degradable protein stimulating microbial growth to enhance digestibility of dairy quality and low quality forages. When forage is in short supply, using a liquid supplement will enhance forage utilization to improve nutrient supply to the cow. Plus, liquid supplements increase ration density, enhance intake consistency, and reduce sorting, which minimizes wastage of both high and low-quality forages.



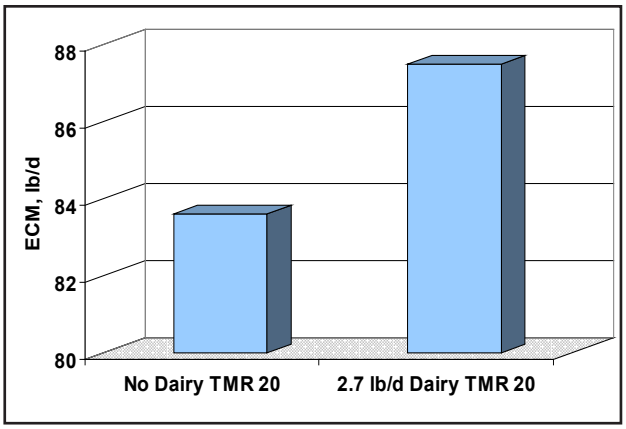
Broderick & Radloff, 2004. J. Dairy Sci. 87:2997.



Yang & Beauchemin, 2007. J. Dairy Sci. 90:2826.

Plentiful Forage Supply - Since liquid supplements can enhance forage utilization, diet forage levels can be increased. This helps maintain healthy rumen pH above 6.0 and fiber digestion, allowing the cow to obtain optimum nutritive value from forage. Sub-acute ruminal acidosis reduces feed intake and milk fat production, and causes laminitis, diarrhea, and immune response!

Limited Corn Supply - Research has shown that increasing diet NDF, and reducing diet NFC and starch from 41% and 27%, to 38% and 21%, respectively, and including Dairy TMR 20 at 2.7 lb/day improves energy-corrected milk production. Lowering diet starch levels conserves corn supply, allowing flexibility to store or sell corn as desired. Likewise, increasing fibrous byproduct or forage inclusion helps moderate diet costs.



Firkins et al. 2008.. J. Dairy Sci. 91:1969.

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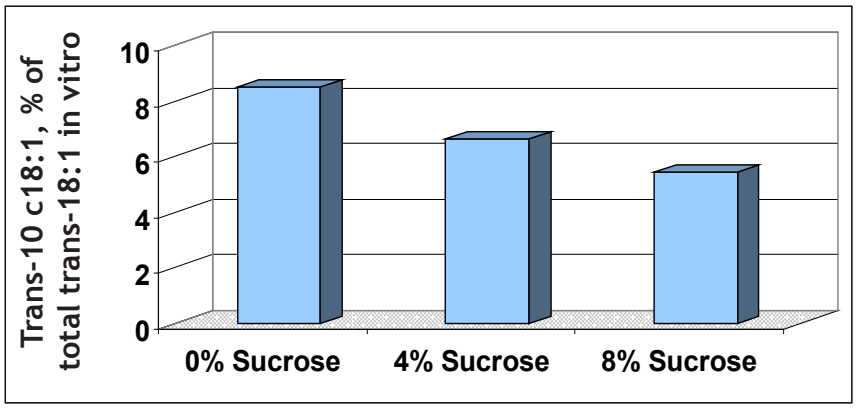
Plentiful Corn Supply - Overfeeding starch can cause low rumen pH, and overgrowth of rumen bacteria which use alternate-pathway biohdyrogenation for adding hydrogen atoms to dietary unsaturated fats, increasing likelihood of milk fat depression. Sugars help feed rumen microbes which perform normal biohydrogenation. Research shows that sucrose, the primary sugar in cane molasses, lowered proportion of fatty acid *trans*-10 18:1. (*Trans*-10 18:1 has been implicated in milk fat depression.) Providing supplemental sugars in the diet keeps rumen microbe populations healthy and balanced to ensure optimal feedstuff digestion and production of milk and components.



Ribeiro et al. 2005. J Dairy Sci 88:4007.

Liquid supplements enhance Ration Palatability, Ration Consistency and Intake Consistency!, As market prices and availability of forages and concentrates necessitate ration changes, including a liquid supplement in the diet helps keep cows eating well to maintain milk and component production!