Liquid Supplements . . . Flexible and Convenient

Dairy TMR-NPN

- NPN Protein for rumen bugs
- Sugars for fiber digestion and microbial protein production
- Ration conditioning/reduced sorting
- High concentrated source of supplemental sugar

Dairy TMR

- Sugars for fiber digestion and microbial protein production
- Fat provides energy
- Ration conditioning/reduced sorting

Dairy SUGR

- Sugars for fiber digestion and microbial protein production
- Ration conditioning/reduced sorting
- High concentrated source of supplemental sugar

Lactation and Dry Cow Optimizer

- High concentrated source of supplemental sugar
- NPN Protein for rumen bugs
- Sugars for fiber digestion and microbial protein production
- Ration conditioning/reduced sorting
- Provides all supplemental VTM
- Reduce ration separation

Consistent Consumption of All Particle Sizes:

- ☑ Provides needed nutrients to the rumen bacteria
- ☑ Maintains healthy rumen fermentation
- ☑ Enhances ration digestion
- ☑ Reduces TMR waste

Quality Liquid Feeds, Inc.

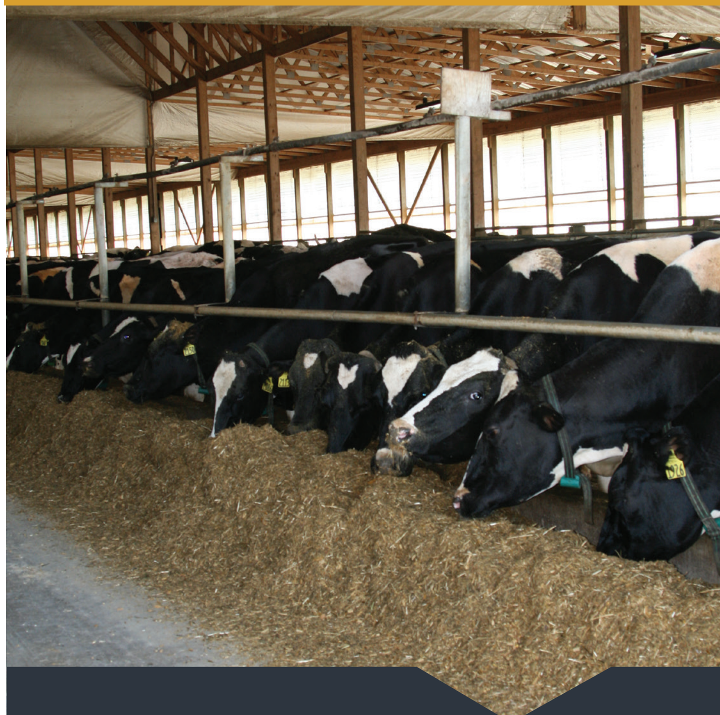
P.O. Box 240
Dodgeville, WI 53533

800-236-2345
www.qlf.com

QLF QUALITY LIQUID FEEDS

B-9350

Reduce Ration Sorting



QLF QUALITY LIQUID FEEDS

Nutrition and More . . .

Reduce Ration Sorting . . .
Improve herd performance

Dairy cattle have strong smell and taste senses, and often sort for the best-tasting particles in the TMR, leaving less-palatable particles in the bunk (long forages).

- Sorting behavior alters the nutrient concentration of the diet consumed and increases TMR waste.
- Sorting behavior may be quantified by comparing the particle distribution at put-down and refusals.
- Research has shown that sorting for short particles significantly reduces rumen pH.

Research - *May 2012 Journal of Dairy Science*

Research Details

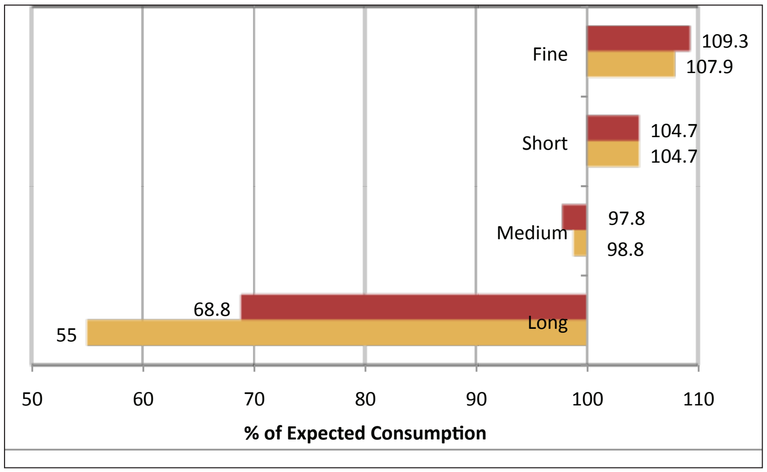
- Lactating Holstein cows (74 DIM) received a 1) Control TMR or 2) Control TMR with 5.8 lb/day molasses-based liquid feed.
- Cows were fed TMR once daily.

Sorting Results

- Liquid feed supplementation markedly reduced sorting against long particles (*P*<0.02) compared to control cows
- Liquid feed adheres small ration particles to larger ones, reducing sortability of the small particles.

Economic Benefit

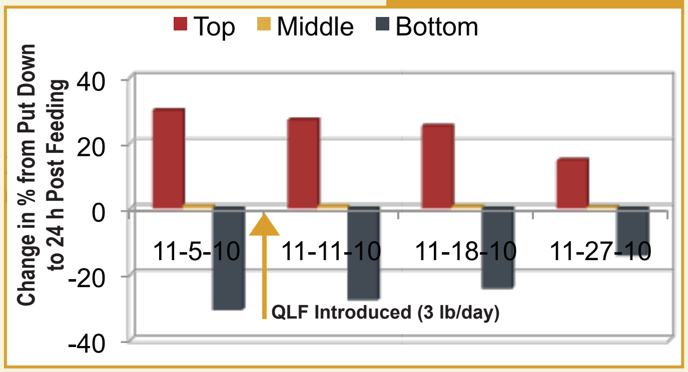
- Cows receiving liquid feed had higher DMI, and produced 0.28 lb more milk fat and 0.2 lb more milk protein/day.
- Net returns: +0.71/hd/day



- 100% = no sorting
- <100% = selective refusals (sorting against),
- >100% = preferential consumption (sorting for)

On Farm Performance

High Group Cows Sorting Behavior



Put-down Particle Distribution

	11/5	11/27
Top	14.5	17.1
Middle	37.3	37.4
Bottom	48.2	45.5

Similar initial particle distribution

- Pre-QLF:Cows are leaving long particles in the bunk (+30 Units Top Screen), preferentially eating short particles (-30 units bottom pan).
- Sorting behavior is changed over several weeks. Cows don't correct sorting behavior "overnight".
- Three weeks later, preferential consumption of short particles is reduced.

Economic Benefit:

Using 3 lb/day QLF and reducing ration sorting increased milk fat 0.07 lb/d and milk protein 0.05 lb/day. Component income increased $0.29/hd/d.