



Treating Forages with QLF Liquid Supplements



For an increasing number of cattlemen, treating forages with QLF liquid supplements has become an effective response to the limitations provided with low quality forages harvested this summer. QLF liquid supplements applied to forages increase palatability, improve nutritional value and reduce forage waste.

Intake and digestion of forages are limited by the rate at which rumen microbes can break down feedstuffs. Typically, forages do not contain enough available degradable protein sources or soluble carbohydrates for optimal microbial growth. QLF liquid supplements applied to forages deliver a source of rumen-degradable protein and sugar, providing supplemental energy for fiber digesting bacteria to enhance rumen efficiencies for further breakdown of available forages.

The application process of treating forages is quite simple. The liquid supplement is evenly pumped or poured onto the top of an upturned bale (as seen in photo). Liquid application rate should be 7-10% of bale weight. Once the liquid has been applied, the bale should sit on end until the liquid supplement has dispersed throughout the bale. Liquid dispersion time will vary with forage type and bale density. Treating forages enhances nutritional value of the forage (Table 1). Net benefits of bale treatment include increased dry matter, crude protein, energy, vitamins and trace minerals.



Table 1: Applying 10% QLF Super 40 improves nutritional value of the forage.

Forage	Apply 7-10% QLF per Bale	Apply 10% Super 40 onto bale of hay	End Result
Untreated Hay	QLF Super 40		Treated Hay
Dry Matter	66% Dry Matter		96% Dry Matter
Crude Protein	40% Crude Protein	9.7% Crude Protein	

Louisiana State University Hill Farm Research Station evaluated the effects of treating poor quality forages with a liquid supplement on hay waste and dry matter intake. Gestating beef cows were used to evaluate 3 methods of feeding a liquid supplement with poor quality hay. Treatments included QLF 35% liquid protein supplement provided free choice in a lick tank (TNK) and poured onto bales at 10% of bale weight (POR10) or 15% of bale weight (POR15).

Table 2: Effect of liquid protein supplementation method on hay waste and hay dry matter

Item	Treatment				P-value
	TNK	POR10	POR15	SE ²	Treatment
Animals, n	60	60	60	-	-
Initial bale wt, lb of DM	1294	1261	1234	-	-
Hay waste, lb of DM	396.80 ^b	330.69 ^a	291.01 ^a	13.75	0.006
Hay waste, % of bale weight	31.7 ^a	26.8 ^b	23.9 ^b	1.95	0.008
Hay intakes, lb of DM	19.30	21.56	20.24	0.41	0.236

^{a,b}Means among treatments within a row lacking common superscript letters differ (P < 0.05).

¹TNK = liquid protein provided free choice via lick tank; POR10 and POR15 = liquid protein poured onto bales at 10 and 15%, respectively.

²SE = average SE for the 3 treatment estimates.

Table adapted from Walker et al., 2013

There was a treatment effect for the amount of hay waste (P = 0.006), where TNK supplemental cows had greater waste compared with POR15 and POR 10 (Table 2). Additionally, there was a treatment effect for percentage of hay waste (P < 0.010), where TNK supplemented cows had greater percent of hay waste (31.7%) compared with POR15 (23.9%) and POR10 (26.8%) treatment group, respectively.

Applying QLF liquid supplements to low quality forage has proven to be an effective strategy to deliver a source of rumen-degradable protein and sugar to fiber digesting bacteria to further breakdown forage. Contact your local QLF representative for more information about treating your forages with liquid supplements.

Citation

Walker R.S., D. LaMay, J.R. Davis, C.A. Bandyk. 2013. Method of feeding a liquid-protein supplement with low-to medium-quality hay affects hay waste and cow performance. Prof. Anim. Sci. 29:552-558.

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