

Cost-effective feeding programs maximize utilization of available, low-cost forages, while still supplying the nutrition needed for profitable performance.

But many of the roughages harvested for beef cattle lack the nutritional content – and intake potential– to meet the herd’s needs.

Treating these low-quality hays and crop residues -- in big bales, stacks, and processors-- with liquid supplements from **Quality Liquid Feeds (QLF)** will increase both intake and digestion of these feedstuffs, provide additional key vitamins and minerals, and also reduce hay waste.

### ADDING QLF AT THE BALE PROCESSOR

Processing hay for beef cows, especially if it is low quality, high in stems or stalks, or badly weathered, can result in feed savings as high as 10-15%. Other benefits include:

- ✓ No twine problems.
- ✓ Feeding in the field prevents accumulation of waste feed and manure.
- ✓ May save feeding time and labor.
- ✓ Allows the producer to adjust the amount offered as conditions change.

Mounting a tank and pump on the processor allows addition of QLF to the hay as it is fed. This is an excellent way to:

- ⇒ Increase hay intake and digestibility.
- ⇒ Provide supplemental energy, vitamins, and minerals.
- ⇒ Adjust the amount of supplement provided as feed and animal needs warrant.
- ⇒ Supply needed supplement without additional feeders, labor, or trips to the pasture.
- ⇒ Reduce hay waste



### GOALS

- Fully utilize available, low-quality forage.
- Provide the nutrition needed for desired production.
- Maintain moderate to good cow body condition.

### HOW QLF WORKS TO MEET THESE GOALS

Intake and digestion of low- and moderate-quality forages are limited by the rate at which rumen microbes can break these feedstuffs down. These ruminal “bugs” work faster and more efficiently when they have a continuous, balanced supply of all the nutrients they need.

Typical forages do not contain enough available (“degradable”) nitrogen sources or soluble carbohydrates for optimal microbial growth. QLF liquids supply both Timed-Release® protein and sugars, primarily from molasses. Fortified with these needed nutrients, the microbes are able to speed the fermentation process. This results in an increased rate of passage, which allows increased intake, and improved digestion of all of the feed that is consumed. The cattle, then, are able to benefit from an increased supply of energy and protein.

*For more information, contact your local QLF representative, or our Dodgeville office.*

Quality Liquid Feeds, Inc.  
Dodgeville, WI 53533  
(800) 236-2345  
www.qlf.com

#B3011



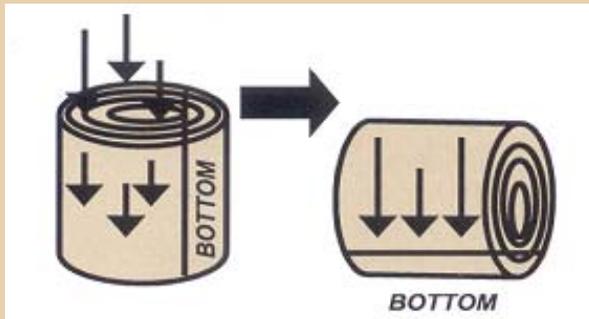
# Treating Forages

Using QLF to enhance utilization of harvested roughages



## TREATING LARGE ROUND BALES

Dispersing a QLF supplement throughout a big bale will significantly enhance the nutritional value *and* palatability of hay, straw, or stalks. Product is typically poured or pumped onto the top of an upturned bale, or injected with a probe and pump. Some producers develop a process for pouring bales just prior to feeding; the more common approach is to treat a large number of bales at once.



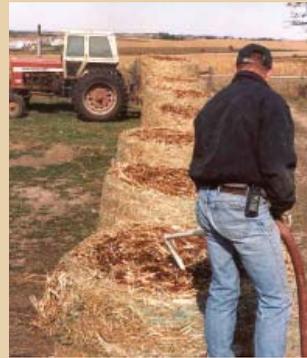
- 1) Tilt the bale on end, using a bale fork, front-end loader, etc.
- 2) Evenly pour or pump QLF on the top surface.
- 3) Allow to sit until liquid begins to pass through.
- 4) Tilt bales back into original position.

### NOTES

- Suggested application rate is 7-10%, by weight (7 to 10 gallons per 1000 lb bale)
- Consider placing 1 or 2 bales on plastic, cardboard, or on a pallet, to time seepage for these particular bales
- Time will vary with bale density
- Treated bales can be ground or chopped
- Feed a balanced pasture mineral with treated hay

## The Hay Treat Advantage

- ✓ More total dry matter fed
- ✓ Crude protein level increased  
*Additional CP is highly degradable*
- ✓ Forage intake increased
- ✓ Forage digestibility improved
- ✓ Added sugar, phosphorus, potassium, vitamins, and trace minerals
- ✓ Less feed waste
- ✓ Single step delivery of hay and supplement



### EXAMPLE:

#### Hay

6% crude protein (CP, dry matter basis)  
90% dry matter (DM)  
1000 pound bale

#### Per Bale

1000 lb X 90% = 900 lb DM  
900 lb DM X 6% = 54 lb CP

#### Forage Booster 32

32% CP

61% DM

add at 10%, by weight

#### Per Bale

10% X 1000 lb = 100 lb of QLF  
100 lb X 61% = 61 lb DM  
100 lb X 32% = 32 lb CP

#### Treated Bale

54 + 32 = 86 lb CP

900 + 61 = 961 lb DM

86 ÷ 961 = 9% CP (dry matter basis)

## Compared to anhydrous ammonia treatment

- ✓ No hazardous materials
- ✓ No bale stacking
- ✓ No plastic
- ✓ No nutrient (N) vaporization loss
- ✓ QLF adds sugar, minerals, and vitamins

## PRODUCTS

- ◆ Almost any QLF liquid protein supplement may be used for treating forages.
- ◆ QLF hay treat products complement forage-based diets with U.S. cane molasses and rumen-degradable Time-Release™ protein.
- ◆ Specific product selection and application rate should be based on forage quality and animal requirements.

## TIMING

With an on-farm storage tank, bales can be treated just prior to feeding. More commonly, large bales and hay stacks are treated in batches to be fed later. It is recommended to not store treated bales beyond one feeding season.

## VS. LICK TANKS

Forage treatment and self-fed lick wheel feeders are both effective means of delivering QLF to cattle. Points to consider when selecting the best option for a given situation:

- Once a bale or stack is treated, the level of supplement intake is limited; cattle adjust lick tank intakes as needed
- Force-feeding a specific daily amount of supplement facilitates use of additives
- It is more practical to supplement very small groups of animals with treated bales
- Treated bales may be more practical than a lick tank when cattle are moved frequently