

# Culbac<sup>®</sup> Hay

*For maximum performance and efficiency*

## Improving grass hay quality with Culbac<sup>®</sup> Hay

High quality grass hay is an important forage component for efficient growth and performance in ruminant and equine diets.

Higher quality grass hay will reduce protein and energy supplementation costs as well as produce greater animal performance than lower quality grass hay. The quality of grass hay, just like legume hays is dependent on retention of the tender leaves and the absence of mold and heat damage in the bale.

### **Controlling quality variables**

Maturity and leaf loss are two management issues which have a large impact on forage quality. As grass hay dries below 16% moisture, significant leaf loss occurs resulting in lost hay volume and reduced hay quality. In addition, hay texture becomes coarser as leaves are lost and the stems dry becoming tough and brittle.

### **Bale Grass Hay at 16% to 20% moisture**

Grass hay baled at 16% to 20% moisture will contain higher crude protein and relative feeding value than hay baled at lower moisture levels. The hay will also have a softer texture and greener color with improved palatability and preference.

**Culbac<sup>®</sup> Hay Treatment** can help hay producers produce higher quality hay with more leaves as well as protect hay from spoilage in times of high humidity and slow drying weather.



### **Leaf retention at baling can be controlled**

Leaf tip retention has been shown to have a significant impact on forage quality.

*Culbac<sup>®</sup> Hay Treatment allows hay to be baled at higher moisture, which increases leaf retention. When baled at the recommended moisture level, Culbac<sup>®</sup> Hay Treatment will allow the production of higher quality hay without spoilage and heat damage.*

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Naturally Effective Solutions

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# Application

Culbac® Hay Treatment can be applied at the baler or at the swather or cutter. When applied at the baler, either Culbac® Hay Dry or Culbac® Hay Liquid can be used. When applied at the cutter, a low volume sprayer is used to apply Culbac® Hay Liquid ahead or behind the conditioner.

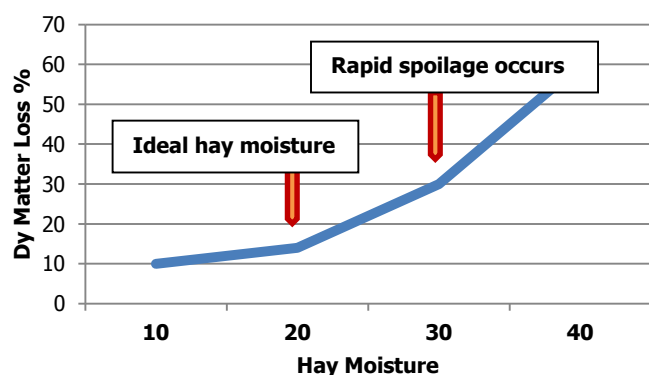
## Additional Benefits of Using Culbac® at the Swather/Cutter vs. Baler

- Stops mold growth earlier
- Improved forage quality after a rain

## Recommended grass baling moisture

As shown in the graph below, the rate of spoilage in hay accelerates at 20%. When the moisture level reaches 30%, spoilage can be very significant and hard to control.

**Figure 1. Dry Matter Loss From Spoilage**



The ideal baling moisture level for grass hay should be between 16% and 21%. This range provides adequate moisture for high leaf retention and but not too high for prevention of spoilage from mold.

Since weather is unpredictable, and hay making conditions are not always ideal, Culbac® Hay provides an additional margin of safety when rain is imminent or high humidity slows hay drying. Even in worst case conditions, Culbac® Hay can help make the difference to improve the quality of the baled hay.



## Application Rates for Culbac® Hay

### Culbac® Hay Liquid:

- Use 2.6 ounces of Culbac® Hay Liquid per ton of hay (16 – 22 % moisture).
- For a uniform application, dilute Culbac® Hay Liquid at the rate of 1 gallon per 11.5 gallons of water. The table below provides further details for mixing.

**Figure 2. Mixing Directions for Culbac® Hay Liquid**

Hay treated, tons	50	100	150	200	250
Culbac Hay Liq., gal.	1.0	2.0	3.0	4.0	5.0
Water, gal.	11.5	23.0	34.5	46.0	57.0
Total, gal.	12.5	25.0	37.5	50.0	62.5

### Culbac® Hay Dry:

- Use Culbac® Hay Dry at the rate of 0.4 pounds per ton of hay (16 – 22% moisture).
- Apply Culbac® Hay Dry through a dry granular applicator at the baler.

Use the table below to determine the appropriate moisture level for your baling operation.

**Figure 3. Recommended Moisture Levels for Using Culbac® Hay (Liquid or Dry)**

Bale type	Legume hay	Grass hay
Small square	23%	21%
Round	20%	18%
Ton square	18%	16%

**Get the most from your grass hay with Culbac® Hay Treatments.**