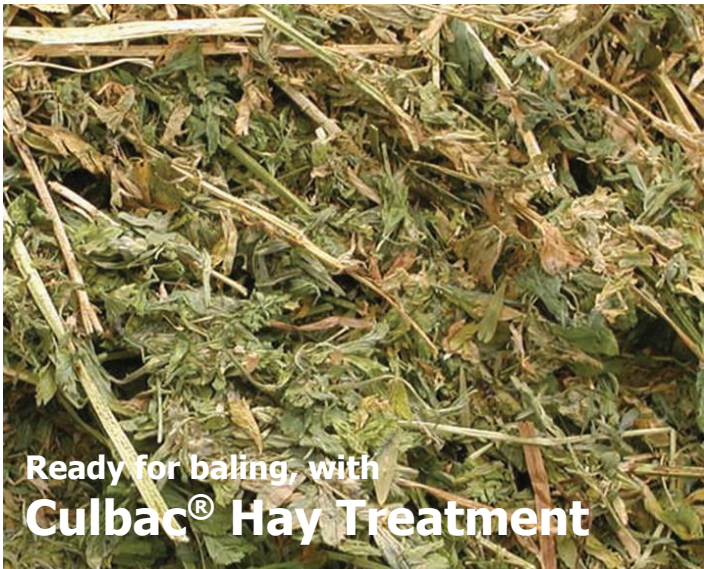


Culbac[®] Hay

For maximum performance and efficiency

Culbac[®] Hay Treatment improves nutritional value of alfalfa hay



High Quality Alfalfa Hay

Production of high quality alfalfa hay is a vital component for maximum performance and efficiency of high performing animals. Alfalfa hay baled with more retained leaves will have higher feeding value and contain greater nutritional quality which can reduce ration costs, improve performance with higher profitability.

Controlling quality variables

Maturity and leaf losses are two management issues which have a large impact on forage quality. Culbac[®] Hay Treatment can help hay producers produce higher quality hay with a high leaf content.

Research

University trials demonstrate Culbac[®] Hay treated alfalfa hay at 18% – 22% moisture content resulted in:

- higher leaf retention
- higher crude protein
- lower acid detergent fiber (ADF)
- higher dry matter digestibility
- reduced mold and heat damage

New Mexico State University research demonstrated that approximately 30% of the leaf material is lost when alfalfa hay is baled at 15% moisture and the most significant protein loss occurred when alfalfa hay dries down from 23% to 13% moisture.

Leaf retention has been shown to have a significant impact on forage quality (Table 1).

As hay moisture drops during the drying process, the leaf content also reduces resulting in lower quality hay. Culbac[®] Hay Treatment allows hay to be baled at higher moisture, increases leaf retention and hay quality without molding and heating damage.

When baled at the recommended moisture level, alfalfa hay treated with Culbac[®] Hay Treatment will retain more leaves resulting in higher feeding value.

Table 1. Baling Moisture and Leaf Loss

	Moisture	Leaf:Stem	CP,%
At cutting	81.0	60:40	21.0
Baled at	15.0	42:58	13.0
Baled at	23.0	58:42	19.0

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Naturally Effective Solutions

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Round bale study-alfalfa

Culbac® Liquid Hay Treatment was used to treat high moisture 1400 pound round bales. The untreated high moisture round bales had considerable quality deterioration.

Culbac® Hay for Large Round Bales

	Culbac®	Untreated
Number of bales	5	5
At Baling		
Moisture, %	23.6	21.3
Bale weight, lbs.	1400	1400
After Storage		
Moisture, %	15.3	14.9
CP, %	17.8	11.8
ADIP, %	7.4	11.8
Quality Evaluation		
Spoiled bales	0	3

One-ton bale study-alfalfa

Field trials with one – ton square bales demonstrated that Culbac®–treated high moisture alfalfa hay, retained more leaves and contained 12% more crude protein, 11% more digestible protein than low moisture untreated alfalfa. There was no spoilage in the high moisture alfalfa hay.

Culbac® Hay for One-ton Alfalfa Bales

	Culbac®	Untreated
Moisture at baling, %	18.9	13.6
After Storage		
CP, %	19.3	17.2
Digestible protein, %	17.9	16.1
Quality, % good bales	100	100

Small square bale study-alfalfa

When Culbac® Hay Treatment was used on small square bales, the higher moisture alfalfa hay contained higher crude protein, lower acid detergent fiber (ADF), and had higher estimated dry matter digestibility than low moisture untreated bales. The Culbac® treated bales were all bright green in color, contained more leaves and were free of spoilage.

Culbac® Hay for Small Square Bales

	Culbac®	Untreated
Moisture at baling	23.0	13.9
After Storage		
CP, %	18.5	17.1
Digestible protein, %	16.5	15.2
DM digestibility, %	61.7	59.6
ADF, %	34.6	37.3



One-ton bales baled at slightly higher than the recommended 20% moisture. No mold or heat damage present.