

Hay vs. Haylage: Is there a difference?

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Very often there is a gap that exists between an optimal weaning time and availability of cool season forages for grazing in the southeastern US. As summer is coming into full swing, it is important that producers are preparing for the winter months ahead. Whether a producer buys or makes conserved forage (hay, haylage, etc.), it is imperative that proactive actions are taken to ensure a sufficient supply of protein and energy for their cows during the winter. A question that many producers are asking themselves is, 'hay or haylage?'

Feeding hay has been a staple throughout the winter for many producers who either do not plant cool season forages or for those that do plant cool season forages, but still need to supplement their cattle with extra forage. In the Southeast, with the unpredictable weather that we are up against, it can be a daunting task to decide when to cut hay, attempting to choose a week that our hay will not get rained on. When trying to bale hay at 10-15% moisture, a shower from the West can add a few days of drying and nutrient loss to an otherwise successful cutting of hay. With this in mind, many producers are considering rapping their cut forage with about 60% moisture and allowing that forage to ferment creating haylage.

After considering these possibilities, we designed an experiment to evaluate the difference between forage conserved as hay or haylage on organic matter intake and the total tract digestibility of nutrients in growing beef steers. Sixteen Angus and 14 Brangus steers, (average body weight = 538 lb) were randomly assigned to either a Ryegrass hay or haylage diet that was provided ad libitum. By using two differing breeds (Bos Taurus and Bos indicus for Angus and Brangus, respectively) we were able to test whether or not one breed may more efficiently utilize either one of the forages compared to the other breed.

Composition of Ryegrass fed can be viewed on Table 1. There was no effect of cattle breed on digestibility; however, Brangus steers consumed 2.2 lb less than Angus steers regardless of forage conservation method. Furthermore, irrespective of breed, steers on the haylage treatment consumed nearly 3 lb more than those on hay. There was not an interaction of breed and conservation type on intake nor digestibility. Conversely, there were differences in total tract digestibility of certain nutrients between hay and haylage (Table 2). Dry matter and organic matter digestibility were 19% greater for steers consuming haylage as compared to hay. The digestibility of dry matter and organic matter was improved largely due to the 21% increase in total tract digestibility of fiber (neutral detergent fiber).

Despite differences in feed intake, Angus and Brangus steers had similar digestibility of nutrients in the total tract. Very often, when an animal has greater dry matter intake, such as the steers consuming haylage, digestibility is consequently reduced; however, we found the opposite occurred for these Angus and Brangus steers. This could be the cause of possibly 'softening' the fiber through fermentation or something as simple as reducing the lag time of microbial attachment to the fiber.

Now, should Georgia producers start producing haylage rather than hay since digestibility is 19% greater? Unfortunately, the answer is not that simple. As usual, when something is improved, often there are extra costs incurred. Yes, steers consuming haylage averaged 2.2 lbs more intake per day than those on hay, and yes, digestibility was improved, but producers need to sit down and put pencil to paper to decide whether or not the added costs of making haylage is the best decision for their ranch.

Table 1. Nutrient composition of Ryegrass hay and Haylage.

	Dry Hay	Haylage
Nutrient, %		
DM	89.7	51.2
OM	90.0	89.6
CP	12.4	11.9
NDF	69.4	68.3
ADF	41.1	42.0
TDN	56.9	56.2

Table 2. Total tract digestibility of growing steers consuming hay or haylage.

Item	Dry Hay	Haylage	P-value
Total tract digestibility, %			
Dry matter	57.1	67.9	<0.01
Organic matter	57.9	69.1	<0.01
Crude protein	57.9	56.2	0.18
NDF ¹	64.9	74.9	<0.01
ADF ²	58.6	74.9	<0.01

¹NDF = neutral detergent fiber

²ADF = acid detergent fiber



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