

tions may or may not be accurate, but they exist. It is important that hay producers have good management practices to counter such assumptions and allow buyers to overcome that stigma.



- Understand the size of bales that will fit the targeted market.** Regardless of the bale size, produce a solid bale. The size, weight and shape of the bale can have a great impact in marketing strategies because buyers look for convenience (Table 1). Bales need to be moved easily. That means that bales need to be tight, light, and easy to transport. Bale size and density usually limit marketing strategies because payloads are charged base on mileage rather than weight. Loose bales break apart easily and make them hard to load and handle. Calibrate your baler to make firm bales that are easy to handle.

The bale size affects the cost of transporting and handling hay. Thus, the bale type and size helps hay growers identify their target market. Many dairy producers want hay in large square (>1000 lbs) or small rectangular bales (100 to 200 lbs), but not round bales. Horse producers prefer small rectangular bales (50 to 70 lbs) and not large square bales or round bales. Beef cattle producers prefer large round bales (500 to 1200 lbs).

Table 1. Effect of bale size on bale weight and price value on different bale types.

Bale Type & Dimension	Bale Volume (ft ³)	Estimated Bale Weight (lb DM)	Bale size (% of a 5' x 5' bale)	Bale value in relation to a 5' x 5' bale ² (\$)	Price per ton of DM ³ (\$)
Small Square¹					
14"x18"x36"	5	56	5	2.25	--
14"x18"x42"	6	67	6	2.70	--
14"x18"x50"	7	78	7	3.15	--
Large Square¹					
3'x3'x8'	72	807	73	32.85	111.52
3'x4'x8'	96	1076	98	44.10	83.60
4'x4'x8'	128	1435	130	58.50	62.72
Large Round					
4'x4'	50	561	51	22.95	160.42
4'x5'	79	886	81	36.45	101.58
4'x6'	113	1266	115	51.75	71.09
5'x5'	98	1100	100	45.00	81.82
5'x6'	141	1580	143	64.35	56.96

¹Assumes all bales are the same density as a 5' x 5' bale that weighs 1,100 lbs (11.21 lbs/ft³).

²Assumes all factors are equal except bale size and weight.

³Price per ton assuming all bales cost \$45.00 each (the same as a 5' x 5' bale). It does not take into account forage nutritive value or other forage quality factors.

Source: Adapted from Banta, 2010.

- Remember that the cost of transportation will be dictated by the size of the bale.** The cost of transporting hay is a major consideration when selling into any market. Hay profitability can rapidly be consumed by transporting bulky, low value product. Hay packaging is an important way to reduce trucking costs (Table 2). Hay can be packaged as soft or solid -core round bales, or small, medium and large square bales. Soft core bales can be safely baled at relatively high moisture contents, but have less structural density and generally lower weight than hard-core round bales. Small square bales are labor intensive, and vary in density. Medium and large square bales have the greatest density of all bale types, and stack and ship easily. Trucking rates will reflect current fuel prices, so be sure to check with trucking firms to obtain up-to-date hauling charges. Transportation of hay requires knowledge of trucking rules and regulations, not only at the point of loading, but also in the various jurisdictions that the hay will be passing through on the way to its final destination. Knowledge of maximum lengths, widths and weights, permits and phytosanitary or quarantine requirements are also needed.
- Hay storage is an integral part of hay marketing.** Storing the hay properly will reduce quality and yield losses. It is also important to store hay by type, cutting and quality. In other words, separate hay by lots. Leaving space between lots will allow quick and easy access to hay at any time to meet the customer's need. Small square bales are often stored in a barn. Large bales may be stored in a barn, or they could be left outside. Significant storage losses occur in bales that are stored uncovered outside. Storing hay in a barn reduces storage losses but involves additional costs such as loading and unloading cost, shrinkage, fire insurance and barn expense.
- Produce a consistent hay supply and be realistic on the price.** Long-time customers would like to have hay with consistent quality that will minimize adjusting feeding programs. Do not try to hide and sell low-quality bales in the middle of a load. Having a hay production management plan that will account for equipment breakdown will also minimize hay production delays. Meeting the customer's need to the furthest extent possible is part of a successful marketing strategy.

Market price is heavily dependent upon local or regional hay inventories despite of beef or milk prices. When marketing hay, it is always a challenge to come-up with a fair and equitable pricing structure that is simple, but accounts for changes in dry matter, forage quality, and the prices of competitive feeds supplying protein or energy. For average market hay prices visit the Hay Exchange website (http://www.hayexchange.com/tools/ave_price_calc.php) or the Alabama Weekly Hay Report (http://www.ams.usda.gov/mnreports/mg_gr310.txt).



7. **It is important to determine if hay will be sold by the bale or by the ton.** Hay, like many other crops, has a somewhat predictable seasonal price pattern that can be used to make marketing decisions. Although there is not a set farm price for hay, using hay reports to set hay prices will be beneficial. Hay may be priced by the bale or the ton, depending primarily on the volume under consideration. Sales involving less than a ton are usually based on a per-bale price, because it is impractical to have the hay weighed. For hay, prices are usually lower at harvest, and then increase as hay supply begins to decrease. Hay prices in Mississippi usually peak from October to January. Accepting a lower price for hay sold from the field during the harvest season may yield higher returns than delaying purchase until hay is needed when demand is comparatively high. Stored hay shrinks (loses moisture) as it cures. Therefore, about 10 percent fewer pounds of the same hay will be sold from storage than will be sold from the field at harvest. This might be an economic advantage for the buyer, but not for the seller.

8. **Be sure the buyer clearly understands the sale price and terms of sale, the point of sale, responsibility for shipment and any delivery charges associated with the sale.** If a customer is buying hay over the internet, it is important that buyer and seller agree on reasons for buyer's rejection of hay being delivered, how hay will be replaced or money refunded, and how any disputes will be resolved. If hay quality is being taken into consideration, it is important to agree in resampling procedures such as in presence of the seller or truck driver and agree on term and conditions if the hay being delivered does not match the analysis. If the buyer or seller is unknown to each other, checking references prior to buying or selling hay will help to determine how payment transactions or refunds should be made. It might be a good idea to request cash, a certified check or a letter of credit from the buyer's bank before shipping any hay.

Table 2. Effect of bale size and shape on transportation costs¹.

Parameters	Bale Shape and Size			
	Small Square 14"x18"x42"	4'x5'	5'x5'	5'x6'
#bales/load	565	34	24	16
Bale weight (lbs)	67	886	1100	1580
lbs/load	37,855	30,124	26,400	25,280
tons/load	18.9	15.1	13.2	12.6
Cost (\$/ton/100 miles)	\$15.87	\$19.87	\$22.72	\$23.81

¹Assumes \$3.00 per loaded mile for semi-trailer with a 3,392 ft³ capacity based on general transportation regulations (53' L x 8' W x 8' H). This not include fuel surcharge.

²Assumes all bales have a density of 11.21 lbs/ft³.

Source: Adapted from Banta, 2010.

9. **Using resources to market your hay.** An important part of a sound marketing or sales program involves making potential buyers aware of the particular hay type, bale package and quantity available for sale. Using the internet is a valuable tool to market hay through a diverse number of channels. In Mississippi, the Mississippi Hay Directory (<http://msucare.com/livestock/beef/mshayform.html>) provides the opportunity for advertising and selling hay produced in the state. The Mississippi Market Bulletin (http://www.mdac.state.ms.us/n_library/pub_form/mkt_bulletin/index_marketbulletin.asp) is also an effective channel to market hay. The Texas Department of Agriculture has also set up a hay emergency hotline to allow out of state hay being sold in the state. Be aware that there is a Federal Imported Fire Ant (IFA) Quarantine. Baled hay, baled straw and soil are among some of regulated articles of this quarantine. The whole State of Mississippi and ¾ of Texas are in this quarantine (http://www.aphis.usda.gov/plant_health/plant_pest_info/fireants/downloads/fireant.pdf). This means that hay can only move within the IFA quarantine zone. For more information visit the Texas Department of Agriculture Hay Hotline website (<http://www.gotexan.org/HayHotlineHome.aspx>).

Summary

The hay market is variable, with end-use and associated quality requirements being the defining elements of each market. A hay producer can improve profitability of the hay operation by improving yields and quality, and by making the effort to evaluate marketing opportunities and the associated marketing costs, market prices and quality requirements of each targeted livestock enterprise. Remember that hay production requires expensive inputs such as fertilizer, tractors, and baling equipment. It also requires approximately 7 hrs of labor per acre of hay produced. If you are not familiar with the potential hay market opportunities, conduct a market analysis. Talk to other hay growers, extension and agribusiness personnel and members of local organizations such as the Cattlemen's Association. In advertising and merchandising hay effectively over a long period of time, it is advisable to be honest, treat customers fairly, understand and try to fill the needs of customers and be specific about hay available for sale.

Let me emphasize again that hay marketing starts with hay production. Do not waste your time if you are going to grow mediocre quality hay. It takes the same amount of energy via fossil fuels to harvest hay with poor quality as it does good

quality hay. There is money to be made in hay marketing for those producers willing to spend the time and effort on developing a marketing strategy. Increasing yields and reducing costs of production will increase profitability, but effective and strategic marketing is often where the biggest contribution to profit is made. Marketing involves being customer-oriented. It also means listening to buyers and understanding their needs. The drought situation in Texas and Oklahoma has been a unique situation this year and many producers see this as an opportunity to enter the hay market because low quality hay is valuable in such places. However, this will not be the circumstances in the long-term. If you want to be in the hay business, know what your market is, produce for it, and remember that repeat business is always important.

