

# EQUINE REPRODUCTION SVC

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## Understanding Round Bale Hay for Horses



Hay for horses comes in many forms, but the two most common are round bales and small square bales. Both have significant advantages as well as challenges and can be a source of quality forage for horses when managed correctly. In this two-part series, we will explore round and square bales and how to best utilize each. This month's article will focus on round bales.

Before purchasing or putting up hay, remember that forage quality does not depend on size or shape. High-quality (or low-quality) hay can be packaged in round or square, large or small bales. Forage quality is at its peak when harvested at the correct stage of maturity. The extent of quality loss is related primarily to timing, management, and weather conditions. Once baled and stored properly, forage quality losses are minimal over a long period of time. Improper feeding of hay can also lead to quality and quantity losses.

**Process:** Baling hay can be an expensive endeavor. Those costs (plus shipping and taxes) are typically included in the price of the hay. Making round bales requires fewer passes over the field and less time, fuel, and twine compared to making square bales. Hence, round bales are often more economical.

Hay baled at higher moisture levels is more likely to heat, causing forage quality losses and potentially even fire. Before storing round bales inside, allow them to go through a "sweat," allowing the inside bale temperature to return to ambient temperature. See the University of Kentucky article "[Hay Fire Prevention and Control](#)" for more information on this topic.

**Size:** The size of round bales can vary widely depending on the size of the baler and the density of the bales. Round balers can be 4 or 6 feet wide and produce bales ranging from a few hundred pounds to nearly a ton.

Weight also depends on the type of forage baled. Legumes are denser than grasses, so a bale of alfalfa will likely weigh more than a similarly sized bale of grass hay. Water is less likely to percolate into more densely packed bales, so denser bales will hold forage quality better when stored outside.

**Storage:** Ideally, property owners should store all hay inside. However, round bales are commonly stored outside. Outside storage exposes hay to the elements; exposure to moisture can significantly reduce forage quality.

Moisture, in the form of rain, dew, snow, or soil, absorbed from the ground degrades forage quality in two ways. First, water-soluble nutrients, including carbohydrates, vitamins, and minerals, leach from wet hay. Moisture also allows bacteria and fungi to thrive; these organisms feed on protein, carbohydrates, and fiber in the hay, reducing quality and producing dangerous byproducts.

If you must store round bales outside, place them on rock or wood pallets to prevent moisture wicking from the ground. Place bales with flat sides butted firmly together but round sides not touching. Cover bales with heavy-duty tarps, if possible, and avoid storing them under trees, which increases the amount of moisture the bales absorb and prolongs drying.

Never stack bales when storing outside unless they are tarped. One study on round bale storage documented 43% loss and 66% animal refusal when stored on the ground, compared to 2% loss and 3% animal refusal when stored in a barn. Round bales that are held together using "net wrap" shed water better than bales with twine, so net wrapping is preferred when storing uncovered.

**Handling:** Because you can only move round bales with a tractor or other machinery, this hay form might not be an option for small farms with limited equipment. When feeding large groups of horses, though, the ability to quickly put out a large bale of hay can make feeding easier and less physically demanding on staff. Pulling off large sections of hay by hand and dragging them into stalls is possible, but extremely labor-intensive. When feeding round bales inside, most farms unroll the hay and fork hay into stalls; mechanized unrollers can speed up this process.

**Feeding Losses:** Feeding losses are a major concern when feeding any hay. Hay producers invest significant effort, time, and money into growing, baling, and storing hay, only for horses to waste it. Round bales stored outside and exposed to the elements often develop a deteriorated outer layer that horses refuse to eat.



Reduce feeding losses by using any number of hay feeders, including rings or nets to keep animals from trampling the hay.

Photo: University of Kentucky's College of Agriculture, Food, and Environment

Time also increases waste. If a round bale is fed to a small number of animals, they will trample more of it. Reduce feeding losses by using any number of hay feeders, including rings or nets to keep animals from trampling the hay. Covered feeders help limit trampling and weather exposure. Hay feeders come in many styles, types, and sizes and should be carefully evaluated to select one that works best for your operation. See the University of Minnesota article "[Selecting a Round-Bale Feeder for use During Horse Feeding](#)" for a comparison of feeder types.

Remember that some feeders require equipment to lift and move. Herd dynamics might also play a role in the type of hay feeder selected. In extremely large herds that consume a round bale in 24 hours or less, unrolling hay might be the best option to allow access for all horses at once.

**Safety:** Because round bales are often exposed to more moisture compared to square bales, they come with a greater risk of mold and botulism. In most cases, mold will do no more than cause forage refusal, but the dustiness created by mold can lead to respiratory problems.

Botulism is a common bacteria found in the soil. It can thrive in wet hay and has been known to infect horses. The best way to prevent botulism is to purchase quality hay that has been stored properly and to feed it to horses as soon as possible. A botulism vaccination is available. Consult your veterinarian for details. For more information about botulism, see the University of Kentucky article "[Botulism: A Deadly Disease that can Affect Your Horse](#)."

**Summary:** Equine operations might find benefits in using round bales. Round baling forage is less expensive than square baling, but proper storage is key to maintaining forage quality and reducing losses. Feeding several horses in a pasture or drylot is easier using round bales, but requires special equipment. Hay feeders, such as rings, nets, or huts, will greatly reduce feeding losses. As always, grazing is far less expensive than any form of hay; good pasture management year-round will prolong grazing and reduce the need for hay.