

Safety Watch: Safe handling could prevent hardship caused by hay bales

By Stephanie Leonard
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An enclosed operator compartment and an attachment designed to hold bales improve bale handling safety.

Photo by Stephanie Leonard

bale 1 n. : 1. a large bundle of raw or finished material tightly bound with twine or wire and often wrapped.

bale 2 n. : 1. great evil; harm; misfortune. 2. woe; misery; anguish; sorrow.

Large bales: They're massive, unyielding and inert, and indispensable in the livestock industry.

Mishaps with these three-quarter-ton articles we make and transport can result in a not-

so-familiar definition of “bale”: harm, misfortune, anguish.

Bale fires are one misfortune, but they don't compare with loss of life.

Dangerous situations

Consider some of the tragedies in recent years:

A farmer in Iowa died when a large bale he had just stacked fell on him.

One of several round bales lost from a semitrailer struck an oncoming pickup, causing a crash that killed both its passengers in Minnesota.

A South Dakota man was unloading large bales from his semitrailer when “one got loose and crushed him.”

A 10-year-old in Iowa died after a round bale that was being moved with a skid loader fell off the equipment and rolled over him.

In two different incidents in Iowa, truck drivers died when they were struck by large bales that fell off their trailers. Both victims were standing on the ground on the opposite side of the trailer from where bales were being unloaded. Unloading from one side caused bales to shift and topple off the other side, unbeknownst to the unloading operators.

A man was injured in a multi-vehicle accident in Illinois when a rear-end collision of two hay-hauling trucks caused a round bale to fall off and strike his vehicle.

In two separate incidents in Iowa, farmers died in tractor rollovers that resulted when their tractors drove up over bales that fell off their front loaders.

An Iowa farmer moving bales was struck and killed by a raised bale that rolled backwards off the front loader into the tractor operator's area.

An Iowa man died after he was struck by a raised bale that fell apart while he cut the wrapping.

An Iowa farmer's tractor overturned and pinned him when he used it to try to stop a round bale from rolling downhill; the tractor ran up on onto the bale and overturned.

A Wisconsin man died after he was trapped under a large bale of corn stalks.

The scenarios that can turn into a worst-case outcomes, when gravity or unanticipated movement put a bale into motion, include these:

- when bales are raised at an elevation above you or others
- when bales are stacked precariously
- when trailers are loaded and unloaded
- when any coworkers, bystanders or kids are in a work area during bale handling
- when you're moving bales with a tractor or equipment that is not equipped with FOPS (falling object protective structure) or full cabin ROPS
- when the equipment you are using is balancing or cradling the bale, instead of securely grabbing and holding it
- when bales are hauled unsecured on beds and trailers

Safe and secure

Q: What over-the-top tiedowns are needed to safely secure a load?

A: The minimum number of tiedowns depends on the length and weight of articles in the load, and if the load is prevented from forward movement (i.e., with blocking, bracing or other cargo).

When the article is not prevented from forward movement and:

Minimum tiedowns needed

- | | |
|--|--|
| ● length is 5 feet or less; weight is 1,100 lbs. or less | 1 |
| ● length is 5 feet or less ; weight is over 1,100 lbs. | 2 |
| ● length is over 5 but less than 10 feet, regardless of weight | 2 |
| ● length is 10 feet or more, regardless of weight | 1 for every 10 feet and fraction thereof |

When the article is prevented from forward movement:

- | | |
|------------------------|--|
| ● regardless of weight | 1 for every 10 feet and fraction thereof |
|------------------------|--|

All tiedown assemblies are assigned a Working Load Limit (WLL) that designates the dependable strength of the tiedown assembly. The aggregate WLL for all tiedown assemblies used to secure the load must be at least 50 percent of the cargo weight. Tiedown condition, anchor points and inspection also factor in.

Safe handling and transport

You can reduce the risks of injury and property damage with safe practices:

- Use equipment with FOPS or enclosed ROPS that protect the operator compartment.
- Use equipment attachments designed to grab and securely hold large bales: bale spears, bale squeezers, grabbers, grappler hooks and bale hugger arms.
- Keep the bale on a front attachment as low as possible during transport.
- Keep the area on both sides of a trailer clear of bystanders during loading and unloading.
- Maintain a line-of-sight and communication with helpers and truck drivers during loading and unloading. Don't unload until tiedowns are off and drivers are out of range.
- When you're transporting by trailer, secure your load to keep it from tipping, shifting, and falling.
- Maintain a generous following distance when you're driving behind trailered bales; you'll have better visibility of the roadway and the reaction time and distance needed to avoid a falling load.
- Don't try to stop a bale that starts to roll. You won't be able to.
- Stand clear of any raised bale.

Let's prevent situations where a bale is the source of harm and anguish.

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