Safety Tips while Moving Large Hay Bales

Large, round bales provide an efficient and economical way to harvest hay; however, they also pose safety problems. The bales can weigh 1,500 to 2,000 pounds—the weight of a small car. Large, round bales are bulky and heavy. The bales are designed to repel rain and prevent spoilage; their shape allows them to easily roll down inclines or off raised loaders.

The National Institute for Occupational Safety and Health (NIOSH) estimates that approximately 75 agriculturalists were killed from 1992 through 1998 while harvesting, handling, or working near large round bales and bale-handling equipment. Forty-two of these workers were killed while preparing bales for transport or while moving them. Tractors were involved in 34 of these 42 incidents. In a number of these deaths, rollover protective structures (ROPS) on tractors and handling equipment were not used, and parked tractors were not secured to prevent them from rolling.

Case in Point

Farmers and ranchers are at-risk of being struck by bales that fall from equipment during transport:

A 70 year old farmer died from injuries received when a large, round bale fell out of the bucket of a tractor-mounted front-end loader.

The bale pinned him against the tractor seat. The loader did not have a grapple or spear for holding bales in place. Instead, the farmer had tied the bale with a 5/8-inch diameter rope. The rope broke, and the bale tumbled down the loader lift arms, striking and killing the farmer. (Minnesota Department of Health)

Preventing Injury or Death

To reduce the risk of injuries and deaths, NIOSH recommends the following:

- Rig tractors with ROPS and a seat belt. Use the seat belt even when driving tractors with ROPS.
- Make sure equipment is in good repair, weighted properly, and able to carry the load safely and securely.
Before beginning work, plan the safest travel path. Whenever possible, use paths that are flat, firm, free of obstructions, and a safe distance from holes, ditches, and ruts.

When stacking, loading, or moving bales with a front-end loader, use attachments designed to handle large bales, such as grapples and front-end bale spears.

Do not raise or lower loaders while the tractor is moving.

When moving bales but not stacking or loading them onto trailers, use tractors having a rear-end bale spear attachment if possible.

Use tractors with headlights, taillights, and warning flashers and turn them on when moving bales. Be sure the lights are not obstructed when bales are moved with attachments in the safe, lowered position. Moving bales during daylight hours is preferred.

When moving up or down sloping land, keep the bale on the upslope end of the tractor with the attachment in the lowest possible position. For example, if using a front-end loader, the operator should drive uphill or back downhill. If a rear-end spear attachment is used, drive downhill or back uphill.

If the operator must leave the tractor, lower the attachments, stop the engine, remove the key, and secure the tractor to prevent it from rolling.

Make sure tractor front-end loaders are counterbalanced. Check that axles and tires are strong enough to cope with the maximum loads imposed on them. Don’t exceed the rated capacity of lifting machinery.

Transporting and stacking large hay bales have resulted in numerous injuries and deaths. Many of these incidents could have been prevented had equipment more suited to the job been used and more care taken by the operators when using the equipment. **Assess the risks before you start.**

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**For more information**

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