Training Module: Working with Large Round Bale Equipment

Objective: To know how to prevent possible accidents when working with large round bales and equipment.

Trainer's Note: It is important to remember that these bales are very heavy and are able to roll. Informally discuss with employees how to accomplish work objectives safely. It will be helpful to review the module on tractor safety, cutterbar safety,and PTOs with this discussion.

Background

Usually baling must be done quickly and efficiently. Changing weather conditions can devalue the crop. However, no crop, no matter how large or valuable, is worth an unnecessary injury or death. Careless operation that saves time but endangers workers is foolish. Slow down and use common sense.

Conditioners and Mower-Conditioners

This equipment uses crimping or crushing rolls to condition hay so it will dry faster. The conditioning rolls are PTO-powered. They pull the hay between them, and throw the hay out of the back of the machine. The rolls may pick up a stone or other object and throw it out also.

Some mower-conditioners have rotating, steel impeller tines which are also PTO-powered. They are rotating at 600 to 900 rpm, and can also fling rocks or other objects out the back. **It is important not to have anyone standing near the rear of a conditioner or mower-conditioner.** If service is needed, the PTO should be disengaged and the engine shut off. The rolls or impellers can grab your hand or clothing in an instant. All machine hoods, covers, or shields should be in place as recommended by the manufacturer.

Round Balers

Equipment that produces large round bales provides an efficient and economical way to harvest hay. However, it also poses safety problems. Large round bales can weigh 1500 to 2000 pounds, similar to a small car. Large round bales are bulky as well as heavy. The bales are designed to repel rain and prevent spoilage, however, their round shape allows them to easily roll down inclines or off raised loaders.

Another potential hazard of hay baling is the heat, since hay harvesting is normally done in hot weather. Heat can cause the operator to become fatigued and frustrated easier. Add to these factors the human tendency to misjudge reaction time around aggressive equipment, and the result is a potentially dangerous situation.

To avoid accidents when working with a round baler:

- Replace broken or worn parts. A baler with broken or missing pick-up tines, loose belts, and other damaged parts will not feed material properly into the bale chamber.
- Always lubricate sprockets and chains when the machine is turned off.
- Make sure the twine is properly threaded and the twine arm is adjusted and in good working condition. **Do not feed twine by hand into the baler.**
- Set the baler pick-up at the manufacturer's suggested height and operate the power take-off at the suggested speed.
- Travel at a speed at which the machine can handle the width and size of the windrow to avoid clogging and other equipment problems.

- Observe all safety precautions applying to PTO and hydraulically operated machinery.
- Always be sure the PTO is disengaged and the engine shut off before dismounting to service or adjust the baler. This also includes unplugging the baler.
- Keep all shields and safety guards in place.
- Always lock and block the rear gate if you must be underneath it. This will prevent the gate from falling on top of you if the hydraulic system fails.
- During baling, drive on a contour so that released bales do not roll down a slope.
- Make sure the rear of the baler is clear before ejecting a bale.
- Be prepared for a fire. Carry a Class ABC fire extinguisher on your tractor (Refer to the Fire Extinguisher module).

Moving large round bales

Due to their large size and weight, round bales affect the stability of equipment used to handle them. Check the baler owner's manual for charts regarding the size of the tractor and loader required to safely lift and transport large round bales. Always adjust the tractor wheel tread to the suggested setting to assure that the tractor can maintain balance and avoid rollover. Be sure the load being pulled is no heavier than the pulling unit. Five or six bales on a trailer may give a weight of 9,000 to 10,000 pounds.

When transporting large round bales:

- For the best stability, keep the bale on the up-slope side of the tractor.
- Avoid driving across a slope.
- Drive slow and carry the bale low.
- Avoid sudden movements and turns.
- When a bale is rolling don't try to stop it, even with a tractor.
- When using a front-end loader always use a grapple hook. It will prevent the bale from rolling back onto the loader arms.
- A rear-mounted loading spike is ideal because it eliminates the danger of roll-back and it does not block the operator's forward vision.
- For maximum control, insert the spike into the center of the bale.
- Wagons used to haul bales should be of sufficient width and have end racks to prevent bales from moving off either end during transport.
- A bale should never be carried on the front end loader while pulling a loaded wagon.

Review The Following Points

- The large size and weight of round bales affect the stability of equipment used to handle them.
- Disengage all power before attempting to service hay equipment.
- Consider field conditions when harvesting and select the proper ground speed.
- Always lock and block the rear gate if you must be underneath it.
- Remember low and slow when moving large round bales.
- Use a grapple hook if a front-end loader will be used for bale transport.

True or False Answer Key

1. T, 2. T, 3. F, 4. F, 5. T

Working with Large Round Bale Equipment Quiz

True or False **Name**_____

1. All power should be disengaged before attempting any service to machines.	T	F
2. For transporting large round bales, a rear-mounted loading spike is ideal.	T	F
3. The size and weight of the round bales does not affect the stability of equipment used to handle them.	T	F
4. When in a hurry, it is acceptable to leave the engine running to make a quick adjustment to the baler.	T	F
5. Large round bales weigh about as much as a small car.	T	F