

## Training Module: Using Hay Harvesting Equipment Safely

**Objective:** To be able to identify the hazards associated with hay harvesting and know how to prevent possible accidents.

**Trainer's Note:** Often hay crops are grown on ground too rough, steep or unsuitable for row crops. Taking safe preparations in these areas is especially important for safe operation. 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.

### Square Balers

Balers can cause considerable harm if not serviced and operated safely. Knives and mechanical arms must be regarded with extreme caution. Driving at the correct ground speed will help eliminate possible breakdowns.

If service is needed, follow these procedures for safety:

- Disengage all power.
- Shut off the engine.
- Wait for the flywheel and all other moving parts to stop completely.

### Other recommendations for safe baler operation:

- While someone is working on the machine knives, never allow anyone to turn the flywheel. Moving parts can easily injure someone.
- Be sure bale twine or wire is properly spliced and threaded in the machine to avoid knotter problems.
- While the knotter is in operation, never pull anything out of it. You can easily become entangled in it.
- When the machine is running, don't hand feed material, such as broken bales or heavy windrows into it. Instead, spread the material on the ground so the machine can pick it up.
- Wear close fitting clothing, no hooded shirts or jackets with drawstrings, and tie hair back.

## **Bale Ejectors**

The two most common bale ejecting or throwing mechanisms are hydraulically powered, high speed belts and bale-throwing frames. Since those mechanisms can throw heavy bales of hay, they can seriously injure people. Also, you could be struck by a bale as it is ejected, or by the throwing frame and pan if you are too close.

### **Safety precautions to take with bale ejectors:**

- Disengage all power, shut off the engine, and move the ejector lockout control into locked position before inspecting, servicing, or adjusting the bale ejector.
- No one should stand behind or work on the ejector while the PTO and engine are operating, or while a bale is in the ejector.
- Shut off tractor engine, disengage the PTO, and engage ejector lockout control before hitching or unhitching wagon behind ejector.
- Don't allow anyone to ride in the bale wagon.

## **Manual bale loading**

Manual bale loading is safe if it is done carefully. The nature of wagons and bale handling requires extra caution due to the following potential hazards:

- Starts and stops can cause handlers to fall off the wagon or truck.
- Workers might step off the wagon or truck while loading bales.
- Falls from the wagon or truck can result in fractures, sprains, and concussions or getting run over.
- Tossing bales could knock someone off balance.
- Use hand signals to communicate when working with baling equipment (refer to Hand Signaling module).

## **Review The Following Points**

- Disengage all power before attempting to service to all hay equipment.
- Consider field conditions when harvesting and select the proper ground speed.
- Use recommend hand signals when working with harvesting equipment.
- Watch for the safety of fellow workers when using harvesting equipment.
- Enforce the "no riders" rule.
- When working with any hay harvesting equipment, practice PTO safety (refer to PTO module).
- Utilize the ejector lockout control when working on the bale ejector.

**True or False Answer Key**

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

## Using Hay Harvesting Equipment Safely Quiz

**True or False**

**Name** \_\_\_\_\_

- |   |   |   |
|---|---|---|
| 1. All power should be disengaged before attempting any service to machines.  | T | F |
| 2. Use the recommended hand signals when working with harvesting equipment.   | T | F |
| 3. The bale wagon is a good place for people to ride.   | T | F |
| 4. To hitch or unhitch a wagon behind an ejector, the tractor engine should be shut off, the PTO disengaged, and the ejector lockout control engaged. | T | F |
| 5. No crop is worth the risk of injury or death due to unsafe working conditions.   | T | F |