

Bale safety part 2 – moving and transportation

Purpose:

To promote safe working practices when moving and transporting bales.

Why:

To help prevent accidents and fatalities to operators, contractors and pedestrians/ road users when loading or transporting bales

TIAH Capability Framework area:

This aligns with the knowledge and skills in the Health and Safety area.

<https://tiah.org/tiah-capability-framework>

Talk leader instructions:

- Prepare to do the talk in a suitable/quiet location with no distractions
- Consider using some of the resources as part of the talk, e.g. showing a video
- Engage with participants, ask questions and give everyday examples
- Conclude with a brief review
- Get everyone to sign the form. Make sure to write the name of the farm and the date. Keep a copy in your Health and Safety records
- Ensure all participants have access to a copy of this document to refer to once the session has finished. This could be electronic and emailed or printed

Background

Working with bales poses significant risks, whether they're stacked in the farmyard or being transported, so it's important to be aware of these risks to help keep yourself and others safe.

A large high-density bale can weigh up to 600kgs which can cause life changing injuries or even fatality if it fell on you.



As well as safety implications, there are also risks to the business if you don't comply with the law. The law states that you must ensure the load is secured so that the use of the vehicle or trailer does not involve a risk of danger or injury to any person.

When working with bales, you should always follow a risk assessment and plan the task with your supervisor or manager. They will also have a safe system of work in place for each task associated with bale handling activities including guidance on emergency procedures so make sure to ask about these.

Main learning points 8 minutes

Vehicles and equipment

You must be fully trained and competent when working with bales and aware of the risks associated with any machinery you use. You must follow the guidance below:

- Only use well-constructed and properly maintained machinery that's designed for a specific purpose
- Tractors with fore-end loaders used to move bales should have approved, well-maintained and have enclosed cabs with a rollover protection system (ROPS) and falling object protection (FOPS)
- Seat restraints should be fitted and worn
- Only use trailers or vehicles that allow loads to be secured to them
- Check axles and tyres are strong enough to cope with the maximum loads imposed on them
- Consider the weight of any load and handling equipment attached – you can find this information in the machine's instruction manual
- Don't lift or stack higher than the machine is capable of
- If driving a loader or telescopic handler that obscures your vision, don't carry a bale/bales on it
- Bale/hay racks etc., must be securely attached to trailers
- Loads must be stable – roping an unstable load won't make it safe
- If operating a tractor, be aware of the risks associated with the centre of gravity, especially with a front-end loader
- Make sure tyre pressures are set correctly
- Make sure trailers are securely connected to their tractor or towing vehicle
- Check that equipment such as clamps, grabs and spikes are suitable for the type of bale you're handling



Remember: To keep the load as low as possible, use the controls smoothly, avoiding jerky movements and don't travel too fast! You must also make sure there's sufficient ballast on the front and rear to help balance the load, otherwise it could be dangerous in the field and on the road.

Notes:

Suggestions/ ideas:

What the law says - Q&A

Q: What do you think could happen if you're caught driving a vehicle in a dangerous condition?

A: According to the Road Traffic Act 1991 it's an offence for driving a vehicle in a dangerous condition which could result in a £5000 fine, three penalty points and disqualification. It's also an offence for dangerous driving which could result in two years imprisonment.

Q: whose responsibility do you think it is to ensure loads are checked and sufficiently secured?

A: Although it's the responsibility of the farm owner or manager to ensure that vehicles are suitable, and properly maintained, and that you've received sufficient training, it's your responsibility to always follow best practice, check loads are sufficiently secured, and report any damage or defects.

Ensure you follow instructions and consider the effects of weather, different ground conditions, tracks and gateways.

Make sure you are aware of your duties under road traffic legislation. If in doubt, you can check with your manager or with the Department for Transport or local Police.

De-staking bales

Q: If you're removing bales from a stack or load either by hand or machinery, you should always follow the HSE advice. Do you know what this is?

Responses might include:

- De-stack in the reverse order – don't remove bales from the bottom or middle of the stack. It will cause the stack to become unstable
- Never leave overhanging bales unsupported
- Don't physically push big bales off. Always use mechanical handling equipment
- Be aware of the risks involved when manual handling small/conventional bales
- Be aware that the bales may settle when de-stacking

Loading and transporting

When loading a vehicle for transporting bales, lashings must be used if the height of the load exceeds the height of any headboards, tailboards or sideboards.

Lashings which provide forward restraint must be as near horizontal as possible and never more than a 60° angle, because the effort required to restrain the load increases sharply as the lashings approach the vertical position. Make sure there's at least one lashing on each column of bales with additional cross straps at the rear.

Rope hooks are not suitable for securing loads as they're not built to a specified standard. **For further guidance refer to the GOV.UK website- Securing loads on HGVs and goods vehicles <https://www.gov.uk/securing-loads-on-hgvs-and-goods-vehicles>**

Each column of bales should be strapped with additional cross-strapping at the rear, or strapping along each row of bales, with a least two additional straps each on the front and rear columns.

Overhead power lines (OHPLs)

Make sure loading equipment, such as telescopic booms and the masts of fork-lift trucks etc., are lowered when passing under OHPLs.

The poster on the next page can be printed out and put on your notice board to remind your team how to load bales correctly.

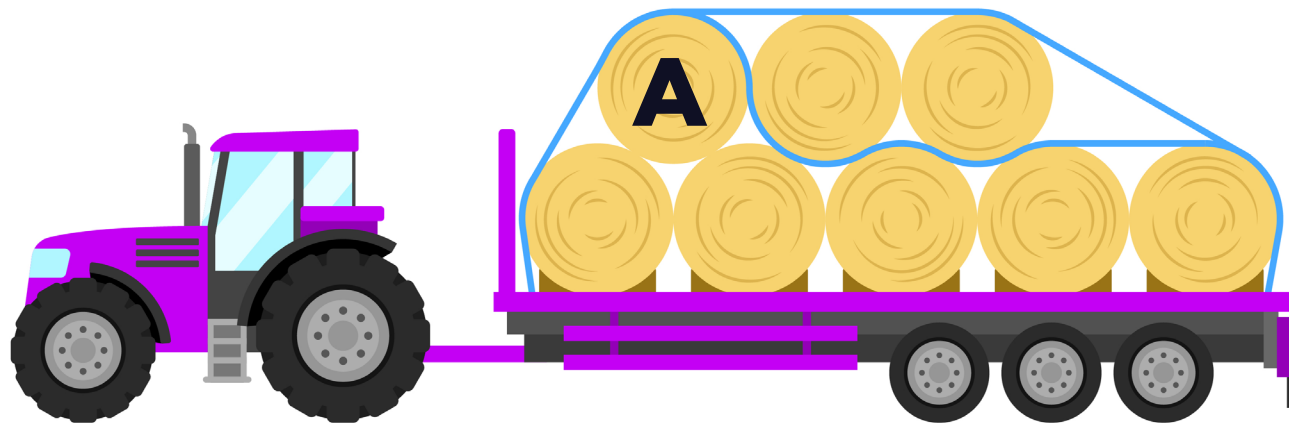
SAFE BALE LOADING

Load bales correctly to help keep you and others safe



Round bales

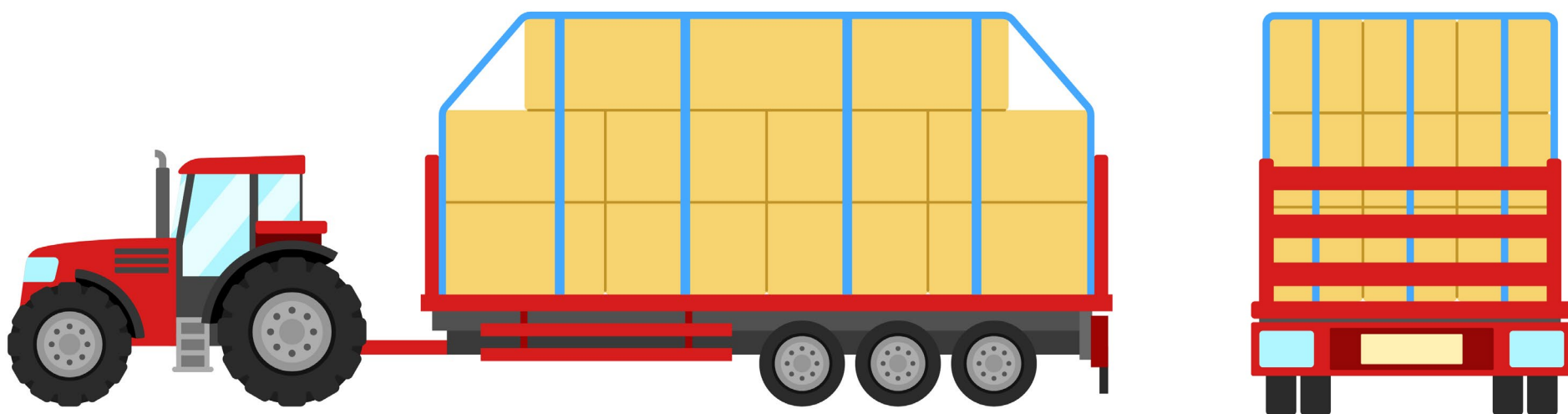
- Round bales can be transported either on-end or on their side across the trailer
- The DfT advise that if the length of the bale is less than twice its diameter, they should be placed on end
- Each row must contact the one in front, with rear bales chocked to prevent rolling backwards. Use extra packing to prevent rolling where required
- A loading arrangement as highlighted in the diagram below, should be followed – after loading and securing the bottom layer on the bed and the first roll of the second layout (A) has been loaded, the over lashings must be laid over 'A' and along the top of the bottom layer. Don't apply tension to the lashings at this stage
- Load the remaining rolls after which the 'between layers' are secured to the rear of the vehicle and 'tap-over' lashings applied



- **If loading round bales on their end**, lashings must be used to prevent sideways movement and further cross lashings applied
- If on their side, bales should have at least one cross lashing for each
- If there's more than one layer, the rearmost bale must be restrained by lashing or blocking against forward motion

Square bales

The below covers Conventional/Flat 8, Hesston Bales, Quadrant Bales, $\frac{3}{4}$ Hesston and Mini Heston and wrapped bales.



- Stack bales tightly to reduce the risk of them moving
- Each bale on the top layer should be placed over the crack of the bales on the lower layers to bind them in
- Use the widest and most compact bales at the bottom to ensure a stable and secure foundation
- Bales should be stacked with the string on the top/bottom of the bale.
- Always use tailboards, headboards, and sideboards if available
- If the stack exceeds the height of the above, lashings must be used
- At least one lashing on each column of bales is required with additional cross straps at the rear

Loading formats based on: NFU – Get a handle on your bale stacking <https://www.nfuonline.com/updates-and-information/safe-loading-of-bales-what-you-need-to-know>

Notes:

Suggestions/ ideas:

Discussion points 10 minutes

Choose two of the following discussion points to discuss with your team and complete the remaining two at another time.

Q: What should you consider if using bale spikes?

Responses might include

- Use two or more spikes, if possible, to ensure a bale is held securely and to reduce the risk of a bale spinning or coming loose - longer spikes are safer
- Fix bales securely otherwise the weight of the bales on the end of the spikes may cause the spikes to snap
- Spikes should not protrude so far through the bales that they are a danger to others
- Remove, fold back or cover spikes before travelling on the highway and when they're not required, so that they're not a danger to people and other road users
- Always follow the safe stop procedure before dismounting a tractor or mobile machine. Fatal accidents have happened when people haven't followed safe stop and were impaled by a bale spike or crushed by the machine

Q: How can you help keep others safe when moving/transporting bales?

Responses might include:

- Check around before moving off, particularly for children and young people who may be in your 'blind spot'
- Before setting off ensure all people are well clear of the driving route
- Never carry passengers on loads or bale transporters
- Never allow anyone to ride on any machinery, particularly the drawbars of trailer units
- Make sure people are kept away from stacks during stacking and de-stacking, particularly when vehicles and machinery are being operated
- Make sure mirrors on tractors and telescopic handlers are fitted and properly maintained and adjusted. If you find a mirror is cracked or broken it could obscure your view, so report this immediately to your supervisor

Q: What should be included in a risk assessment when assessing your load?

Responses might include:

- The journey – length, type of roads, traffic and other potential obstacles such as low bridges
- The type of load – weight, size, shape
- The type of security used – consider how you're minimising the risks
- Weather conditions
- Experience of the people loading and unloading the vehicle
- working at height
- Manual handling
- Trailer coupling and uncoupling
- Separating pedestrians from vehicles



Q: When manually removing bales from a stack, you should be aware of the risks from falling bales. What shouldn't you do when de-stacking?

Responses might include:

- Try to free jammed bales
- Pick-up bales with broken strings
- Work too closely to the edge of the stack
- Stand on a loose bale – it could easily collapse

For more on bale safety, download our other Toolbox Talk: Bale safety part 1 – stacking and storage from our Learning Hub: <https://tiah.org>

Incorrect moving, loading and transportation of bales poses a high risk and can lead to serious injuries and fatalities. Therefore, it’s essential that anyone working with bales, is fully trained and competent and is aware of the risks and how to reduce them, to keep themselves and others safe.

Resources:

HSE: Safe working with bales in agriculture: <https://hse.gov.uk/pubns/indg125.pdf>

HSE: Bales and bale handling: <https://hse.gov.uk/textiles/bale-handling.htm>

NFU: Get a handle on you bale stacking:
<https://www.nfuonline.com/updates-and-information/safe-loading-of-bales-what-you-need-to-know>

Farmers Guide: A guide to bailing safety: <https://www.farmersguide.co.uk/business/farm-safety/a-guide-to-baling-safety>

Irish Farmers Journal: Stay safe during silage bailing:
<https://www.farmersjournal.ie/focus/baled-silage/stay-safe-during-silage-baling-157194>

HSE: Working safely near overhead power lines: Working safely near overhead electricity power lines AIS8 (hse.gov.uk)

HSE: Safe use of big round balers: AIS4 - Safe use of big round balers (hse.gov.uk)

NFU: Transporting vehicle loads safety – guidance on the rules: <https://www.nfuonline.com/updates-and-information/transporting-vehicle-loads-safely-guidance-on-the-rules/>

Toolbox Talk participants

Toolbox Talk: **Bale safety part 2 – moving and transportation**

Name of farmDate

Talk leader name.....

Name	Signature	Date