



Safe use of forage harvesters

Agriculture Information Sheet No 24

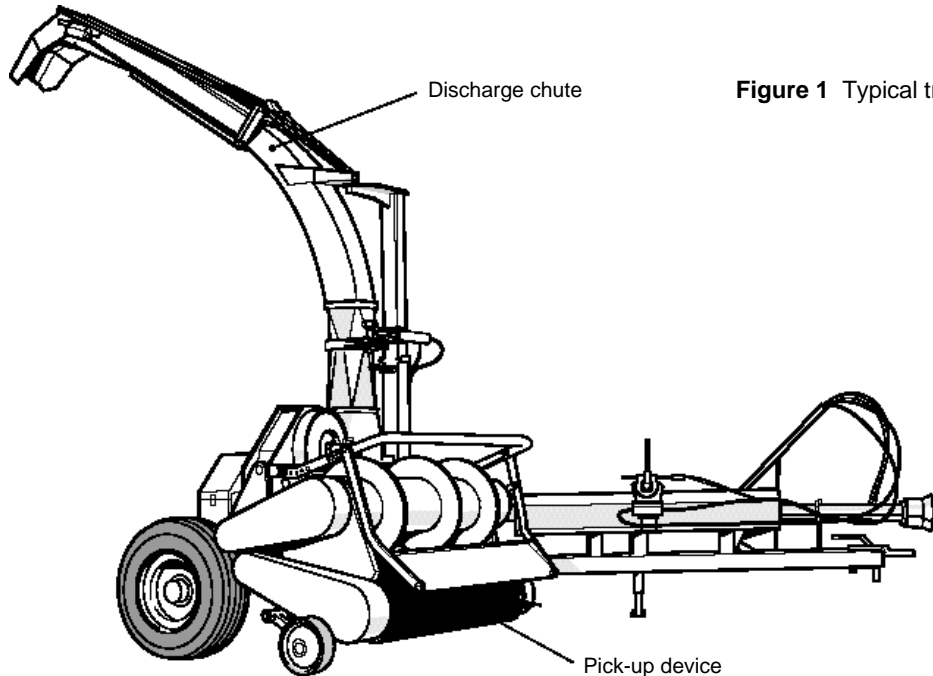


Figure 1 Typical trailed forage harvester

Introduction

Between 1986 and 1999, the Health and Safety Executive (HSE) investigated 74 serious accidents involving forage harvesters, one of which was a fatality.

This information sheet outlines the main hazards arising from the use of forage harvesters (foragers), both trailed and self-propelled, and gives advice on how to use them safely.

The risks from using your machine should be identified and precautions put in place to reduce them.

Different types of forager and attachments (eg a rotary maize header) may have particular features which should be considered when you assess the risks and decide on appropriate precautions. Remember:

- Make sure all operators are provided with the instruction manual and are aware of the risks and the safe operating procedures. They should particularly be aware of the safe use of the machinery, clearing blockages and the recommended procedure for sharpening the knives.
- Make sure that you, your employees, or contractors are properly trained in the safe use of the forager and have seen this sheet.
- Make use of relevant training courses (such as

those run by Lantra, agricultural colleges and manufacturers/dealers). They will help ensure the safe and efficient use of your forager.

Hazards

The hazards are:

- the exposed rotating cutterhead while sharpening;
- the moving drive mechanisms;
- guards fouling the rotating cutterhead;
- contacting overhead power lines (OHPLs), particularly with self-propelled machines;
- being trapped or injured by the header;
- clearing blockages from the spout/header while the machine is in motion;
- contact with silage additives;
- the sharpening stone being ejected or breaking up during sharpening;
- falling while adjusting the spout;
- noise and vibration.

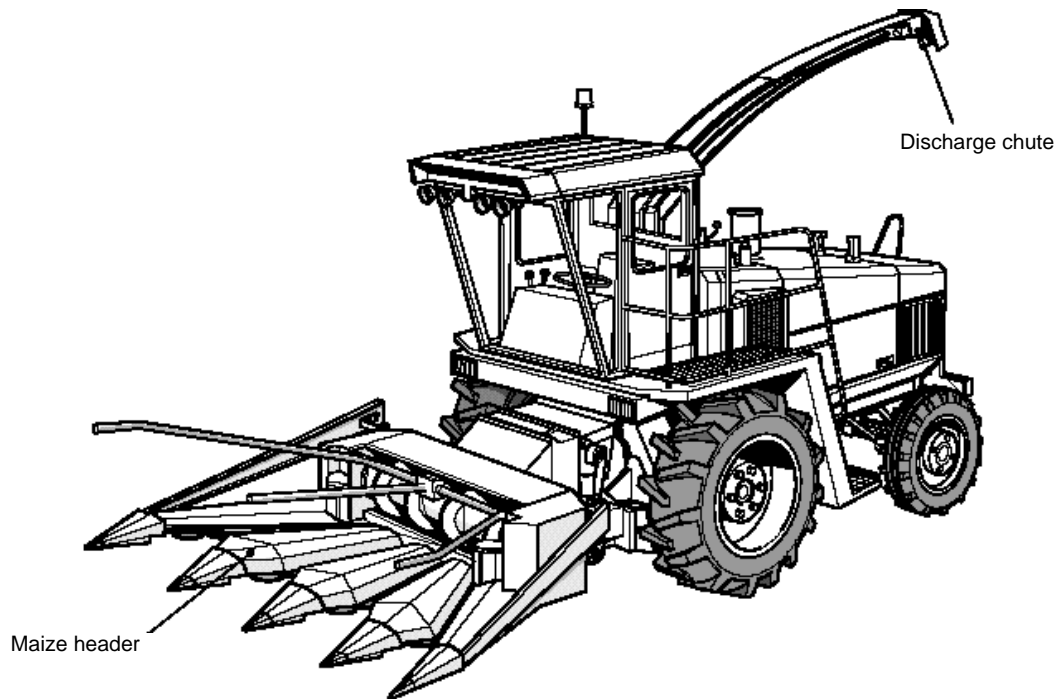


Figure 2 Typical self-propelled forage harvester

Do:

- make sure anyone operating the forager has read and understood the instruction book;
- follow the manufacturer's recommendations and procedures for sharpening the knives;
- when sharpening the knives on trailed machines, stand in the position recommended by the manufacturer - **do not** lean over the sharpening mechanism;
- wear recommended personal protective clothing, eg safety goggles, when sharpening;
- allow for the run-down time of the cutting mechanism before opening any guards;
- use any reversing mechanism to wind out blockages from headers;
- follow correct procedures for clearing blockages in chutes;
- take care when working on steep ground. This is particularly important when using a trailed forager with a towed trailer;
- use mechanical handlers or handling aids when placing full additive containers onto the forager. It may be easier to top up the forager-mounted container from a bulk tank using a transfer pump;
- make sure all guards are in position and correctly fitted before starting work.

Don't:

- attempt to clear any blockage unless the engine and the cutterhead have stopped and the ignition key has been removed;
- expose the knives for any reason (eg sharpening) unless the cutterhead has stopped rotating;
- attempt to open or close the cutterhead guards unless the cutterhead has stopped rotating;
- carry out maintenance work on a forager that has been applying additives unless suitable precautions are taken, eg thoroughly wash it down with **cold** water;
- carry out maintenance with the engine or tractor running;
- extend the spout when under or near OHPLs;
- carry passengers in the forager or tractor cab unless seated in a proprietary passenger seat;
- let people jump on or off the tractor or self-propelled forager when it is moving.

Overhead power lines (OHPLs)

Check the location of OHPLs in every field when using a self-propelled forager. You must plan your work to avoid the spout being raised when under them. All self-propelled harvesters at maximum height can get close enough to touch or induce arcing from the lowest legal height of power lines.

You should have a safe system of work when using a forager in fields where OHPLs are present. This may form part of your written safety policy, but as a minimum it should include:

- knowing the overall height of your machine and OHPLs. (Remember that aerials, chute extensions etc will affect the overall height of your forager.) A warning sign in a prominent position in the cab as a visual reminder is a good idea;
- using appropriate farm maps as reminders when planning daily work. Contractors should ask for information on the presence of any OHPLs from their customers.

General

- Use your instruments. Listen and watch for potential blockages - avoiding blockages is easier than clearing them.
- Observe maintenance schedules - a poorly maintained machine will lead to poor machine performance and increase the likelihood of blockages etc.
- Follow manufacturer's procedures for removing headers and chopping mechanisms from the forager.
- Take into account the run-down time for rotary maize headers before approaching them.
- When blowing grass into a separately towed trailer consider the other driver and avoid sudden manoeuvres.
- When dropping off loaded trailers from behind a forager on soft ground use a drawbar shoe or jack that has a large ground surface contact area.

Legal

Manufacturers and suppliers have responsibilities under the Health and Safety at Work etc Act 1974 (the HSW Act) and the Supply of Machinery (Safety) Regulations 1992 (as amended in 1994). They should have considered BS EN 292 and BS EN 632 (which specifically deals with forage harvesters).

The HSW Act and the Provision and Use of Work Equipment Regulations 1998 place duties on employers, employees and the self-employed to ensure their own and others' health and safety.

Employers should remember to consider the views of their employees or safety representatives as they often have personal knowledge or experience of the hazards of using forage harvesters and may offer practical, common-sense suggestions on what should be done to avoid accidents and minimise health risks. Involving employees will gain their commitment and help make the work activity safe.

Further reading

Working safely near overhead power lines AIS8(rev)
HSE Books 1997

Silage clamp hazard: nitrogen dioxide (NO₂) AIS15
HSE Books 1995

The future availability and accuracy of the references listed in this publication cannot be guaranteed.

Further information

HSE priced and free publications are available by mail order from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA. Tel: 01787 881165 Fax: 01787 313995. Website: www.hsebooks.co.uk

HSE priced publications are also available from good booksellers.

British Standards are available from BSI Sales and Customer Services, 389 Chiswick High Road, London W4 4AL Tel: 020 8996 9001 Fax: 020 8996 7001.

For other enquiries ring HSE's InfoLine Tel: 08701 545500, or write to HSE's Information Centre, Broad Lane, Sheffield S3 7HQ. Website: www.hse.gov.uk

<p>This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.</p>

This publication may be freely reproduced, except for advertising, endorsement or commercial purposes. The information is current at 5/98. Please acknowledge the source as HSE.

