

Safe use of potato harvesters

HSE information sheet

Agricultural Information Sheet No 13 (Revision 1)

Introduction

This information sheet is aimed at operators of potato harvesters. It describes typical hazards from the use of potato harvesters and gives guidance on how to minimise the risks to operators and others during harvesting work. It does not cover other health or safety issues there might be when grading, handling or stacking potatoes (see 'Further information').

There are particular features of different types of potato harvester, which you should take into account when considering the hazards, risks and precautions. For example manned harvesters, with workers stationed at a picking table, may create risks that are different from unmanned machines. This information sheet covers the typical hazards likely to be found when using most types of manned and unmanned potato harvesters.

Hazards

There have been fatal and serious incidents, including crush injuries, and amputations of arms or legs, from contact with harvesters' moving parts. The greatest risk of injury comes from contact with components and, in particular, from:

- contra-rotating rollers, such as haulm and cleaning rollers;
- conveyors or elevator chains;
- drive mechanisms;
- inadequately guarded power take-off (PTO) shafts.

Other risks created by potato harvesting work include:

- being struck or run over by the harvester or tractors;
- falling from access ladders or work platforms.

Control measures

It is extremely dangerous to carry out any work on a machine while it is under power. The most important safety measure is to follow the 'safe stop' procedure

before carrying out any maintenance or adjustments, including dealing with a blockage or other problem:

- Handbrake on.
- Controls neutral.
- Stop engine.
- Remove key.

There have been many serious and fatal accidents where workers have tried to clear blockages; carry out cleaning; or run the machine with the guards removed; or worked on the machine with the engine running or power engaged. So always follow the safe stop procedure.

Dealing with blockages

- Follow the safe stop procedure before trying to deal with a blockage.
- Never reach into the haulm or cleaning rollers with an arm or leg when the machine is running.
- Follow the instructions for clearing blockages set out in the instruction handbook.
- Remember that avoiding blockages is easier than clearing them.
- Take care when working in difficult harvesting conditions or those with weed or haulm problems – take your time and don't overload the machine.
- Use drive reversing mechanisms when fitted and encourage the use of conveyor controls to optimise picking conditions.

Guarding

- Check that all haulm, clod, stone separator and cleaning rollers are properly guarded. Fit additional guards if anyone can reach the rollers with arms or legs from any position. Manufacturers can help with guard kits.
- Net-type guards for contra-rotating rollers are easily defeated and should not be used. Replace them with securely fixed metal guards.
- The power take-off shaft should be fully enclosed in a guard along its entire length from the tractor power take-off to the power input connection on

the harvester. Other drive shafts should be guarded to the same standard.

- Make sure all guards are in position and correctly fitted before starting work and stop work if any guards become broken or defective.

General guidance on safe working practice

- Make sure everyone working on the harvester understands the safety instructions in the handbook, including the safe way to clean the harvester of haulm, stones, potatoes etc.
- On a manned harvester, there should be a two-way system for communicating between the workers on the picking/sorting platform and the tractor driver. These machines should also be fitted with an audible warning alarm intended to draw the attention of those on the platform to the starting of the moving parts, eg before starting the engine, reversing or engaging drives.
- Machines with a picking/sorting platform require emergency stops accessible from the work position to stop the conveyor to the platform.
- Take particular care when reversing; make sure you can see what is behind the harvester or get help if the view is obscured. People have been killed when they got off a manned harvester or approached a machine on foot and were run over by it.
- Stop the tractor before anyone gets on or off the harvester and do not allow anyone to jump on or off the harvester when it is moving or stationary. Always use the access ladder to mount or dismount from the picking platform and do not climb over the machine.
- Picking/bagging platforms on manned harvesters require guard rails to prevent people falling off the machine.
- Take advantage of relevant training/courses provided by manufacturers/dealers. They will help to ensure the safe and efficient use of your potato harvester.
- Workers on a manned harvester will also require training. Don't forget the training needs of any temporary or casual staff.

Maintenance

- Do not run the harvester with the guards raised or removed for maintenance or cleaning purposes.
- Always use some form of mechanical support when working below any raised components, eg if working under box handling attachments, use the supports provided.

- Remember that putting the power take-off (PTO) out of gear will not cut the power to some hydraulically driven components.
- Avoid parking the harvester or carrying out maintenance on it when under or near overhead electricity power lines.

Further reading

Power take-offs and power take-off drive shafts Leaflet AS24(rev1) HSE Books 2009 www.hse.gov.uk/pubns/as24.htm

Tractor action: A step-by-step guide to using tractors safely Leaflet INDG185(rev2) HSE Books 2009 www.hse.gov.uk/pubns/indg185.htm

Working safely with agricultural machinery Leaflet INDG241(rev1) HSE Books 2012 www.hse.gov.uk/pubns/indg241.htm

Further information

Potato Council Safe Potato Operations DVD (copies can be ordered from the British Potato Council website at www.potato.org.uk).

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

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