Harvesting grain and seed crops

COSHH essentials for farmers

Control approach 2 Engineering control

Hazard
- Dust created by grain and seed harvesting contains bacteria, fungi and insect residues, and can cause lung diseases such as asthma and farmer's lung.
- Control exposure to stop occupational lung diseases developing - this means short-term as well as long-term exposure.
- When all controls are applied properly, less than 10 mg/m³ grain dust is usually achievable (based on an 8-hour time weighted average).
- If an individual develops occupational asthma, avoid further exposure.

Access and premises
- Only allow access to trained people. Keep everyone else away.

Equipment and procedures

Harvester
- Use a harvester with air filtration fitted to the cab, including the following features:
  - pre-filters, to protect the main HEPA filter;
  - pressure gauges to show the system is working properly;
  - alarms to sound when filters clog;
  - overpressure above 10 Pa inside the cab to prevent dusty air ingress;
  - flaps to release excess pressure;
  - door seals - heavy-duty neoprene or other suitable material; and
  - self-closing doors.
- Check that the clean air is turned on and working.
- Check any air conditioning self-test every time you start the harvester.
- Keep doors and windows closed.

Tractor
- Use a cabbed tractor for trailers collecting grain from the harvester.
- Use a harvester with an enclosed cab and filtration. Keep tractors upwind of dust with doors and windows closed.
✓ Close the cab doors and windows to keep dust out.
✓ Try to keep upwind of dust clouds.
   Caution: Some dusts (eg from barley) are very irritating to skin.

Respiratory Protective Equipment (RPE)
✓ RPE should not be needed if the harvester cab filters work properly, or
  where tractor-trailer drivers stay upwind of dust clouds.
✓ RPE is needed for maintenance and cleaning inside the machinery, or
  where dust clouds are unavoidable.
✓ Powered or air-fed RPE is more comfortable to wear.
✓ Select RPE that suits the wearer, the job and the work environment.
✓ Use RPE with an assigned protection factor (APF) of at least 10. See
  sheet R2.
✓ Disposable RPE, type FFP2, is acceptable. Don’t use ‘nuisance dust’
  masks.
✓ Make sure that RPE fits properly - get advice from your supplier or
  read the instructions on the box.
✓ Train workers to check their RPE works properly before use.
✓ Replace RPE filters as recommended by the supplier. Throw away
  disposable RPE at the end of the day, or sooner if heavily soiled.
✓ Keep RPE clean and store it away from dust.

Maintenance, examination and testing
✓ Plan regular checks and maintenance of the critical parts.
✓ Every day, look for signs of damage, eg door and window seals. Repair
  damage immediately.
✓ Check pre-filters regularly - keep spares.
✓ Check that the filter seating is in good condition.
✓ Change inlet air HEPA filters as advised by the manufacturer, but at
  least after every 250 hours’ use.
✓ Get a competent ventilation engineer to examine the air filtration
  regularly.
✓ Examine and test non-disposable RPE thoroughly at least once every
  three months.
✓ Keep records of all examinations and tests for at least five years.
✓ Review records - failure patterns show where preventive maintenance
  is needed.

Cleaning and housekeeping
✓ Clean the cab at least once a week during harvest. Use a Type H
  vacuum cleaner fitted with a HEPA filter, or wet clean.
   Caution: Don’t use a brush or compressed air, and never use compressed
  air to remove dust from clothing.

Health surveillance
✓ There is a chance of asthma developing, even with good controls in
  place. Use health surveillance - see Sheet G402.
✓ Ask an occupational physician for advice - see ‘Useful links’
Training and supervision

✓ Tell workers that grain and seed crop dust can cause lung diseases including asthma. Show them this sheet.
✓ Working in the right way and using the controls correctly is important for exposure control. Train and supervise workers. See sheet AG0.
✓ Ensure that health surveillance is carried out on everyone that needs it.

Further information

- Preventing asthma at work. How to control respiratory sensitisers L55 HSE Books 1994 ISBN 0 7176 0661 9
- Farmer’s lung Agricultural Safety Leaflet AS5 HSE Books 1995
- Controlling grain dust on farms Agriculture Information Sheet AIS3(rev) HSE Books 1996
- See www.hse.gov.uk/pubns/agindex.htm for other advice on health and safety risks in agriculture.

Useful links

- 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.
- Contact the British Occupational Hygiene Society (BOHS) on 01332 298101 or at www.bohs.org for lists of qualified hygienists who can help you.

Employee checklist

☐ Shut cab doors and windows.
☐ Is the air filter working properly?
☐ Look for signs of leaks, wear and damage.
☐ If you find any problems, get them fixed. Don’t just carry on working.
☐ Co-operate with health surveillance.

This document is available at: www.hse.gov.uk/pubns/guidance/ and www.hse.gov.uk/coshh/essentials/

This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

© Crown copyright If you wish to reuse this information visit www.hse.gov.uk/copyright.htm for details. First published 12/06.