

AG3

COSHH essentials for agriculture



The Control of Substances Hazardous to Health Regulations 2002 (COSHH) require employers to ensure that exposure is prevented or, where this is not reasonably practicable, adequately controlled. This guidance gives practical advice on how this can be achieved by applying the principles of good practice for the control of exposure to substances hazardous to health, as required by COSHH.

It is aimed at people whose responsibilities include the management of substances hazardous to health at work (eg occupational health specialists, anyone undertaking COSHH assessments, supervisors and is also useful for trade union and employee safety representatives). It will help you carry out COSHH assessments, review existing assessments, deliver training and supervise activities involving substances hazardous to health.

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.

See Essential information near the end of the sheet.

Weighing, milling and mixing animal feeds (small scale)

Control approach 2 Engineering control

What this sheet covers

This sheet describes good control practice during small scale weighing, milling and mixing of animal feeds.

It covers the key points you need to follow to reduce exposure to an adequate level. Follow all the points, or use equally effective measures.

Hazards

- ✓ High dust levels are produced when mixing animal feed.
- ✓ Dust produced by moving and processing grain and seed contains bacteria, endotoxin, fungi and insect residues, and can cause lung diseases such as asthma, chronic bronchitis and farmer's lung. Enzyme additives may cause asthma.
- ✓ Grain dust has a workplace exposure limit (WEL) of 10 mg/m³ (based on an 8-hour time-weighted average). You need to keep exposures as low as is reasonably practicable below this limit.
- ✓ Control exposure to stop occupational lung diseases developing – this means short-term as well as long-term exposure.

Caution: Some dusts (eg from barley) are very irritating to skin, eyes and the respiratory tract. You will need to consider this and select the appropriate exposure controls as part of managing the risks.

Access to work area

- ✓ Allow access to authorised and appropriately trained people only.
- ✓ Place the machinery controls outside the area and an emergency stop near the machine.
- ✓ In larger plants, provide a separate control room.

Equipment and procedures

Vehicles (where applicable)

- ✓ Where reasonably practicable use a vehicle with an enclosed, ventilated cab fitted with filtered air intakes.
- ✓ Check that the clean air is turned on and working.
- ✓ Check any air conditioning. Self-test every time you start the vehicle.
- ✓ Keep doors and windows closed.

Sheds, elevators, conveyors, etc

- ✓ Avoid weighing out. Buy additives in one-shot packages.
- ✓ Consider suppressing dust by using molasses or oil in the feed formula.

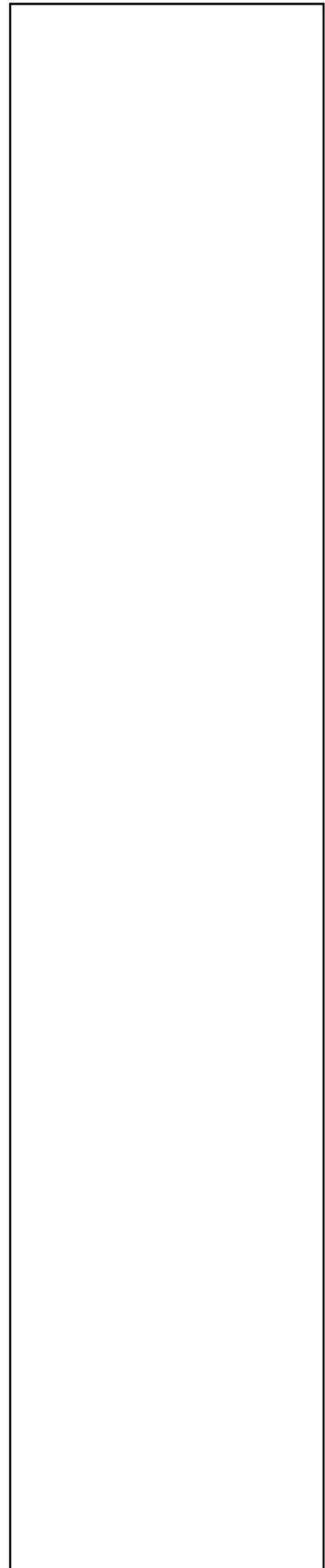
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- ✓ Apply local exhaust ventilation (LEV) at the source of the exposure to capture the airborne contaminant and enclose the process as much as possible, eg use enclosed or extracted elevators and conveyors.
 - ✓ Fit lids where dust can escape, and enclose chutes.
 - ✓ Auger the mixed feed to storage bins.
 - ✓ Fit the hopper, mixer and bagging-off point with LEV.
 - ✓ Airflow must be sufficient to effectively control airborne contaminants. This will depend on the design, size of opening and the type of process and substance being controlled.
 - ✓ Provide an easy way of checking the LEV is working, eg an airflow indicator or equivalent.
 - ✓ Mark the acceptable range of readings on the gauge.
 - ✓ Keep extraction ducts short and simple – avoid long sections of flexible duct.
 - ✓ Discharge extracted air to a safe place away from doors, windows and air inlets.
 - ✓ When operating inside a shed provide a good standard of general ventilation with greater than five air changes per hour, with a through draught.

Respiratory protective equipment (RPE)

- ✓ RPE is normally not needed if the extraction and dust enclosures are working properly.
- ✓ Provide RPE for maintenance and cleaning inside the machinery, or where dust clouds are unavoidable.
- ✓ Provide RPE with a UK Standard Assigned Protection Factor (APF) of at least 10.
- ✓ Fit testing is required for RPE with a tight fitting face seal.
- ✓ Workers wearing tight fitting RPE must be clean shaven, trained how to fit it properly and look after it.
- ✓ Tell workers to discard disposable RPE at the end of the shift, or sooner if their RPE becomes blocked with dust.
- ✓ Change the filters on respirators in accordance with manufacturers' recommendations and if:
 - the shelf-life expiry date has passed;
 - they are damaged or visibly contaminated; or
 - they become harder to breathe through.
- ✓ Examine and test non-disposable RPE thoroughly at least once every month and record this.
- ✓ Tell workers to check RPE is working properly before every use and record this.
- ✓ If RPE is required for extended periods, eg longer than 1 hour, use powered respirators.
- ✓ Make suitable arrangements for maintenance, storage and replacement of RPE.

Personal protective equipment (PPE)

- ✓ PPE is normally not needed if the extraction works properly and dust enclosures are sound.
- ✓ Provide PPE for maintenance and cleaning inside the machinery, or where dust clouds are unavoidable.
- ✓ Ask your supplier to help you select suitable PPE.



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- ✓ Make suitable arrangements for maintenance, storage and replacement of PPE.

Personal decontamination

- ✓ Provide warm water, mild skin cleansers, and soft paper or fabric towels for drying. Avoid abrasive cleansers.
- ✓ Provide pre-work skin creams, which will make it easier to wash dirt from the skin.
- ✓ Provide after-work creams to replenish skin oils.

Caution: 'Barrier creams' are not 'liquid gloves' and do not provide a full barrier.

Maintenance, examination and testing

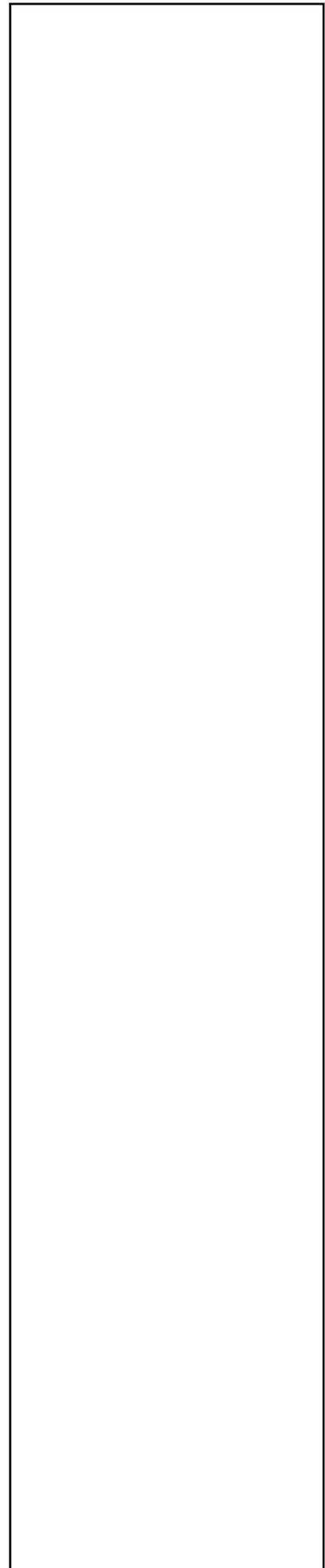
- ✓ Keep all equipment used for the task in effective working order. Maintain it as advised by the supplier or installer.
- ✓ Follow any special procedures before any systems are opened or entered, eg purging or cleaning. Don't forget you may need RPE/PPE for some maintenance tasks.
- ✓ Check all equipment at least once a week for signs of damage or faults.
- ✓ For LEV systems, a user manual or log book is helpful in setting out the frequency of checking, maintenance and parts replacement.
- ✓ For LEV systems with no user manual or log book, you may need the help of a competent person. They can determine the performance needed for adequate control.
- ✓ Keep records of all examinations for at least 5 years.
- ✓ LEV systems require a statutory 'thorough examination and test' (TExT).
- ✓ Get a competent person to perform the TExT at least once every 14 months.
- ✓ Carry out all actions arising from the TExT.
- ✓ Several measures are available to check effectiveness of controls. These range from simple qualitative (use of dust lamp) to complex quantitative techniques (eg air sampling) – usually for higher risk scenarios.
- ✓ HSG258 provides more detailed information on LEV systems and legal and competence requirements.

Vehicle air filtration

- ✓ 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.
- ✓ Get a competent engineer to examine the air filtration at suitable intervals.

Cleaning and housekeeping

- ✓ Clean work equipment and the work area daily. Clean other equipment at least once a week.
- ✓ Vacuum dry dust or use wet cleaning methods.
- ✓ Use vacuum equipment that meets at least dust Class M (medium hazard) classification to remove dust.



Caution: Never allow the use of brushes or compressed air for removing dust from skin and clothing. Avoid the use of brushes or compressed air for removing dust from surfaces or from inside machinery.

Health surveillance

- ✓ Provide health surveillance for asthma where there is a reasonable likelihood that asthma may occur in your workplace. See G402.
- ✓ Provide health surveillance for dermatitis where there is a reasonable likelihood that dermatitis may occur in your workplace. See G403.

Training and supervision

- ✓ Tell workers about the hazards associated with their work and how to recognise the early signs of asthma and dermatitis.
- ✓ Provide supervision – ensure that safe work procedures are followed.
- ✓ Provide workers with training on:
 - working safely with hazardous substances;
 - when and how to use controls;
 - how to check they are working;
 - how the LEV system works;
 - how to use the LEV to get the best out of it;
 - how to check that the LEV is working;
 - what to do if something goes wrong.
- ✓ Training records are helpful to demonstrate training has taken place.

Essential information

You can find the full COSHH essentials series at www.hse.gov.uk/coshh/essentials/

Health surveillance for occupational asthma COSHH Guidance Sheet G402
HSE 2011 www.hse.gov.uk/pubns/guidance/g402.pdf

Health surveillance for occupational dermatitis COSHH Guidance Sheet
G403 HSE 2011 www.hse.gov.uk/pubns/guidance/g403.pdf

New and existing engineering control systems COSHH Guidance Sheet
G406 HSE 2011 www.hse.gov.uk/pubns/guidance/g406.pdf

RPE with a UK Standard Assigned Protection Factor 10 (APF10) COSHH
Guidance Sheet R2 HSE 2016 www.hse.gov.uk/pubns/guidance/rpe2.pdf

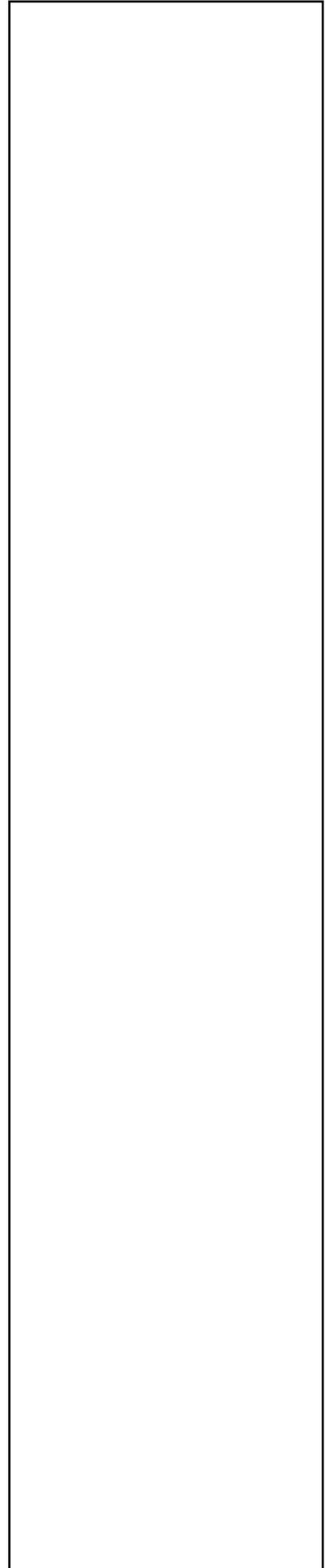
Further information

Occupational Safety and Health Consultants Register www.oshcr.org/

For other advice on health and safety risks in agriculture see
www.hse.gov.uk/agriculture/

Local exhaust ventilation (LEV) workplace fume and dust extraction web
page: www.hse.gov.uk/lev/

Respiratory protective equipment at work: A practical guide HSG53 (Fourth
edition) HSE 2013 www.hse.gov.uk/pubns/books/HSG53.htm



Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV) HSG258 HSE 2011
www.hse.gov.uk/pubns/books/hsg258.htm

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.

Employee checklist

- Do you know how to use the control equipment properly?
- Is the extraction working?
- Look for signs of leaks, wear and damage before every job.
- If you find any problems, tell your supervisor. Don't just carry on working.
- Is your respirator working properly? Check it every time you use it.
- Use, maintain and store your PPE and RPE in accordance with instructions.
- Co-operate with health surveillance.
- If you develop any symptoms that may be related to work, inform your supervisor.
- Wash hands before eating, drinking, smoking or using the lavatory and after work.

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Published by the Health and Safety Executive 09/16