

# Occupational Health and Safety in Agriculture



labour

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Department:  
Labour  
REPUBLIC OF SOUTH AFRICA

This pamphlet provides information on the health risks associated with work in agriculture, horticulture and forestry.

We are committed to preventing accidents and ill health, and are delighted to be associated with all individuals and companies who deal with health and safety in agriculture, horticulture and forestry.

### **Health and safety risks in agriculture**

Work in agriculture may pose threats to your health for many reasons, including:

- Its physical nature
- Exposure to the weather, noise or vibration
- Contact with animals
- Exposure to hazardous chemicals or other substances.

### **Physical nature of your work**

For example, handling loads or working in awkward positions may cause muscular-skeletal disorders. These are aches and pains in the limbs,



joints or back, which may be due to sprains or strains (damage to ligaments or muscles), 'slipped' discs (backache), sciatica (pain down the back of the leg), or arthritis of the hips, knees or other joints.

- Avoid handling loads where possible, or use mechanical systems
- Use good handling techniques - place your feet correctly, keep your back straight and keep the load close to your body
- Make sure that your workplace is arranged so that objects and produce can be reached conveniently without stretching and try to change tasks or move so that you use a variety of muscles in the body.

### **Using machines safely on farms**

Make sure the machines you use are:

- Suitable for the job
- Maintained so that they can be used safely
- Fitted with safeguards required by law, and make sure they are:
  - strong enough and, if fixed, that they can not be easily removed
  - made of the right material. Plastic allows good visibility but may be easily damaged
  - not easily defeated or overcome

If guards are interlocked, for example if you need access several times each day to a dangerous part, check that:

- The machine cannot start before the guard is in position
- Opening the guard stops the machine or that part
- The interlocking switch or valve is sufficiently robust for the job, and that the way it works makes it difficult for someone to defeat.

### **Power-take-off shaft guards**

For power-take-off shaft guards, check that the guard is:

- Made to a recognised standard
- The correct size and length for the shaft, both when closed and when extended



- A non-rotating type, with the restraining device (e.g. securing chains) in place
- Properly used and maintained - clean and lubricate guards regularly
- Supported when not connected - do not rest it on the drawbar or drop it on the ground, and do not suspend it by the restraining device
- Safe from damage, for example by livestock, when the machine is in store.

### **Buying or hiring machines**

When you buy or hire machines the law requires the supplier to provide the necessary safeguards. Make sure that you and your workers:

- Use machines according to the instructions supplied with them
- Keep guards in position and effective 'safety check' all equipment and rectify all defects before each use
- Check that controls are clearly marked to show what they do and which machine they control, and are designed and placed so you cannot operate them accidentally
- Check that stationary machines are adequately lit
- Check that electrical machinery is isolated and locked-off if safeguards are removed
- Are trained to work safely and are provided with and use necessary protective clothing.

### **Maintenance and unblocking**

Many incidents with machines occur during maintenance or unblocking operations. Remember 'safe stop' and make sure that:

- Staff are properly trained to do the job
- Adequate tools and instructions are provided for maintaining, adjusting, cleaning and unblocking of machines
- Safe working practices are devised and used
- Stored energy, for example from compressed material, springs or hydraulics, is dissipated before you start work
- Hydraulically raised machines or parts are prevented from descending by using mechanical devices such as stops or jacks when people work under them.





All operators should make sure:

- They know how to stop the machine before starting it
- They always start it from the correct position
- All guards are fitted and working correctly
- The area around a fixed machine is clean, tidy and free from obstruction
- Their supervisor is told at once if a machine is not working properly
- They wear appropriate protective clothing and equipment.

**Never:**

- Use a machine unless you are authorised and trained to do so
- Attempt to clear blockages or clean a machine unless the drive is disconnected and the machine is stationary
- Wear dangling chains, loose clothing, gloves or rings, or have long hair which could get caught up in moving parts
- Distract people who are using machines
- Dismount from a moving tractor or other self-propelled machine.



## Using electricity safely

**Electricity can kill. Three or four people are killed by electricity in agriculture every year. Many of these incidents involve contact with overhead power lines. Others involve poorly maintained handheld equipment or extension cables. Poor electrical installations and equipment can also cause fires. Overhead power lines**

Electricity can jump gaps when equipment or machinery gets close enough: you do not need to contact overhead power lines (OHPLs) to be injured. If OHPLs run across your land, consider with your electricity supplier whether they can be re-routed, put underground, or raised. If that cannot be done, make sure you have a map of the routes of the lines (available from your supplier) and that visiting workers such as contractors have copies.

### **Never:**

- Work under OHPLs without working to a safe system, or allow any part of a machine (e.g. crop sprayer, tipper lorry) or ladder, irrigation pipe etc., within 15 meters of them. Consider using warning labels in high-reach machines
- Erect fencing wire along the same route as OHPLs, nor move or strain fencing wire where it may spring and come into contact with the line. Long lengths of wire on undulating ground present a special risk
- Erect ricks, stacks or buildings, or create dumps, under or near OHPLs or stay wires
- Store machinery against overhead line towers, poles or stay wires.

**Contact with an OHPL may cause the power supply to 'trip out' temporarily - but it may be reconnected by an automatic reclosing device. Never attempt to disentangle equipment until the owner of the line has confirmed that the line is dead. If you have to work near OHPLs, check with your electricity suppliers and arrange temporary disconnection.**



## **Underground cables**

If you are likely to be working near buried cables, get information about their route from your electricity supply company. Get a competent person to check that there are no cables present before you dig holes in roadways or near buildings.



## Your electrical system

Make sure that:

- There is an accessible and clearly identified switch near each fixed machine to cut off power in an emergency
- Power cables to machines are suitably protected (armoured cable, covered in thick flexible rubber or neoprene, or installed in conduit) and have a good earth connection
- Light bulbs are protected (for example use bulkhead type fittings)
- There are enough socket outlets – overloading sockets by using





adaptors is a fire hazard. In suitable places (e.g. the farm office) you can use a multi-plug socket block

- Three-pin plugs always have the flex firmly clamped to stop the wires (particularly the earth) pulling out of the terminals
- Fuses, circuit breakers etc., are correctly rated for the circuit they protect. Fuses must never be bypassed, over-wired or wrapped with foil
- You have an appropriate plug and socket for equipment drawing a heavy current (e.g. welders)
- Socket outlets outdoors, in damp or corrosive atmospheres, or where steam or water jets are used, are of an appropriate type (get advice - never use a household-type socket) and protected by a residual current device (RCD)
- Covers to electrical equipment are kept closed and (if possible) locked, with the key held by a responsible person
- Main switches are readily accessible and clearly identified, and everyone knows how to use them in an emergency
- Wiring is installed in conduit or similar to avoid damage by rats and mice
- Installations are checked periodically and repairs carried out by a competent electrician
- Damaged cables are repaired or replaced immediately.

### **Portable equipment**

Electrical tools used outdoors or where there is a lot of earthed metalwork should be operated at reduced voltage from a safety-isolating transformer (for example 110 volts centre tapped to earth) or connected through an RCD which will cut off the power quickly if there is an earth fault. Consider whether you can avoid using electricity altogether, for example by using pneumatic tools in the workshop (but check the noise levels).

Make sure that you and your staff:

- Use plugs and fittings that are sufficiently robust and suitable for the wet or dusty conditions likely to be found in agriculture
- Regularly inspect all portable tools. Don't forget hired or borrowed tools
- Take suspect or faulty tools out of use, put them in a secure place and



- make sure they are not used until repaired by a competent person
- Make someone responsible for regularly operating the 'test' button on RCDs to ensure that they work correctly
  - Switch off tools and power sockets before plugging in
  - Unplug or isolate appliances before cleaning or making adjustments
  - Provide sufficient socket outlets to keep the use of extension leads to a minimum. When an extension lead has to be used, check that it is in good condition and that it is positioned where it won't be damaged
  - On welding sets, use only insulated leads and undamaged electrode holders.

## **Electric shock**

It is important to know what to do if someone receives an electric shock. Remember always to disconnect the power source first, or if that is not possible, never touch the electrocuted person except with non-conducting items - never use metal. Resuscitation needs training and practice so make sure that your staff receive elementary first-aid training. Display a copy of an 'electric shock placard' that shows what to do.

## **Noise**

If you are exposed to excessive noise, permanent hearing damage can result. Consider:

- Working outside of the noisy environment
- Reducing the noise, for example by insulation
- The need for hearing protection.

## **Vibration**

This may affect the hands and arms (typically from chainsaws or grinders), or the whole body (typically from tractors or lift trucks). To avoid chronic backache or hip/knee pain from whole-body vibration (WBV):

- Use the right tool for the job, for example a modern tractor with a properly maintained and adjusted seat
- Drive at the right speed for the ground conditions, avoiding potholes etc.



To avoid damage to your circulation, nerves, muscles and bones in hands and arms from hand-arm vibration (HAV):

- Plan jobs to avoid using vibrating tools
- Select tools with low levels of vibration, for example a chainsaw with anti-vibration mountings
- Use job rotation where possible – take regular breaks
- Warm hands before work (and keep them warm).

## **Weather**

Being exposed to the weather, especially sunshine or extreme cold can be harmful.

Remember:

- In sunny weather wear light clothing and a wide brimmed hat - don't strip off; put high factor sunscreen on exposed skin
- Keep an eye on moles, warts or skin discoloration. See your doctor if moles etc., grow, bleed or itch
- To use wet weather clothing - being wet can worsen the effects of cold.



## Animals

Contact with animals may result in zoonoses (diseases transmitted from animal to human), including orf, ringworm or leptospirosis from cattle or rats. Symptoms range from skin problems to initial 'flu-like conditions which may result in prolonged illness unless treated.

- Always thoroughly wash hands and arms after handling animals or working in places with rats
- Cover all cuts and abrasions with waterproof dressings
- Wear protective clothing such as gloves where necessary.

## Hazardous substances

Exposure to hazardous chemicals or other substances, for example to pesticides, veterinary medicines (including sheep dips), dusts, fumes or materials such as slurry, sewage sludge or fertilisers; inhaling fumes from burning plastic, or dust created when moving grain, fertilisers, straw, hay; contacting slurry, manure etc; or being splashed with pesticide or sheep dip can all cause ill health.



Employers and the self-employed should consider whether they or their workers:

- Have to use, or work with, the substance
- Can use engineering controls such as splashboards, induction hoppers or dust extraction equipment.

In some cases employers and the self-employed will need to provide, and ensure that workers use protective equipment.

### **Reporting work-related diseases**

Certain diseases caused by work must be reported to the Department of Labour.

You might contract a reportable disease if you work with:

- **Animals** - zoonotic diseases such as brucellosis, leptospirosis, lyme disease or streptococcus suis, or any other infection attributable to work with animals
- **Pesticides** - poisoning by organophosphorus compounds or methyl bromide
- **Natural substances** - occupational asthma from grain dusts or insects used for biological control of pests; farmer's lung/mushroom worker's lung from moulds or spores from hay, straw or mushroom compost; or tetanus
- **Other substances** - occupational dermatitis from work involving exposure to solvents or disinfectants
- **Machines** - hand-arm vibration syndrome from work with chainsaws, brush cutters or hand-fed circular saws.





### Further information

Inspectors may be contacted at the following offices of the Department of Labour:

#### ***Provincial Offices of the Department of Labour***

##### **Eastern Cape**

East London Tel: (043) 701 3000

##### **Free State**

Bloemfontein Tel: (051) 505 6200

##### **Gauteng North**

Pretoria Tel: (012) 309 5000

##### **Gauteng South**

Johannesburg Tel: (011) 497 3222

##### **KwaZulu-Natal**

Durban Tel: (031) 336 2000

##### **Limpopo**

Polokwane Tel: (015) 290 1744

##### **Mpumalanga**

Witbank Tel: (013) 655 8700

##### **North West**

Mafikeng Tel: (018) 387 1800

##### **Northern Cape**

Kimberley Tel: (053) 838 1500

##### **Western Cape**

Cape Town Tel: (021) 441 8000



## **Labour Centres of the Department of Labour**

### **Eastern Cape**

Aliwal North	Tel: (051) 633 2633
Butterworth	Tel: (047) 491 0490
Cradock	Tel: (048) 881 3010
East London	Tel: (043) 702 7500
Fort Beaufort	Tel: (046) 645 4686
Graaf-Reinet	Tel: (049) 892 2142
Grahamstown	Tel: (046) 622 2104
King William's Town	Tel: (043) 642 3401
Lusikisiki	Tel: (039) 253 1996
Maclear	Tel: (045) 932 1424
Mdantsane	Tel: (043) 761 3151
Port Elizabeth	Tel: (041) 506 5000
Queenstown	Tel: (045) 807 5400
Uitenhage	Tel: (041) 992 4627
Umtata	Tel: (047) 501 5600

### **Free State**

Bethlehem	Tel: (058) 303 5293
Bloemfontein	Tel: (051) 505 6200
Ficksburg	Tel: (051) 933 2299
Harrismith	Tel: (058) 623 2977
Kroonstad	Tel: (056) 215 1812
Parys	Tel: (056) 811 3043
Petrusburg	Tel: (053) 574 0932
Phuthaditjhaba	Tel: (058) 713 0373
Sasolburg	Tel: (016) 970 3200
Thaba Nchu	Tel: (051) 873 2004
Welkom	Tel: (057) 391 0200
Zastron	Tel: (051) 673 1471

### **Gauteng North**

Atteridgeville	Tel: (012) 386 5116
Bronkhorstspruit	Tel: (013) 932 0197
Garankuwa	Tel: (012) 702 4525
Krugersdorp	Tel: (011) 955 4420
Mamelodi	Tel: (012) 805 5090
Pretoria	Tel: (012) 309 5050
Randfontein	Tel: (011) 693 3618
Soshanguve	Tel: (012) 799 7395
Temba	Tel: (012) 717 9500

### **Gauteng South**

Alberton	Tel: (011) 861 6130
Benoni	Tel: (011) 747 9601
Boksburg	Tel: (011) 898 3340
Brakpan	Tel: (011) 744 9000
Carletonville	Tel: (018) 788 3281
Germiston	Tel: (011) 345 6300
Johannesburg	Tel: (011) 497 3163
Kempton Park	Tel: (011) 975 9301
Nigel	Tel: (011) 814 7095
Randburg	Tel: (011) 781 8144
Roodepoort	Tel: (011) 766 2000
Sandton	Tel: (011) 444 7631
Sebokeng	Tel: (016) 988 2626
Soweto	Tel: (011) 939 1200
Springs	Tel: (011) 362 6636
Vanderbijlpark	Tel: (016) 981 0280
Vereeniging	Tel: (016) 430 0000

### **KwaZulu-Natal**

Dundee	Tel: (034) 212 3147
Durban	Tel: (031) 336 1500
Estcourt	Tel: (036) 352 2161
Kokstad	Tel: (039) 727 2140
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Richmond	Tel: (033) 212 2768
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### **Limpopo**

Giyani	Tel: (015) 812 9041
Lebowakgomo	Tel: (015) 633 6958
Lephalale	Tel: (014) 763 2162
Makhado	Tel: (015) 516 0207
Modimolle	Tel: (014) 717 1046



Mokopani Tel: (015) 491 5973  
 Phalaborwa Tel: (015) 781 5114  
 Polokwane Tel: (015) 299 5000  
 Seshego Tel: (015) 223 7020  
 Thohoyandou Tel: (015) 960 1300  
 Tzaneen Tel: (015) 306 2600

### **Mpumalanga**

Baberton Tel: (031) 712 3066  
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 Carolina Tel: (017) 843 1077  
 Ermelo Tel: (017) 819 7632  
 Evander Tel: (017) 632 2295  
 Groblersdal Tel: (013) 262 3150  
 Kwamhlanga Tel: (013) 947 3173  
 Lydenburg Tel: (013) 235 2368  
 Middelburg Tel: (013) 283 3600  
 Nelspruit Tel: (013) 753 2844  
 Nhlazatshe Tel: (017) 883 2414  
 Piet Retief Tel: (017) 826 1883  
 Sabie Tel: (013) 764 2105  
 Secunda Tel: (017) 631 2585  
 Standerton Tel: (017) 712 1351  
 Volksrust Tel: (017) 735 2994

### **Northern Cape**

Calvinia Tel: (027) 341 1523  
 De Aar Tel: (053) 631 0952  
 Kimberley Tel: (053) 838 1500  
 Kuruman Tel: (053) 712 3952

Postmasburg Tel: (053) 313 0641  
 Springbok Tel: (027) 718 1058  
 Upington Tel: (054) 331 1752

### **North West**

Brits Tel: (012) 252 3068  
 Christiana Tel: (053) 441 2120  
 Klerksdorp Tel: (018) 464 8700  
 Lichtenburg Tel: (018) 632 4323  
 Mafikeng Tel: (018) 381 1010  
 Mogwase Tel: (014) 555 5693  
 Potchefstroom Tel: (018) 297 5100  
 Rustenburg Tel: (014) 592 8214  
 Taung Tel: (053) 994 1679  
 Vryburg Tel: (053) 927 5221

### **Western Cape**

Beaufort West Tel: (023) 414 3427  
 Bellville Tel: (021) 941 7000  
 Cape Town Tel: (021) 460 5911  
 Claremont Tel: (021) 683 2388  
 George Tel: (044) 801 1201  
 Knysna Tel: (044) 382 3150  
 Mitchell's Plain Tel: (021) 376 1771  
 Mossel Bay Tel: (044) 691 1140  
 Oudtshoorn Tel: (044) 272 4370  
 Paarl Tel: (021) 872 2020  
 Somerset West Tel: (021) 852 2535  
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