



Welcome to the safe@work Primary Industry Module.

Have you read the General Module, completed the test and printed your safe@work General Award of Attainment?

The Primary Industry Module should be done AFTER the General Module.

If it is some time since you have done the General Module you should read the Review Module. The test for this module contains some questions based on the Review Module.

Key Point

WorkSafe does not cover the mining industry.

There are common hazards that exist in the primary industry. It is important to learn about these hazards and how they can be controlled so that people at work are not exposed to risk.

The Primary Industry Module contains information on:

- Manual Handling
- Machinery and Equipment
- Tractors
- Agricultural Bikes
- Silos
- Hazardous Substances and Dangerous Goods
- Zoonosis
- Sunburn and Heat Stress
- Noise
- Electricity and
- Working Alone.

Within this industry, you may be involved in a range of work activities such as vehicle and machinery maintenance, working with horses (there are different equine industries) or other animals, working in a paddock, shade house or aquarium, picking fruit, fishing, felling timber or harvesting farm produce.

Key Point

Your employer must make sure equipment is well maintained and you are properly trained and supervised and given instructions for safe work procedures.

Key Point

Your employer must also provide you with the appropriate personal protective equipment (PPE).

Key Point

Students may only ride horses only under supervision and with appropriate PPE. Students are prohibited from racing horses.



You must follow safe working procedures not only for your own safety but also for the safety of others in the work place.

Manual Handling

In the primary industry, manual handling injury from the way objects are handled or the way the body is moved may be a serious problem. Strain injuries can occur through sudden overexertion or continuous overuse. Back injuries can result in some of the most serious types of strain. Too much strain on your back can lead to long-term damage.

Employees may be at risk of injury through:

- increased wear and tear or strain from physically demanding activities such as handling products, livestock, bags of seed or fertiliser, hay bales or crates of fruit or fish
- gradual wear and tear from frequent, continuous or lengthy periods of activity handling objects
- heavy or awkward lifting, such as loading items on to a truck or
- sudden injury from stumbling, tripping or falling while carrying heavy objects over uneven ground.

Key Point

People who sustain a manual handling injury at work can spend the rest of their lives coping with pain and be unable to do a lot of things other people can do.

Your employer must assess manual handling risks and put risk controls in place. If job redesign is not practicable, and if mechanical aids cannot be used, these are likely to include training, information and supervision, and safe work procedures to reduce the risk of injury. Safe work procedures may include:

- lightening the load
- team lifting
- warming up before working
- reducing bending, twisting and reaching
- using correct body techniques when lifting, lowering or carrying
- correct use of mechanical aids such as trolleys, hoists, ramps and barrows
- allocating time for rest breaks, and
- allowing time to gradually get used to a new job.

Key Point

Even though you may be young and new to the job, you should speak up - talk to your supervisor - if you feel your job is too heavy, too difficult, too tiring or puts you at risk of injury.



Machinery and Equipment

In the primary industry, employees may work with or come in contact with a large range of machinery and equipment, including tractors, motor bikes, harvesting machinery, generators, chain saws, power tools and equipment, skidders and loaders, haul packs, prime movers and off-road vehicles. **Students are not allowed to use any of the machines mentioned above. (Check with your supervisor if unsure if you are allowed to use specific type of equipment.)**

A large number of mechanical equipment injuries occur in the primary industry. These injuries may result in lengthy periods of time off work, and sometimes result in permanent disability.

Your employer must:

- have a maintenance program to make sure all equipment and machines are in safe working order and that appropriate guards are fitted
- have a system in place for locking out and isolating machinery during maintenance, cleaning and repairs
- train you to operate any item of mechanical equipment before you use it, and make sure you are supervised when you use it. If you are still not sure how to use it ask your supervisor for instruction, and
- provide any personal protective equipment needed, and tell you how to wear and use it correctly.

What you should do

When you are operating any equipment, you must follow safe work procedures as instructed by your employer or supervisor. This may include:

- wearing clothing that will not catch in moving parts
- wearing any personal protective equipment (PPE) provided by your employer
- operating the machinery and equipment correctly and safely according to your training
- keeping all guards in place
- making sure guards removed during adjustment, cleaning, maintenance or repair are replaced by an authorised person before you use the machine
- switching off machinery and equipment when not in use, and locking out and isolating machinery before any adjustment, cleaning, maintenance or repair is done
- concentrating on the job, as distractions can contribute to injuries; and
- keeping the area around the equipment or machinery clean.

Key Point

Your employer or supervisor must make sure you are old enough and properly trained to operate or use any machinery and equipment.



Guarding

Manufacturers of machinery and equipment are legally required to make sure dangerous parts are safely guarded so that operators and others are protected from injury. Examples of guards used in the primary industry include power take-off guards on tractors and guards on belts, couplings, power saws and chain saws.

Your employer or supervisor must make sure machinery and equipment is correctly guarded.

Key Point

Keep all guards in place - they are fitted to protect you from moving parts.

Workshops

In the primary industry, employees may be involved in work tasks and maintenance work in a workshop including machinery or vehicle maintenance, using power tools and saws, welding, cutting and grinding.

Note: Students on work experience must not operate powered tools or mobile plant. They must not undertake any task which may place them at risk from electrical sources. This information is designed to give students an understanding of the hazard and some of its risk control measures.

To reduce the risk of injury, employers or supervisors must:

- provide training, instruction and supervision for all work tasks, such as cutting, welding, grinding, heating and using abrasive power tools
- install safety switches or Residual Current Devices (RCDs)
- store hazardous substances and dangerous goods, tools and equipment safely
- provide suitable tools for the job
- provide fire fighting equipment and smoke detectors
- provide suitable personal protective equipment (PPE) and clothing
- make sure there is enough working space for each job
- provide good lighting and ventilation
- make sure walkways and exits are kept clear to reduce slip and trip hazards, and
- make sure that fuel, compressed air, steam equipment, electrical or other services are installed correctly and are in safe working order.

Key Point

You must follow safe work procedures and wear any personal protective equipment provided.



Current Department of Education & Training policy:

prohibits students undertaking tasks that include the use of machines such as:

- rip saw
- band saw
- buzzer
- thicknesser
- guillotine
- spindle moulder
- docking saw, and
- power wood shapers.

This is not an exhaustive list.

No student should be asked to perform work on any machine which may present significant risks in operation. Work experience activity in such cases must be limited to observing, under supervision, trained and experienced operators.

The health and safety information here is designed to give students an understanding of the hazards and of the measures by which risks are controlled in the primary industry.

Tractors

Tractors are one of the main causes of accidental deaths on farms in Australia. Many farmers, farm workers and others living on or visiting farms have been killed or seriously injured falling from moving tractors, being run over by tractors, or being crushed when a tractor rolls sideways or backwards.

Key Point

You must not drive a tractor unless you have been properly trained and you should always follow safety instructions.

Ways to reduce the risk

Your employer or supervisor should have safe work procedures in place for driving a tractor to make sure employees:

- operate the self-starter from the operator position only
- use the seatbelt on tractors fitted with a roll over protective structure (ROPS)
- never leave a tractor jacked up in the vicinity of children
- never leave the motor of an unattended tractor running
- always remove the starter key when a tractor is not in use
- never leave the tractor in a position where it can roll
- never mount or dismount from a moving tractor, or when the motor is running, &
- never allow passengers of any age to ride on a tractor unless there is a passenger seat fitted.



Agricultural Bikes

Agricultural bikes are any motorbikes with two, three or four wheels used for farm work. Three and four wheelers are also known as "all terrain vehicles" or ATVs.

Most agricultural bike injuries result from lack of training and experience, speed, uneven or unfamiliar ground, carrying a passenger or an unbalanced load, unsuitable protective clothing and unsafe driving.

Key Point

Your employer or supervisor must make sure you are properly trained to drive an agricultural bike, and you must drive safely and follow safe work procedures.

Ways to reduce the risk

Your employer should have safe working procedures in place to make sure you:

- wear a helmet
- wear eye protection to prevent serious eye injuries from bugs, branches or stones
- always check your bike before riding it
- take extra care when using attachments such as spray tanks and other equipment, as they can change the ATV's centre of gravity and reduce its stability
- use familiar tracks where possible, and take extra care when driving on unknown or rough ground, and
- don't drive ATVs on paved or bitumen surfaces, as they are not intended for use on smooth surfaces and may be difficult to control.

Silos

Grain storage silos and loading systems are dangerous. Dangers include falls from heights, shortage of oxygen, explosive atmospheres, toxic fumigants, grain suffocation, collapse of silos and the auger being unguarded. An auger is a large mechanical screw inside a tube, which draws up grain.

Students on work experience must not work in confined spaces such as silos. This information is designed to give students an understanding of the hazard and some of its risk control measures.

Key Point

Loosely stacked grain can trap a person even when the auger is not working.

Ways to reduce the risk

Your employer should have safety procedures in place to make sure:

- grain auger belts, pulleys, drive shafts and rotating screws are correctly guarded
- fumigated silos are ventilated before anyone enters
- someone is nearby when anyone is working in the silo in case of difficulties



- checks are made for explosive grain dusts, carbon dioxide and high temperatures
- roof edge protection (such as a rail) is provided
- the auger is turned off before anyone enters
- filling or emptying a silo does not start while someone is inside
- employees are provided with - and trained in the correct use of - a safety harness inside the silo, and stay on the ladder above the grain level while working, and
- no one smokes near a silo.

Haystacks - fire hazard

Haystacks could pose a potential fire hazard in the work place. Your employer should have safety procedures in place to make sure:

- flammable liquids are stored away from haystacks
- haystacks are handled safely
- there is no immediate source of ignition (e.g. smoking is not permitted near a haystack), and
- storage of haystacks is regularly checked and maintained to prevent instantaneous combustion.

Hazardous Substances and Dangerous Goods

There are many different types of hazardous substances and dangerous goods used in the primary industry, including pesticides, herbicides, animal medications, fuel, acids, cleaning products and solvents.

Injuries caused through incorrect use of chemicals include contact dermatitis; eye injuries; poisoning of particular organs or whole of the body, and chemical burns.

Your employer must make sure hazardous substances and dangerous goods are used according to the manufacturers or suppliers written instructions (Material Safety Data Sheet or MSDS) and agreed safe working procedures.

Key Point

Your employer must provide you with safe work procedures for handling hazardous substances and dangerous goods as well as information, training and supervision.

Zoonosis

Zoonoses are diseases of animals that can cause serious illness in people. People most likely to be infected by zoonoses are abattoir workers, farm workers, shepherds, shearers, wool sorters, veterinary workers, pelt and hide tanners, livestock handlers and animal laboratory workers.

Key Point

Examples of zoonoses are Leptospirosis and Q Fever. Catching either disease from another infected person is extremely rare.



Leptospirosis is passed to humans through contact with the urine of sick or infected stock, native and feral animals, and also by swimming, wading, or using water from urine-contaminated streams, rivers and dams.

Q Fever can be caught by drinking contaminated milk and by inhaling vapours from infected farm animals. Contact with birth fluids from infected animals and inhalation of contaminated dust can also spread the disease.

Both Leptospirosis and Q Fever feel like the flu. You may have muscle pains, severe headaches and fever. The treatment for both diseases is by antibiotics.

Your employer should have safe work practices to prevent Leptospirosis and Q Fever. Safe work practices are similar and include:

- avoiding contact with contaminated water
- burning afterbirth and contaminated litter
- pasteurising or boiling milk before drinking
- getting rid of rats and mice
- maintaining cleanliness in animal sheds, yards and pens, and
- practicing good hygiene.

Sunburn and Heat Stress

In the primary industry, often you may have to work where there is no protection from the sun, or where working conditions are extremely hot. For employees working outdoors, such as farm lands, shepherds, fruit pickers and market garden workers, there is a risk of heat stress, sun stroke, sunburn or skin cancer from prolonged exposure to ultraviolet radiation from the sun.

The effects of exposure to the sun is cumulative - the longer the skin is exposed to the sun, the greater the risk of skin cancers, regardless of tan or skin pigment. Short-term risks include sunburn blistering and peeling, acute skin reactions with certain drugs, ointments and creams, and sore gritty, swollen eyes sensitive to bright light. Long-term risks include skin cancers, premature ageing, wrinkling, wasting skin tissues, excessive pigmentation, and clusters of tiny blood vessels and cataracts of the eye.

Your employer should assess whether the day's tasks could cause heat stress or heat stroke, and consider ways of eliminating or reducing the risks by considering factors like the weather forecast, availability of shade, knowledge of the job ahead and an awareness of individual heat tolerance. Where possible, your employer should re-schedule heavier work for cooler times of the day (or wait for cooler days), and rotate work so you spend less time on heavier tasks.

Key Point

Your employer should train you in safe work procedures for working in the sun and in hot areas of the work place. Training should spell out the action required if an employee shows symptoms of heat stress or sun stroke.



Heat stress

The effects of heat stress range from simple discomfort to life-threatening illnesses such as heat stroke. Heat stress does make it difficult to concentrate on the job, which can also be hazardous. Signs of heat stress include tiredness, irritability, inattention and muscular cramps.

If you believe someone may be suffering the effects of heat stress, rest them in a cool, airy area and give them cool (rather than cold) fluids. Report the problem immediately to your supervisor or first aid officer.

Heat stroke

Heat stroke is not common. A person suffering from heat stroke will stop sweating and body temperature will be high. Skin will be hot and dry. Confusion and loss of consciousness may occur.

Heat stroke is life threatening and urgent treatment by a doctor is very important. While waiting for medical help to arrive, cool the patient as quickly as possible. Soaking the person's clothes with cold water and increasing air movement by fanning can do this. If the person is conscious, give them water to drink.

Ways to reduce the risk

Your employer should make sure you are trained in ways to reduce the risk of sunburn, heat stress and heat stroke. Some of these are:

- drinking lots of water, juices or soft drinks
- taking rest breaks in a cool place
- wearing cool, protective clothing such as a shirt with collar and long sleeves and long trousers
- wearing a broad brimmed hat that shades your head, neck, face and ears
- applying SPF30+ sunscreen before exposure to sunlight as well as on overcast days - noses, lips, ears, necks and backs of hands need extra protection. Sunscreen should be reapplied regularly
- wearing sunglasses that conform to Australian Standard 1067 - 1990
- if possible, working in shaded areas in the high-risk hours between 11am and 3pm, and
- not working near reflective surfaces such as water, cement, shiny metal or white painted sheds between 11am and 3pm.

Cold and Wet-Weather Conditions

In the primary industry, you may have to work where there is no protection from cold or wet-weather conditions. For employees working outdoors, such as farm hands, shepherds, fruit pickers and market garden workers, there is a risk of hypothermia from prolonged exposure to cold and wet weather conditions. Appropriate clothing and footwear must be worn to protect workers and work experience students from extreme cold and wet-weather condition.



Noise

Noise from farm tools and machinery can cause permanent hearing loss. The damage can occur gradually over a number of years, and may remain unnoticed until it is too late. Some noises, such as gunshots, are so loud they can cause immediate permanent damage. Lost hearing is gone forever.

You may be exposed to noise levels exceeding 85 decibels [dB(A)] that can cause permanent hearing loss. Typical farm noises that can damage hearing include:

- tractor - 95-100 dB(A)
- orchard sprayer - 85-100 dB(A)
- chainsaw - 105-120 dB(A)
- pig shed at feed-time - 95-105 dB(A) and
- shotgun - over 140 decibels dB(A).

Your employer can reduce noise levels by isolating noisy machinery from employees not involved in its operation, enclosing it in a sound absorbing box or erecting sound absorbing barriers, and by keeping machinery and equipment in good order so it operates efficiently.

If the noise cannot be removed at the source your employer must provide personal hearing protection (earmuffs or earplugs) in combination with other risk controls, to increase the level of protection and reduce the risk of hearing loss.

Key Point

Earpieces for portable radios and music devices do not provide protection from noise.

Electricity

A lot of the machinery, equipment and tools you will use in the primary industry are operated by electricity.

Note: Students on work experience must not operate powered tools or mobile plant . They must not undertake any task which may place them at risk from electrical sources. This information is designed to give students an understanding of the hazard and some of its risk control measures.

Key Point

Your employer must make sure all electrical machinery and equipment is kept in good working order, electrical plugs and switches are not damaged, cords are not split or frayed and are regularly checked for damage.

There must be a system in place for locking out and isolating electrical machinery during maintenance, adjustment, cleaning and repairs to prevent it being accidentally turned on.



You must follow instructions for using electrical equipment, which may include remembering to:

- switch off appliances at the power point before you pull out the plug
- disconnect broken appliances and not use frayed cords or broken power points
- not use too many appliances from the same power point, and
- always keep electrical cords off the floor to reduce the risk of damage from drag or contact with sharp objects.

Working Alone

Note: Students on work experience must not work alone. This information is designed to give students an understanding of the hazard and some of its risk control measures.

Employees may be required to work alone in the primary industry when undertaking work tasks such as repairing fencing, checking windmills, dams or stock, and seeding or harvesting. In the timber industry, tree fellers, log hauliers and plant operators sometimes work alone or outside the sight or hearing of other persons in the forest - though this is not a recommended practice, and strict contact and emergency arrangements must be in place. Work experience students must be supervised at all times.

The risk of injury or harm for employees who work alone may be increased because of difficulties contacting emergency services when they are needed. Emergency situations may arise because of the sudden onset of a medical condition, accidental work related injury or disease, attack by an animal, exposure to heat, cold or storms, or by becoming stranded without food or water.

The information, training and instruction provided by your employer should cover specific items relating to working alone and your employer must make sure that you have some form of communication (e.g. mobile phone or two-way radio) so you are able to call for help in an emergency.

Key Point

Workers must tell their supervisor or other employees where they will be working and their expected time of return to the main work site or home.

Self-Assessment Questions

Now try the self-assessment questions. Before starting the questions, be sure to enter your name and the name of the school exactly as you want it to appear on your Award of Attainment. We ask you to provide these details so that you can be issued with the Award of Attainment.

There are 16 questions. If you get 12 or more correct you can print online a safe@work Award of Attainment. The Principal of your school will then sign the Award of Attainment to validate it with the school stamp.

This publication is based on "WorkSafe Smart Move" (copyright State of Western Australia) published by Worksafe, Department of Consumer and Employment Protection, Western Australia (www.safetyline.wa.gov.au)