Working at heights and managing the risk of falls

Safe operations management practices

TOOLBOX

GREENHOUSE CONSTRUCTION AND SAFE OPERATION

Working at heights

Falls are a major cause of death and serious injury in Australian workplaces. Fall hazards are found in protected cropping environments by working on roofs, operating machinery for maintenance, and loading and unloading trucks.

Everyone has a responsibility for health and safety relating to falls. This includes, but is not necessarily limited to:

- Business owners who have the primary duty under the Work Health and Safety Act (WHS Act)
- Designers, manufacturers, suppliers, importers and installers of plant or structures
- Officers, such as company directors
- Workers who have a duty to take reasonable care for their own health and safety.

Identifying fall hazards

Look for potentail hot spots

It's important to identify all locations and tasks that could cause injury due to a fall. Tasks that are particularly high risk in greenhouses or grow structures are those undertaken on:

- Structures or plant being constructed or installed, demolished or dismantled, inspected, tested, repaired or cleaned
- Fragile surfaces such as plastic membrane, sheet or glass
- Equipment to work at the elevated level such as elevating work platforms or portable ladders
- Sloping or slippery surface where it is difficult for people to maintain their balance, for example glazed roofs.

Inspect the workplace

Walk around the workplace and have a discussion with your workers to find out where work is carried out that could result in falls. Key things to look for include:

- Surfaces: how stable and/or slippery is the surface
- Levels: where levels change and workers may be exposed to a fall from one level to another
- Structures: the stability of temporary or permanent structures
- Ground: the evenness and stability of the ground for safe support of scaffolding or a work platform
- Working area: whether it is crowded or cluttered
- Entry and exit from the working area

KEY MESSAGES

- Falls are a major cause of death and serious injury in Australian workplaces
- Everyone has a responsibility for health and safety relating to falls
- Taking a risk-based approach is the most effective way to eliminate or reduce falls. This includes identifying fall hazards, assessing risk, controlling risk and reviewing control measures
- Removing the need to work at height is the most effective way of protecting workers from the risk of falls

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- Edges: protection for open edges of floors, working platforms, walkways, walls or roofs
- Hand grip: places where hand grip may be lost.

Advice may be needed from technical specialists, such as structural engineers, to check the stability of structures or load bearing capacity. Refer to the toolbox fact sheet General design considerations in this series for further information.

Review available information, including incident records

It's recommended to check your records of previous injuries and 'near miss' incidents related to falls.

Information and advice about fall hazards and risks relevant to the protected cropping industry and work activities is also available from regulators, industry associations (Protected Cropping Australia and AUSVEG), technical specialists and safety consultants.

Assessing risk

A risk assessment can assist to determine:

- What could happen if a fall did occur and how likely it is to happen
- How severe a risk is
- Whether any existing control measures are effective
- What action you should take to control the risk
- How urgently the action needs to be taken.

This should consider the design and layout of the elevated work area, number and movement of people, as well as the suitability of plant and equipment, lighting, weather conditions, personal protective equipment, staff knowledge and emergency procedures.

However, you may have already undertaken a risk assessment as part of your greenhouse WHS procedures and know the risk and how to control it.

Controlling risk

The risk of falls can be controlled in a number of different ways. A hierarchy of control will help you rank the effectiveness of each of these controls from highest to lowest.

The Workplace Health and Safety (WHS) regulations require the following specific control measures to be implemented to manage the risk of falls, where reasonably practicable:

1. Can the need to work at height be avoided to eliminate the risk of a fall? (e.g. on the ground)
2. Can the fall be prevented by working on solid construction? (e.g. properly constructed stairs with fixed handrails)
3. Can the risk of a fall be minimised by providing and maintaining a safe system of work? (e.g. installing guard rails and fall-arrest systems).

Control measures are needed where there is a risk of injury irrespective of fall height. It's also important that these control measures don't create new hazards.

You must ensure that the control measures you implement remain effective. This includes checking that the control measures are fit for purpose; suitable for the nature and duration of the work; are installed and used correctly:

- Develop work procedures on how to correctly install, use and maintain the control measure
- The manufacturer and/or supplier of the equipment should be consulted for any product specific requirements
- Provide information, training and instruction to workers, including procedures for emergency and rescue
- Provide supervision by ensuring that workers exposed to a risk of a fall are adequately supervised by a competent person.

This is covered by Regulation 37 under the WHS Act accessible online.

Reviewing control measures

The control measures that are put in place to prevent falls must be reviewed, and if necessary revised, to make sure they're effective. This should be done in accordance with Regulation 38 under the WHS Act:

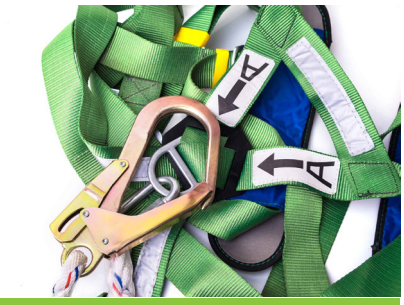
- When the control measure does not control the risk so far as is reasonably practicable
- Before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control

- If a new hazard or risk is identified
- If the results of consultation indicate that a review is necessary
- If a health and safety representative requests a review.

Control measures can be reviewed using the same methods as the initial hazard identification step.

Tips for good farm management

The below table provides guidance on good farm management practices that can eliminate or significantly reduce the risk of falls in greenhouses and grow structures.



IMPORTANT QUESTIONS TO ASK

- What are the main locations and tasks that could cause injury due to a fall on my farm?
- Have I undertaken a risk assessment to determine the likelihood and consequence of these events?
- Do the measures and practices comply with WHS requirements?
- What is the hierarchy of control for measures to address my main risks?
- When was the last time I reviewed and revised my control measures?
- Are there areas where I could remove the need to work at height on my farm?

REFERENCES AND FURTHER READING

Safe Work Australia (2015) Managing the Risk of Falls at Workplaces; Code of Practice, Commonwealth of Australia, Canberra, http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/632/Managing_the_Risk_of_Falls_at_Workplaces1.pdf

Department of Justice and Attorney-General (2011) Managing the risk of falls at workplaces, Queensland Government, Brisbane, https://www.worksafe.qld.gov.au/__data/assets/pdf_file/0004/58171/managing-risk-falls-workplaces-cop-2011.pdf

Table 1: Tips to manage the risk of falls in greenhouses

AREA	EXPLANATION	EXAMPLE
Work on the ground or on a solid construction	Removing the need to work at height is the most effective way of protecting workers from the risk of falls	Using tools with extendable handles
Fall prevention devices	A fall prevention device is any equipment that is designed to prevent a fall for temporary work at heights	Perimeter guard rails
Work positioning systems	A work positioning system involves the use of equipment that enables a person to work supported in a harness in tension in such a way that a fall is prevented	Industrial rope access systems
Fall-arrest systems	A fall-arrest system is intended to safely stop a worker falling an uncontrolled distance and reduce the impact of the fall	Catch platforms
Ladders	Ladders are primarily a means of access and egress. Many falls take place when people are working from ladders	Placing ladders at a slope of 4:1
Administrative controls	Administrative controls may be used to support other control measures	'No go' areas, permit systems, sequencing of work
Emergency procedures for falls	Whenever there are risks from working at height, appropriate emergency procedures and facilities must be established and provided	First aid
Design of plant and structures	Consideration of the potential risk of falls early when designing plant or structures can result in the elimination of such risks	Specifying the strength of roof membranes