



Apply chemicals under supervision

AHCCHM201A

By the end of this topic, you should be able to:

- Check application and personal protective equipment
- Prepare application equipment
- Apply chemicals
- Finalise work
- Transport and handle chemical

Types of chemicals

- There are a range of different chemical types, with varying modes of action.

Chemical	Mode of action
Pesticide	• Contact • Suffocating • Systemic
Herbicide	• Contact • Translocated
Fungicide	• Contact • Systemic

Preparing to apply chemicals

- When preparing to apply chemicals, you should undertake the following:
 - Be familiar with task requirements
 - Refer to documentation to determine task requirements
 - For example, the application/spray plan will explain the task requirements (e.g. required output of the application equipment)
 - Speak to your supervisor
 - Apply active listening when receiving instructions
 - Clarify any unclear instructions with your supervisor
 - Apply calculations
 - Area (m^2): $L \times W$
 - Volume (m^3): $L \times W \times D$
 - Ratios and application rates

- When preparing to apply chemicals, you should undertake the following:
 - Be familiar with relevant documentation:
 - Chemical labels
 - Identifies active constituent
 - Explains purpose of chemical
 - Outlines how the chemical is to be prepared (e.g. measured, mixed and loaded into applicator)
 - Safety Data Sheets (SDS)
 - Outlines how the chemical is to be handled, transported and disposed of
 - Explains how to handle a chemical spill

- When preparing to apply chemicals, you should undertake the following:
 - Be familiar with laws applicable to your workplace, such as:
 - Acts, such as:
 - *Work Health and Safety Act 2011* (Qld) which outlines employers' and employees' safety responsibilities
 - *Agricultural Chemicals Distribution Control Act 1966* (Qld) which outlines recordkeeping requirements

- When preparing to apply chemicals, you should undertake the following:
 - Be familiar with laws applicable to your workplace, such as:
 - Regulations, such as:
 - *Work Health and Safety Regulation 2011* (Qld) which addresses the handling of hazardous substances. This regulation no longer requires a licence to be obtained to store flammable and combustible liquids.

- When preparing to apply chemicals, you should undertake the following:
 - Be familiar with laws applicable to your workplace, such as:
 - Codes of Practice, such as:
 - *Labelling of Workplace Hazardous Chemicals Code of Practice 2011* which outlines the types of information needed on chemical labels so that hazards are easily identified
 - *Managing risks of hazardous chemicals in the workplace Code of Practice 2013* which describes the types of labels that may be present on chemical treatments

- When preparing to apply chemicals, you should undertake the following:
 - Familiarise yourself with the work area
 - Identify any WHS hazards and assess risks (e.g. manual handling injuries)
 - Identify environmental hazards (e.g. damage to flora/fauna, waste)
 - Report hazards to your supervisor within a timely fashion – especially emergency situations

- When preparing to apply chemicals, you should undertake the following:
 - Assess and record meteorological conditions and forecasts
 - Assess whether chemical applications are able to proceed
 - Check PPE (e.g. face shield, gloves, goggles)
 - Should fit, must have been correctly stored, should be in working order
 - Carry out pre-operational checks of application equipment
 - Refer to manufacturer's specifications
 - Identify and replace any damaged or worn components
 - Prepare application equipment for use

- When applying chemicals, you should undertake the following:
 - Monitor and record weather details during the chemical application process
 - Assess whether chemical applications are able to continue if the weather changes
 - Apply chemicals in accordance with the application/spray plan
 - Follow any additional instructions from your supervisor
 - Follow the application requirements of the chemical labels
 - Use equipment as directed
 - Solid applicators may include: Dusters and granule applicators
 - Liquid applicators may include: Aerosols, Controlled droplet applicators (CDA), boom sprays, knapsacks and compression sprayers, handguns, air blast sprayers and foggers

Applying chemicals

- When applying chemicals, you should undertake the following:
 - Keep appropriate records, including:
 - Name of chemical used
 - Quantity of the chemical used
 - Location of the area treated
 - Date and time of application

Keep clear records, being mindful of the varying backgrounds and abilities of those reading the records.

Check the record keeping requirements for your state.

The points listed are required in Queensland under the *Agricultural Chemicals Distribution Control Act 1966* (Qld)

- During the application process, you should assess and minimise risks to humans, animals, and the environment
 - To reduce unwanted chemical impacts, consider:
 - Applying chemicals only when weather conditions are ideal
 - Check calibration of spray nozzles to avoid over-spraying
 - Substituting less toxic chemicals
 - Observe withholding periods
 - This will ensure that chemical product integrity is maintained
 - Observe re-entry periods
 - Workers who have not been involved in applying chemicals will not need health monitoring if re-entry periods have been observed and spraying has not been carried out near them

Handling incidents

- During the application process, you should assess and minimise risks to humans, animals, and the environment
 - To reduce unwanted chemical impacts, consider:
 - Using alternative control methods
 - **Cultural:** Involves manipulating farming practices to suppress weed growth and production, while promoting plant development
 - **Biological:** Makes use of the weed's naturally occurring enemies, such as insects and pathogens (e.g. fungi and bacteria)
 - **Physical:** Includes hand weeding, slashing, burning, cutting, ripping, trapping pests, using screens
 - **Quarantine:** Preventing pests from spreading and entering non-infested areas

Be sure to consider Integrated Pest Management, which uses more than one method to control the problem. IPM aims to lower long term risks to the environment (e.g. chemical resistance).

Handling incidents

- If there are any incidents during the application process be sure to notify your supervisor and complete an incident report form
 - Incidents may include spills, emergencies (e.g. fire), medical emergency (swallowing, skin exposure)
- If poisoning occurs, contact the Poisons Information Centre on 13 11 26
- You may also be required to contact other organisations
 - For example, the local water authority if drains, streams and/or watercourses are contaminated

- As part of clean-up processes, you should:
 - Maintain, clean and store tools and equipment according to manufacturer's specifications
 - Report identified hazards and faults within a timely fashion
 - Store chemicals
 - Ensure chemicals and fuels are not stored together, as this may cause explosions
 - Ensure the storage area is well-ventilated to avoid the build up of fumes and gases
 - Lock up the storage area to avoid access by unauthorised persons
 - Dispose of materials that cannot be reused or recycled
 - Ensure you implement environmentally safe practices (e.g. triple rinse drums)
 - Follow Safety Data Sheet (SDS) requirements