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factsheet

Managing garden weeds

planning tactics



Weeds in gardens

Any plant can be a weed if it is growing in the wrong place. Commonly grown garden plants can be classed as weedy, particularly if they 'jump' the garden fence invading other gardens, agricultural areas or bushland.

Generally, a plant that becomes a problem weed will have the ability to aggressively compete with other plants. It will be able to rapidly grow, reproduce, spread and persist. These plants produce large numbers of propagules and often more than one type of propagule (eg onion grass produces a large number of seeds as well as corms).

Understanding a weed's life cycle and method of spread is essential for:

- planning a successful garden weed management program
- stopping weeds spreading from one part of the garden to another
- avoiding the introduction of new weeds to the garden and
- preventing weeds from 'jumping the fence' and becoming a serious pest.

The table on page 5 outlines some of the key methods of weed spread, within, into and out of the garden.

Managing garden weeds

Tactic Groups

There are a number of tactics that can be used to manage garden weeds and there are various opportunities during the weed's life cycle for weed management. The weed management

Integrated weed

management (IWM): a flexible system, incorporating multiple weed management tactics, aiming to reduce weed numbers in an economic and sustainable manner.

Weed management tactic:

method or activity used to manage weeds in a target area.

tactic used at each of these times is likely to differ. Weed control tactics can be grouped according to their main aim and which part of the weed life cycle they are targeting. They may aim to kill the weed or simply stop the production of viable propagules.

The various tactics that can be used to manage garden weeds can be allocated to one of the five Tactic Groups. This assists in planning a more successful program by ensuring control is targeted at more than one part of the weed's life cycle.

Examples of garden weed management tactics from each Tactic Group are listed in the table on pages 2 and 3.

Successful weed management relies on:

- using a variety of tactics from a number of Tactic Groups
- choosing the right tactics
- applying and timing tactics correctly.

A tactic may belong to one or more Tactic Groups eg digging can be used to kill or remove a weed (Tactic Group 2) or to remove propagules, such as bulbs, from the soil in the area being targeted (Tactic Group 1).

Propagule: method of multiplication or spread used by a plant to reproduce eg seeds, corms, vegetative parts, spores.

VET sector resource: RTD5402A
Develop a strategy for the management of target pests.

Garden weed planner

A garden weed planner can be used to develop and outline a weed management plan. It identifies which tactics are suitable for use and which Tactic Group they belong to. Going to the effort of filling in the planner highlights gaps and any possible weakness in the plan. A blank garden weed planner is located on page 4.

Example garden weed planners can be found in the *Managing garden weeds* factsheets relating to:

- *bulbs, corms and tubers*
- *plants with large seed and fruit*
- *wind dispersed plants*
- *creeping plants.*

Best garden practice

Best garden practice or management to favour desirable garden plants can improve the success of a weed control tactic used. Best garden practice includes activities such as monitoring weeded areas, mulching, replanting weeded areas with desired plants and providing the required nutrients to encourage active plant growth.

Using Tactic Groups to manage weeds in gardens		
Tactic Group and aim	Related tactic example	Objective and outcomes
<p>Tactic Group 1 Deplete the weed seedbank.</p> <p><i>These tactics focus on removing or destroying weed propagules in the area being targeted, thereby reducing the number of weeds of each species already present.</i></p>	Dig	Remove and dispose of propagules such as rhizomes, bulbs and vegetative plant parts from the area of the garden being treated. Good for weeds with large underground propagules. Time consuming and tedious but it is very effective, particularly for a small area.
	Rake and collect	Rake, collect and dispose of fruit and berries from the ground. Reduces the chance of birds and animals eating and spreading seeds within the fruit. Note: Do not place fruit in household compost heaps as the heat generated within them will rarely kill all the seed.
	Mulch	Mulch with materials such as thick layers of newspaper, straw, bark chips and gravel. Weed mat is also effective. Causes the seeds of many weeds to rot and become non-viable. Simple and effective, and water-wise too!
	Replace soil	Remove soil containing propagules from heavily infested areas. Replace with clean soil.
<p>Tactic Group 2 Kill and remove weeds.</p> <p><i>These tactics focus on killing the weeds, often targeting weeds when they are small, but can also be used on large, mature shrubs and trees.</i></p>	Dig	Dig, weed or chip whole plants. Very effective for removing small weeds. Note: It is important to dig out the root system to ensure the weed does not regrow.
	Apply herbicide	Apply herbicide to weeds using an appropriate method. Apply herbicides to actively growing weeds. Avoid applying them to plants that are stressed due to factors such as lack of water, over-watering, frost or hot weather. Very effective control method. Plants often have a time in their life cycle when they are more sensitive to herbicide and control is likely to be much better eg bulbs such as oxalis are more susceptible to a non-selective herbicide at flowering when bulb resources are low. Seek advice and read and follow label directions carefully. Herbicides can be selective (ie kill the target but are safe on non-target species eg dicamba and MCPA used to kill broadleaf weeds in grass lawn) or non-selective (kill all plants that herbicide is applied to eg glyphosate). Note: For further information see guidelines on the Weeds CRC website: <i>Herbicides: knowing when and how to use them</i> and <i>Herbicides: guidelines for use in and around water</i> .
	Mulch	Mulch with materials such as thick layers of newspaper, straw, bark chips and gravel. Weed mat is also effective. Inhibits the establishment and growth of weeds.
<p>Tactic Group 3 Stop weed seed set.</p> <p><i>These tactics focus on stopping the formation of propagules, thereby avoiding further multiplication and spread of actively growing weeds.</i></p>	Cut – dead head	Remove spent flowers to stop formation of fruit, berries or seed. Prevents weed multiplication and spread but does not kill the mature weed.
	Cut – prune	Tip-prune (rather than dead-heading) may be more practical to remove spent flowers to stop formation of fruit or seed. Often beneficial to the plant, improving shape and growth.
	Cut – mow or whipper snip	Mow lawns to stop seed-set of weeds that have flowers on a tall stem. Greatly reduces the number of seeds set. Note: Repeat cutting will be needed to minimise the number of seeds set. Repeat cutting may encourage prostrate growth of some weeds. Seed production on these prostrate weeds will also need to be reduced using appropriate tactics and best garden practice.



Using Tactic Groups to manage weeds in gardens		
Tactic Group and aim	Related example tactic	Objective and outcomes
Tactic Group 4 Prevent replenishment of the weed seedbank. <i>These tactics focus on stopping the spread of propagules from actively growing weeds.</i>	Collect and dispose	Collect and dispose of propagules eg fruit and seeds before they are dispersed from the parent plant.
	Prune and dispose	Prune as an alternative to collecting fruit. More practical method of removing propagules in some situations, particularly from large shrubs and small trees.
Tactic Group 5 Prevent introduction of weed seed from external sources. <i>These tactics focus on stopping introductions of weeds into and the movement of weeds away from the area being targeted.</i> <i>This is a key step in weed management but is often overlooked.</i>	Quarantine	Check new pot plants for weeds as they can be a great source of new weeds. Monitor area where new specimens have been planted out of pots. Dispose of discarded soil from pots. Note: Creeping oxalis is regularly seen in commercial pot plants and is readily spread to all parts of the garden as the new specimen is planted out.
	Clean tools	Clean mowers and garden tools, removing and disposing of soil and seeds when leaving a weedy area and before entering an area that is weed free. Note: Clean vehicles such as prams, bicycles (particularly tyres), shoes (soles and laces), clothing (socks) and animals.
	Use weed-free garden materials	Source and purchase garden materials such as garden soil, potting mix and mulch that are weed free. Note: Manure may contain viable weed seeds as many seeds pass through animals without being damaged.
	Choose plants carefully	Select plants suited to your environment that have a low risk of becoming a weed. Avoid the plants that 'go mad' and those which you 'can't kill with an axe'!
Best garden practice Implement best garden practice to favour desirable plants rather than the weeds. <i>The success of the chosen weed management tactics relies upon the use of best garden practice, increasing the benefits gained from the weed management tactics used.</i>	Choose plants carefully	Introduce desirable and competitive plants to the area where the weeds have been removed.
	Apply nutrients and water	Provide nutrients and water appropriately to give desirable plants the competitive advantage.
	Control diseases and insects	Control diseases and insects to give desirable plants the competitive advantage. An unhealthy plant or area where plant death has occurred provides an excellent opportunity for weed invaders.
	Mulch	Mulch with materials such as thick layers of newspaper, straw, bark chips and gravel to keep desirable plants moist and roots cool during summer. A weed mat is also effective.
	Monitor	Check regularly for weeds around new plants and weeded areas. Control when small.



Disposal of garden waste

There is little accurate information on the best methods of garden waste disposal. It depends on many factors. The guidelines below can assist with responsible disposal of garden waste.

- Avoid placing propagules in compost

as they are not always killed and may even regrow in the compost heap.

- Spread vegetative plant parts (runners) in a contained area and allow to dry and die. Seeds, bulbs and rhizomes are likely to survive.
- Place propagules in a plastic bag and leave in full sun for a number of

weeks. Unfortunately the minimum time required for the heat to kill various propagules is not known.

- Take propagules and soil containing propagules to a refuse dump where rubbish is buried.
- Never dump garden waste anywhere but at an official refuse disposal site.

Garden weed planner		
Target weed:		Situation:
Method of spread:		Key propagules:
Tactic Group and aim	Tactic(s) to be used	Objective and outcomes
Tactic Group 1 Deplete the weed seedbank.		
Tactic Group 2 Kill and remove weeds.		
Tactic Group 3 Stop weed seed set.		
Tactic Group 4 Prevent replenishment of the weed seedbank.		
Tactic Group 5 Prevent introduction of weed seed from external sources.		
Best garden practice to favour desirable plants		

Common methods of weed spread and introduction in gardens			
Method of spread or introduction	Propagule (part of weed introduced)	Method of spread – examples	Ways to avoid weed introductions
Acquired plants in soil (including those in pots, trays, punnets etc)	Bulbs Rhizomes Seeds Whole plant	Plants from commercial nurseries, local markets, friends.	Thoroughly weed pot-plants before planting out – remove weedy bulbs carefully to avoid leaving the bulbs in the soil. Dispose of any excess soil from potted plants during planting-out. Check for weeds around new plants during the first year of growth and control seedlings as they emerge.
Soil, mulch and manure	Bulbs Rhizomes Seeds	Garden materials from commercial suppliers, local markets and friends. Soil around transplants within the garden or from friends.	Purchase treated topsoil, manure and mulch guaranteed weed free. Be aware of weeds present when transplanting and carefully remove weedy bulbs.
Vehicles (including trailers, bikes, mowers, prams etc)	Bulbs Rhizomes Seeds	In tyres, in mud on tyres and in wheel arches, caught in undercarriage of vehicle.	Keep vehicles clean. Restrict vehicle movement from areas where weeds are known to grow.
Garden tools	Bulbs Rhizomes Seeds	In soil on spades, on lawn mowers, whipper snippers, wheelbarrows.	Keep tools clean. Avoid weedy areas with wheelbarrows. Mow weedy areas last then thoroughly clean mower.
Clothing	Seeds	On socks, shoes, trousers, jumpers.	Check clothing and footwear and remove weed seeds.
Animals	Seeds Seeds within fruit Seeds in pet food	On or in fur or manure of pets and pest animals such as rabbits and foxes. Horse and pet rabbit feed	Check pets thoroughly (particularly after walks). Fence out feral animals. Check where pets are fed and where they deposit their droppings.
Birds	Seeds Seeds within fruit Seed in pet food	In droppings. In feed for caged birds. In poultry feed.	Remove spent flowers or immature fruit from plants before they can be eaten and spread by birds. Check and control weeds where birds perch (eg under fences, trees) and feed is discarded.
Wind (air-borne)	Seeds – small	Blown by wind.	Remove spent flowers before seeds mature and can be dispersed.



Remove fruit before it can be spread by birds and other animals.



Remove spent flowers and mature weeds before seed can be dispersed by the wind.



Mow weedy areas last and before weed seeds are produced. Clean mower thoroughly.

For further information visit the Weeds CRC's website: www.weeds.crc.org.au

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Further reading: *What does your garden grow?* (a training resource developed by the Weeds CRC); other factsheets in the *Managing garden weed* series, Weeds CRC.



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