

factsheet

Managing garden weeds

wind-dispersed plants



Wind-dispersed weeds in gardens

Garden weeds that have very small, light seeds or those with special 'wings' to assist the seed to 'fly' can be dispersed by the wind. Depending on the size, weight and structure, seeds can move meters up to kilometers in the wind. These airborne seeds are moved across gardens and over the fence unless the weeds producing the seeds are managed before the seeds mature. Some examples of trees, shrubs, vines, grasses and broadleaf weeds that are dispersed by wind are listed in the table on page 2.

Managing wind-dispersed weeds in the garden

Tactic Groups

There are a number of tactics that can be used to manage weeds in gardens. These tactics can be grouped according to their main aim and which part of a weed's life cycle is being targeted.

There are five Tactic Groups and these are outlined in the Weeds CRC factsheet, *Managing garden weeds: planning tactics*. These Tactic Groups aim to prevent new weeds entering the garden, kill the weed or simply stop the production and dispersal of propagules.

Allocating the various weed management tactics to one of the five Tactic Groups assists in planning a more successful garden weed management program.

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

Pappus: a ring of fine, sometimes feathery, hairs, developed from the calyx and covering the fruit. It acts as a parachute and aids in wind dispersal.

Calyx: outer whorl of the flower made up of sepals (usually green); protect the flower in the bud.

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

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.

Important tactics for wind-dispersed weeds

The ultimate weed management plan will use a tactic from each Tactic Group. For wind-dispersed weeds in the garden it is essential to include tactics from:

- Tactic Group 2: Kill and remove weeds (apply herbicide or dig seedling)
- Tactic Group 3: Stop weed seed set (small seed).

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.

An example garden weed planner for the wind-dispersed weed, common

sowthistle (*Sonchus oleraceus*), is included as a case study in this factsheet. It illustrates a successful weed management plan using tactics from each Tactic Group and how to complete a planner to manage any garden weed problem. An individual planner should be used for each target weed.

Best garden practice

Best garden practice or management to favour desirable garden plants will also improve the success of any weed management plan. 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.



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

Examples of weeds dispersed by wind		
Common name(s)	Scientific name	Comments
Balloon vine	<i>Cardiospermum grandiflorum</i>	Capsules can be carried by wind and float freely on water, dispersing the plant along waterways. Also regrows from root fragments.
Crofton weed	<i>Ageratina adenophora</i>	Enormous seed production. Seed is dispersed by wind and water over long distances, by vehicles and machinery, and in clothing, soil and stockfeed. Do not leave stems on ground. They will reshoot if damaged.
Dandelion, flat weed	<i>Hypochoeris radicata</i>	Germinates in autumn. Weed of lawns. Seeds with pappus produced in large numbers blow long distances.
Fireweed	<i>Senecio madagascariensis</i>	Short-lived perennial (or annual in frost-prone areas) germinating any time except midwinter. Seeds with pappus produced in large numbers can blow long distances. Can cause death and ill-thrift in livestock grazing infested pastures.
Flaxleaf fleabane	<i>Conyza bonariensis</i>	Germinates in winter-spring and into summer. Produces numerous seeds with pappus which are blown long distances.
Gazania, African daisy	<i>Gazania linearis</i>	Tough, low-growing perennial herb popular for landscaping, particularly near beaches. Many small, wind-borne, furry seeds produced often blowing into dunes. Becoming a major environmental weed and prevents regeneration of coastal native species where it grows.
Pampas grass	<i>Cortaderia selloana</i>	Long-lived, perennial tussock used as a garden plant or windbreak in agriculture. It has escaped to become a serious and widespread weed in urban bushland. Produces numerous wind-dispersed seeds that can be blown more than 40 km.
Prickly lettuce	<i>Lactuca serriola</i>	Germinates in autumn–winter. Seeds with pappus produced in large numbers blow long distances.
Sowthistle – common	<i>Sonchus oleraceus</i>	Germinates in autumn–winter. Seeds with pappus produced in large numbers blow long distances.
Sowthistle – prickly	<i>Sonchus asper</i>	Germinates in autumn–winter. Seeds with pappus produced in large numbers blow long distances.
Thistles	<i>Cirsium</i> spp. <i>Carduus</i> spp. <i>Onopordum</i> spp. <i>Silybum</i> spp.	Germinates in autumn–winter. Seeds with pappus produced in large numbers blow long distances.
Tree of heaven	<i>Ailanthus altissima</i>	Tree which can cause contact dermatitis, it is a widespread weed of wasteland and degraded pastures. Seeds are surrounded by a large wing which aids dispersal by wind.
Witch grass	<i>Panicum capillare</i>	Germinates in spring–summer. Very small seed is produced on a large open panicle or seed head. Seed is spread as the whole seed head is blown and tumbled by the wind.



Many different types of plants use wind to disperse their seeds. These plants include (L-R) broadleaf weeds (eg flaxleaf fleabane); trees (eg Tree of heaven); and grasses (eg witch grass). Managing these weeds before they develop mature seed assists in preventing their spread to other areas.

Case study: managing sowthistle in gardens

Planning sowthistle management

The successful management of sowthistle will depend on the tactics chosen, the timing of the tactics, where the weed is situated and the density of the infestation (eg few plants or many). Deciding how to best manage this weed can be assisted by filling in a garden weed planner. The following weed planner demonstrates how to approach the management of sowthistle in a garden situation.

A blank weed planner can be found in the Weeds CRC factsheet *Managing garden weeds: planning tactics*.

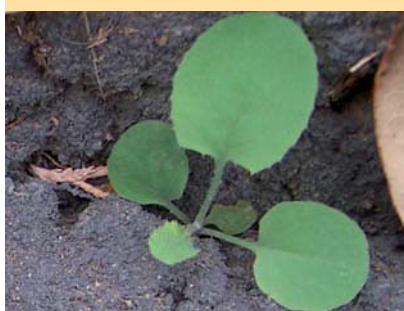
Target weed: *Sonchus oleraceus*, sowthistle, common sowthistle, milk thistle.


Brief description: This annual, broadleaf weed germinates in autumn or winter. It has an erect habit and can grow up to 1.5 metres high. Its hairless leaves are bluish green in colour and are deeply lobed with spines on the serrated leaf margin.

The stem is hollow and exudes a sticky white sap when broken. The flowers are yellow and produce numerous small seeds that are attached to 'fine white parachutes' or pappus.

Key propagules: air-borne seeds.

Method of spread: sowthistles produce numerous seeds that are dispersed by the wind.



Garden weed planner		
Target weed: sowthistle		Situation: garden and lawn
Method of spread: wind		Key propagules: seed
Tactic Group and aim	Tactic used	Information and timing of tactic
Tactic Group 1 Deplete the weed seedbank.	Mulch	Mulch with materials such as thick layers of newspaper, straw, bark chips and gravel. Mulching causes 99% of sowthistle seeds close to the soil surface (0–2 cm) to rot and become non-viable. Simple, effective, and water-wise too!
	Dig	Dig, weed or chip whole plants. Very effective for removing small sowthistles and larger plants prior to seed production. Note: It is important to remove the tap root of larger plants to ensure the sowthistle does not regrow.
	Apply herbicide	Apply a recommended herbicide using the appropriate method: a) <i>selective herbicide</i> (eg kills broadleaf weeds such as sowthistles in grass lawns) or b) <i>non-selective herbicide</i> (kills all plants, including sowthistles, when it is applied eg spot-spraying with glyphosate). Apply herbicides to actively growing sowthistles. Avoid applying them to weeds that are stressed due to factors such as lack of water, over-watering, frost or hot weather. Seek advice and read and follow label directions carefully before application. 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> .
Tactic Group 2 Kill and remove weeds.	Mulch	Mulch with materials such as thick layers of newspaper, straw, bark chips and gravel to inhibit the emergence, establishment and growth of sowthistle seedlings. Weed mat is also effective.
		

Garden weed planner		
Target weed: sowthistle		Situation: garden and lawn
Method of spread: wind		Key propagules: seed
Tactic Group and aim	Tactic used	Information and timing of tactic
Tactic Group 3 Stop weed seed set.	Cut – mow	Time mowing of lawns to cut the seed head before it matures. Repeat treatment may be required.
Tactic Group 4 Prevent replenishment of the weed seedbank.	Collect and dispose	Collect and dispose of plants before the seeds are dispersed from the parent plant. Seeds can be dislodged when removing the parent plant so care should be taken. 
Tactic Group 5 Prevent introduction of weed seed from external sources.	Clean tools – mower	Light seeds can collect on top of the mower deck. Clean after mowing infested areas and contain and dispose of debris. 
	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.
Best garden practice Implement best garden practice to favour desirable plants rather than the weeds.	Choose plants carefully	Competition from desirable garden plants will reduce the number of seeds that sowthistles can produce. 
	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 and improve their competitive ability. A weed mat is also effective.
	Monitor	Check regularly for sowthistles around new plants and weeded areas. Control when small.
	Apply nutrients and water	Healthy plants and lawns provide good competition, dramatically reducing seed set of sowthistles. Combine with appropriately timed tactics to manage sowthistles.

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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