

Bulb weed reproduction and control guide



Name	Declared status	Toxicity	How it spreads	Priority non-herbicide control option	Herbicide options
Arum lily <i>Zantedeschia aethiopica</i> Family: Araceae	Declared in SA*	Yes - all parts are toxic to humans and livestock.	Rhizome and tubers. 1. Growth of underground rhizomes, along with aggressive production of many small tuber-like nodules each season. 2. Flowers produce 40-50 berries, each containing several seeds.	Remove the flowers while young, to prevent berry and seed development.	Near standing or flowing water - Roundup Biactive or Weedmaster Duo. Away from standing or flowing water - metsulfuron 600 g/kg at 1 g/10 L + penetrant, ensuring full leaf coverage, from flower stem emergence when all leaves have unfurled (maximum leaf area), until immature seed set (prior to seed expansion and turning yellow).
Asparagus fern <i>Asparagus scandens</i> Family: Asparagaceae	Declared in SA*	Not known	Rhizome and tubers. 1. Growth of underground rhizomes and tubers. 2. Flowers produce berries that contain 1-3 seeds each. 1 m of length fruiting stem can produce 64 berries. Male and female flowers on separate plants.	Pull the climbing foliage off significant native plants to prevent smothering. For smaller infestations, detach climbing foliage from the tuber before the flowers can develop seed. Dig up the dense mat of rhizomes of individual plants on the edge of infestations to contain outward spread. Any root fragments left in the soil will re-shoot.	Spray 100 ml glyphosate (360g/L) + 0.2 g metsulfuron methyl + penetrant in 15 L water when flowering. Pull climbing foliage off other plants, pile foliage together on the ground and spray. Metsulfuron methyl alone at 0.15g/10L is appropriate for a range of Asparagus species.
Aunt Eliza <i>Chasmanthe floribunda</i> Family: Iridaceae	No - under review	Yes - low to mild toxicity to humans, livestock and pets.	Corm. 1. Growth of underground corms and cormlets each season. 2. Flower stalks produce 20-40 capsules, each containing 6-10 seeds.	Cut off the flower stalks before the flowers develop into seed capsules.	Near standing or flowing water - Roundup Biactive or Weedmaster Duo. Away from standing or flowing water - metsulfuron 600 g/kg at 1 g/10 L + penetrant, ensuring full leaf coverage, from flower stem emergence when all leaves have unfurled (maximum leaf area).
Bridal creeper <i>Asparagus asparagoides</i> Family: Asparagaceae	Declared in SA*	Not known	Rhizome and tubers. 1. Growth of underground rhizomes and tubers. 2. Flowers produce berries containing 2-9 seeds each.	Pull the climbing foliage off significant native plants to prevent smothering. For smaller infestations, detach climbing foliage from the tuber before the flowers can develop seed. Dig up the rhizomes of individual plants on the edge of infestations to contain outward spread. Any root fragments left in the soil will re-shoot.	Spray metsulfuron methyl 0.2 g/15 L + penetrant when flowering. Pull climbing foliage off other plants, pile foliage together on the ground and spray. Metsulfuron methyl alone at 0.15g/10L is appropriate for a range of Asparagus species.
Bridal veil <i>Asparagus declinatus</i> Family: Asparagaceae	Declared in SA*	Not known	Rhizome and tubers. 1. Growth of underground rhizomes and tubers. 2. Flowers produce berries containing 5-8 seeds each.	Pull the climbing foliage off significant native plants to prevent smothering. For smaller infestations, detach climbing foliage from the tuber before the flowers can develop seed. Dig up the very large rhizomes of individual plants on the edge of infestations to contain outward spread. Any root fragments left in the soil will re-shoot.	Spray metsulfuron methyl 0.2 g/15 L + penetrant when flowering. Pull climbing foliage off other plants, pile foliage together on the ground and spray. Metsulfuron methyl alone at 0.15g/10L is appropriate for a range of Asparagus species.
Chincherinchee <i>Ornithogalum thyrsoides</i> Family: Asparagaceae	No - under review	Yes - all parts are toxic, including seeds.	Bulb. 1. Division of parent bulb, and growth of underground bulbils each season. 2. Spikes produce 11-70 flowers, each flower spike producing about 500 seeds.	Remove flowers while young. If left on the ground, mature flowers may still form viable seeds. The lower flowers mature and set seed first. Seeds are long lived in the soil.	Tolerant to most herbicides. Spot spray 100ml glyphosate (360g/L) + 0.2g metsulfuron methyl in 10L + 2ml/L penetrant.
False onion weed <i>Nothoscordum borbonicum</i> Family: Amaryllidaceae	No	No	Bulb. 1. Growth of many bulbils surround the underground parent bulb each season. 2. Stalks produce 8-20 flowers, each forming a capsule containing 12-36 seeds.	Slash before flowering to prevent seed developing. If digging up bulbs, take care to dig out the all of the surrounding bulbils.	Spot spray glyphosate (360g/L) 1% + penetrant before flowering.
Freesia <i>Freesia refracta</i> Family: Iridaceae	No	No	Spread mechanism: Corm. 1. Growth of underground cormlets on parent corms each season. 2. Growth of tiny cormils in leaf bases. 3. Flowers produce capsules containing 9-15 seeds each.	Slash before flowering to prevent seed developing. Corms are not long lived (2-3 years), making eradication achievable in a relatively short time.	Spot spray metsulfuron methyl 0.2 g/15 L + penetrant on corm exhaustion.
Guildford grass <i>Romulea rosea</i> Family: Iridaceae	No	Yes - may cause staggers syndrome in livestock and may cause fibre balls in the stomachs and bowels of cattle, horses and sheep.	Spread mechanism: Corm. 1. Growth of 3-6 underground corms each season. 2. Flowers produce up to 36 seeds per capsule.	Difficult to control. Slashing is unlikely to remove the short flowers. Depending on the situation, hand digging or herbicide control may be needed.	Spot spray metsulfuron methyl 0.2 g/15 L + penetrant just on flowering at corm exhaustion. In pasture, boom spray with 10g/Ha of metsulfuron methyl + wetter at the bulb exhaustion stage.

Bulb weed reproduction and control guide



Name	Declared status	Toxicity	How it spreads	Priority non-herbicide control option	Herbicide options
Harlequin flower, Tricolor harlequin flower, and Synnotia <i>Sparaxis bulbifera</i> , <i>S. tricolor</i> and <i>S. villosa</i> Family: <i>Iridaceae</i>	No	Yes - mildly toxic to cats and dogs, usually causing mild stomach upset.	Spread mechanism: Corm. 1. Growth of underground corms and cormlets each season. 2. Flowers can produce prolific seeds, from 50-1,000 per plant.	Slash before flowering to prevent seed developing.	Spot spray metsulfuron methyl 0.2 g/15 L + penetrant just on flowering at corm exhaustion.
Ixia <i>Ixia polystachya</i> Family: <i>Iridaceae</i>	No	Yes - all parts are toxic to cats and dogs, causing vomiting, diarrhoea, and depression.	Spread mechanism: Corm. 1. Growth of underground corms and cormlets each season. 2. Flowers can produce prolific seeds, from 50-1,000 per plant.	Slash before flowering to prevent seed developing.	Spot spray metsulfuron methyl 0.2 g/15 L + penetrant.
One-leaf Cape tulip <i>Moraea flaccida</i> Family: <i>Iridaceae</i>	Declared in SA*	Yes - all parts are toxic to humans and livestock, fresh or dried	Spread mechanism: Corm. 1. Growth of 1-3 underground corms each season. 2. Flowers produce up to 150 seeds per capsule.	Slash before flowering to prevent seed developing.	Spot spray metsulfuron methyl 0.2 g/15 L + penetrant just on flowering at corm exhaustion.
One o'clock <i>Oxalis purpurea</i> Family: <i>Oxalidaceae</i>	No	Yes - high in oxalic acid, which can be damaging to kidneys if eaten in large quantities.	Spread mechanism: Rhizome and Bulbs. 1. Growth of underground bulbils along extending rhizomes. 2. Bulbs renew themselves annually. (Not known to set seed in Australia).	Take care to remove all bulbils when digging up manually. Control small outlying patches early, to prevent establishment.	Spot spray metsulfuron methyl 0.2 g/15 L + penetrant, or 1% glyphosate (360g/L) at bulb exhaustion, generally just on flowering.
Soursob <i>Oxalis pes-caprae</i> Family: <i>Oxalidaceae</i>	No	Yes - poisonous to stock, mildly toxic to humans if eaten in large quantities.	Spread mechanism: Bulb. 1. Bulbs renew themselves annually. 2. Plants produce numerous underground bulbils each season. (Rarely forms viable seed in Australia).	Hand pull plants early in the growing season, before bulbils develop. Take care to remove all bulbils if digging up later in the season. Control small outlying patches early, to prevent establishment.	Spot spray metsulfuron methyl 0.2 g/15 L + penetrant, or 1% glyphosate (360g/L) at bulb exhaustion, generally just on flowering.
South African weed orchid <i>Disa bracteata</i> Family: <i>Orchidaceae</i>	No	No	Spread mechanism: Tuber. 1. Growth of 1-2 underground tubers each season. 2. Flowers produce prolific fine seed that is dispersed by wind and survives for 6+ years.	Remove flowers before seed develops.	Spot spray 1% glyphosate (360g/L) + penetrant, just on flowering.
Three-cornered garlic <i>Allium triquetrum</i> Family: <i>Amaryllidaceae</i>	Declared in SA*	No - all parts are edible, but can taint milk and meat when consumed by grazing animals.	Spread mechanism: Bulb. 1. Growth of 2-3 underground bulbils each season. 2. Umbels produce 4-19 flowers, each forming a round capsule containing many seeds.	Remove flowers well before berries form. Note that berries are not visible beneath the petals. Dispose of flowers when capsules begin to form. If left on the ground seeds may still mature.	Away from water - Spot spray metsulfuron methyl 0.2 g/15 L + penetrant on flowering at bulb exhaustion.
Two-leaf Cape tulip <i>Moraea miniata</i> Family: <i>Iridaceae</i>	Declared in SA*	Yes - all parts are toxic to humans and livestock, fresh or dried	Spread mechanism: Corm. 1. Growth of 1-2 underground corms each season. 2. Growth of tiny cormils along the stem and base of stem. (Flowers produce seeds that are NOT viable in Australia).	Slash foliage early to prevent cormils developing along the stem. Mowing too late will spread any cormils that have matured.	Spot spray metsulfuron methyl 0.2 g/15 L or chlorsulfuron 0.2 g/15 L + penetrant just on flowering at corm exhaustion.
Watsonia <i>Watsonia bulbillifera</i> Family: <i>Iridaceae</i>	Declared in SA*	Suspected - but stock avoid mature plants and are apparently unaffected by young shoots.	Spread mechanism: Corm. 1. Growth of 2-3 underground corms each season. 2. Growth of tiny cormils along the flower stalk and in leaf bases. Cormils are short lived for only one season. (Flowers produce seeds that are not viable in Australia).	Cut off the flower stalks before cormils form beneath the flowers and drop.	Wipe individual leaves with glyphosate (360g/L) 10% concentration or spray dense infestations with 2,2-DPA (Dalapon**) 5-10 g/L + penetrant or with metsulfuron methyl 1 g/10 L, just as flower spikes emerge at corm exhaustion.
Wild Gladiolus <i>Gladiolus undulatus</i> Family: <i>Iridaceae</i>	No	Yes - Gladiolus generally cause digestive distress if ingested.	Spread mechanism: Corm. 1. Growth of underground corms with production of masses of cormlets. (Flowers are not known to produce seed in Australia).	Dig up individual plants ensuring removal of all the soil containing hundreds of cormlets surrounding the parent corm are also removed and disposed of.	Wipe individual leaves with glyphosate (360g/L) or spot spray metsulfuron methyl 0.2 g/15 L + penetrant at corm exhaustion.

* See PIRSA "Weed Control Handbook for Declared Plants in South Australia" for more chemical control options.

**Dalapon is a selective herbicide for corms in the Iridaceae family, and can be used in native vegetation.

Cormlets = below-ground baby corms. Cormils = above-ground baby corms.