

South Australian alert weeds guide



Alert weeds are significant weeds that pose a threat to South Australian primary production, biodiversity or human health.

They are regulated under the *Landscape South Australia Act 2019* which prohibits their transport and sale, and if found their presence must be reported to PIRSA or Landscape Boards. Alert weeds are either not yet present in SA, or present in low numbers making them prime targets for eradication.

Report locations of alert weeds to enable a prompt management response that will prevent further spread of the weed. This brochure showcases 15 of the 27 South Australian Alert weeds.

Hygiene is an important component in preventing the introduction of new weeds. Property owners should insist that vehicles, machinery, livestock and produce coming to or from their property are not contaminated with weed seeds or vegetative material. Weed hygiene is everyone's responsibility.

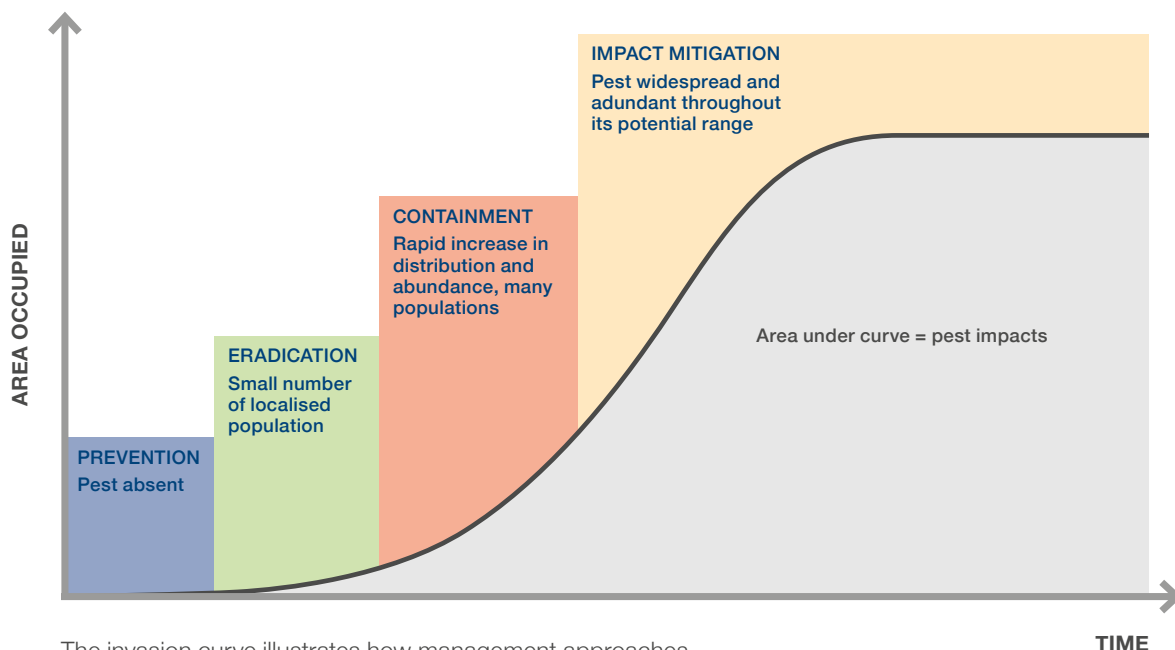
For information on all 27 Alert weeds, and contact details for reporting please visit the PIRSA website.



Invasion curve

All weed management has a cost. Prevention is by far the most cost effective form of weed control. The second most cost effective form of weed control is eradication of a recently arrived weed limited to a small number of localised populations. The longer a weed goes uncontrolled the more it will spread, causing greater environmental and production impacts and making eradication an unlikely target.

Containment and asset based protection are the least cost-effective management actions. Unfortunately this is where most weeds lie on the invasion curve. Early detection and eradication of a new weed will prevent another costly widespread weed from establishing.



The invasion curve illustrates how management approaches change as a weed is introduced and becomes widespread.

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Cane Needlegrass – *Nassella hyalina*



A perennial tussock-forming grass growing 25–120cm high with linear leaves that are flat or rolled inwards and are rough to the touch.

Flowers from mid-spring until early-summer; seeds ripen in summer. The erect seed head is an open panicle with many flower spikelets, but it also produces hard, nut-like stem seeds within the leaf sheath at the stem joints. The seeds are 3.5–5mm long and have a long awn, which is twisted near the base and twice bent.

Drought tolerant, inhabits grasslands, pastures, woodlands and disturbed areas and is tolerant of waterlogging.

IMPACT

- A low-protein, high fibre grass; can dominate a pasture when desirable species are preferentially grazed out
- Forms dense infestations where it can exclude desirable species
- Very sharp seeds can cause injury to livestock and contaminate fleece

Serrated Tussock – *Nassella trichotoma*



A perennial tussock-forming grass with a deep fibrous root system growing up to 60cm high (75cm when in flower). The narrow leaves are stiff, upright, tightly rolled, and have microscopic serrations along their edges.

Open branching flower heads containing seed are around 25cm long. Flower heads have a distinct purple colour as seeds ripen in late spring and summer. Seeds are 1-2mm with 30mm long tail.

Drought tolerant, adapts to a range of climates, terrains, and soil types including pasture land, roadsides, woodlands and disturbed areas.

IMPACT

- A low-protein, high fibre grass; can dominate a pasture when desirable species are preferentially grazed out
- Threatens biodiversity in native grasslands
- Creates a fire hazard
- Mature plants produce more than 100 000 seeds per year

Mexican Feathergrass – *Nassella tenuissima*



A perennial tussock-forming grass with flowering stems growing up to 70cm high. Leaves are thread-like, and roll smoothly between the fingers. Leaves have serrations and feel rough when sliding the fingers down the leaf blade. Flowers from mid-spring until early-summer; seeds ripen in summer.

Seed heads are 15–25cm long, have a small pointed tip, a long bent tail and resemble a large feather when clumped together. Tussocks are pale to white in winter, and are very similar in appearance to serrated tussock.

Drought tolerant, capable of surviving in extremely variable climates and soil types. Was mistakenly sold as a garden plant around the Fleurieu Peninsula in 2008.

IMPACT

- A low protein, high-fibre grass; can dominate a pasture when desirable species are preferentially grazed out
- Threatens biodiversity
- Highly adaptable, could spread throughout most of southern Australia causing major economic and environmental damage

Prickly Acacia – *Acacia nilotica* subsp. *indica*



Thorny shrub or small tree typically 4–5m high (up to 10m high reported) with umbrella shaped canopy.

Leaves are fern-like, 4–10 pairs of leaf branches, 10–20 pairs of narrow green leaflets on each branch. Flowers from February to June, pods ripen and fall from late October through to January.

Seed pods resemble a string of pearls. Bark is dark and rough on older trees and orange and/or green on saplings. Prefers subtropical and tropical climates. Inhabits woody grasslands and savannahs on a wide range of soil types

IMPACT

- Threatens biodiversity, transforming grasslands into thorny scrub
- Exclusion of native vegetation can increase soil erosion
- Forms dense, thorny thickets that interfere with stock mustering, movement, and water access
- Thorns can cause serious injury and damage vehicles

Mesquite – *Prosopis* spp.



Multi-stemmed perennial shrubs or single stemmed trees with a spreading canopy growing 3–15m tall. Branches have a zig-zag structure and fern-like leaves at each point where the branch changes direction, often with a pair of spines at the base.

Creamy-yellow cylindrical shaped flower spikes are 50–80mm in length. Flowers in spring and early summer; Seeds remain viable for very long periods.

Bark is smooth and red-green in young stems, and rough grey in older stems. It has a large branched tap root reaching a depth of 20m. Infestations commonly begin along watercourses (natural and constructed) and can rapidly invade upland country. Inhabits semi-arid and arid rangelands.

IMPACT

- Damages watercourses and native grasslands
- Competes with and excludes native vegetation
- Forms dense, impenetrable barriers that interfere with stock mustering, movement, and water access
- Thorns can cause serious injury and damage vehicles
- Provides refuge and food source for feral animals, such as pigs

Parkinsonia – *Parkinsonia aculeata*



A fast growing perennial shrub or small tree 2–8m high. Drooping leaves have two sharp spines at the base of each leaf, arranged along zig-zagging branches. The branches have green bark enabling the plant to obtain sustenance even after complete defoliation from drought or grazing.

Flowers in early summer. Has a five-petalled flower – a single orange or orange-spotted, erect petal and four yellow petals. Seeds mature in late summer, borne in straw-coloured pods that can float on water. Inhabits creek/river corridors, alongside bores, disturbed sites and roadsides. Found in tropical, subtropical and semi-arid rangelands.

IMPACT

- Damages watercourses and rangelands; forms impenetrable barriers that interfere with stock mustering, movement and water access
- Wetlands are vulnerable as thickets can dam watercourses, cause erosion, lower water-tables and take over floodplains
- Competes with and excludes native vegetation by shading and depleting soil moisture and nutrition
- Infestations provide refuges for feral animals, especially pigs

Blue Mustard – *Chorispora tenella*



Erect annual herb growing to 60cm tall, covered with minute, glandular hairs that are odorous and sticky to the touch. Branched stems arise from the base of the plant. Leaves are variable in shape, oval to spear-shaped. Larger basal leaves have toothed or smooth edged margins, and often wither when flowers appear. Flowers have four mauve petals.

Seeds are held in long, upward-turned, segmented, cylindrical pods, which are ribbed on one side and pitted on the other. Single, round reddish-brown seeds to 1.5mm in diameter are contained in each segment. Germinates autumn to winter. Inhabits disturbed areas such as roadsides, waste areas and pastures. Tolerates a wide range of moisture, temperature and soil conditions.

IMPACT

- A tenacious highly competitive agricultural weed
- Competes with wheat/other cereals dryland lucerne
- Can taint milk when eaten by dairy cattle
- Difficult to control in grain crops as it is relatively tolerant to the herbicide 2,4-D

Parthenium Weed – *Parthenium hysterophorus*



An erect summer annual herbaceous plant growing 50–150cm high, Germinates in spring forming a basal rosette of leaves in the early growth stages and later producing upright ribbed, hairy stems in maturity. The fine hairs on the stems and the pollen are irritants and prolonged contact can cause long-term health issues.

Has fern-like leaves and numerous small white flower heads at the branch tips, which produce black, 3mm long seeds with small white scales at the top. Has been known to flower and set seed in as little as 4 weeks after germinating. Inhabits degraded or disturbed areas in semi-arid, subtropical, tropical and temperate regions.

IMPACT

- Unpalatable to livestock
- Contact with plant or pollen can cause allergic reactions, dermatitis and hay fever
- Spreads rapidly, colonising large areas
- Once established, rapidly builds a huge soil seed bank making eradication difficult and expensive
- Plants release chemicals that inhibit germination and growth of pasture grasses and other plants

Dodders – Introduced *Cuscuta* spp.



Summer annual leafless parasite with threadlike, branching stems that twine around a host plant, and produce small suckers that attach to the host's stem to extract nutrients.

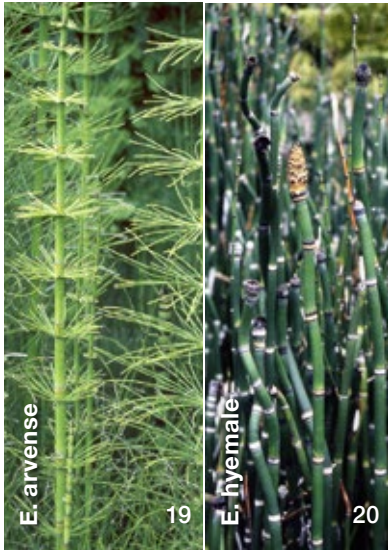
Flowers are tiny and cream to white. In *C. campestris* (golden dodder), the stems are yellowish. In *C. planiflora* (red dodder), the stems are reddish. A weed of lucerne crops, can inhabit cultivated, cropping land, pasture land, and roadsides across a wide range of climates, terrains, and soil types.

Native dodders *Cuscuta australis* and *Cuscuta victoriana*, are not weed species

IMPACT

- Parasitic on lucerne, leguminous herbs, vegetables and forbs
- Crop yields are diminished as absorbs nutrients from host plant
- Can cause scouring and death in cattle
- Financial loss occurs due to devalued or unsellable crops contaminated with dodder

Horsetail – *Equisetum* spp.



Horsetails are erect, long-lived perennial plants 10–100cm high, which are nonflowering and non-fruiting and have leafless green stems. The above ground parts are short-lived and regrow each year from the extensive root system. The entire length of the stem is divided into segments, which have tiny leaves like teeth encircling the stem joints.

A thick cuticle and the shape of the stems repel water droplets making herbicide penetration difficult. Prefers cold to warm temperate regions, within 100–600mm annual rainfall, swampy areas, edges of waterways, disturbed sites, poorly drained and low-lying crops/pastures.

IMPACT

- Contain alkaloids that are toxic to livestock
- Destroys natural wetlands forming pure stands over extensive areas, displacing native vegetation/fauna and impeding water flow
- Reduces crop yields by producing a substance that suppresses surrounding plants
- Difficult to control due to a waxy substance that repels herbicide, and extensive – inaccessible underground root system to 5m depth

Giant Arrowhead – *Sagittaria montevidensis*



A short-lived perennial aquatic herb growing to 1m high. Arrow shaped emergent leaves to 25cm long and 20cm wide and straplike, linear submerged leaves. White 3-petalled flowers 2.5cm wide grow on leafless stems mainly in summer.

Seeds are flat, 1.5–3mm long with dorsal wings. Frost sensitive, prefers temperate swamps, marshy areas along river and stream banks, drainage channels.



IMPACT

- Impedes water flow in irrigation and drainage channels
- Decomposition causes de-oxygenation of water and increased populations of disease-carrying insects
- Lowers light levels, shading out native aquatic flora and fauna
- Restricting recreational use of waterways

Salvinia – *Salvinia* spp.



A free-floating aquatic fern, with feathery submerged leaves that look like roots, and rounded surface leaves. Upper leaf surface is covered in water-repellent hairs that look like eggbeaters (distinguishing feature).

In early stages of growth, oval leaves lie flat on the water surface. At a later stage, leaves position themselves vertically in response to crowding and develop into tight chains, to form dense mats of floating plants. Salvinia does not produce flowers and reproduces vegetatively.

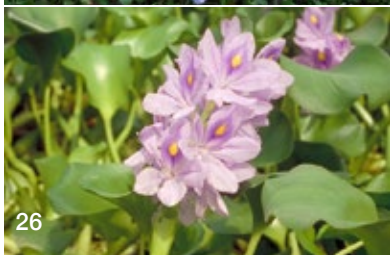
Actively grows in spring/summer and although sensitive to frost, can survive winter and proliferate in spring. Inhabits stationary and slow-flowing fresh water, and in a wide range of climates.



IMPACT

- Destroys natural wetlands by reducing light, oxygen levels and temperature leading to water stagnation
- Impedes water flow, restricts stock access and provides favourable conditions for the breeding of disease-carrying insects
- Dense mats form over the water surface, affecting aquatic habitat
- Impairs the use of waterways for recreation and transport
- Interferes with irrigation systems

Water Hyacinth – *Eichhornia crassipes*



An aquatic herb 30–65cm high, free-floating but sometimes attached to the substrate underwater. It has black to purple feather roots that trail in the water. It has glossy green, thick flat leaves that radiate from the base to form a rosette, some with a swollen buoyant base to the leaf stalks.

Flowers are a showy bluish-purple colour with a distinctive yellow blotch on the upper petal, on a short erect stem. Prefers still or slow-flowing water, including rivers, swamps, reservoirs and farm dams. Actively grows in spring/summer and although sensitive to frost can survive winter and proliferate in spring.

IMPACT

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Alligator Weed – *Alternanthera philoxeroides*



Perennial herb to 50cm high. Flowers are silvery-white and papery in globular clusters and are borne on short stalks during mid-summer.

Green spear-shaped leaves are arranged along hollow stems growing to 10m long in water. On land, stems modify to become thickened roots reaching a depth of 1m in the substrate.

Tolerates a wide range of conditions. Grows in brackish or slow-moving fresh water and moderately saline waterways, such as rivers, lakes, reservoirs, swamps, irrigation systems, and drainage channels. Once established on land, it will survive extreme dry periods.

IMPACT

- Dense weed mats can reduce oxygen levels, increase water loss and reduce water quality
- When growing on land, it displaces other more favourable plants such as crops or native vegetation, and can be harmful to animals when consumed
- Invades both land and water and spreads easily from fragments; very hard to control
- In fresh water, it can obstruct waterways and drains

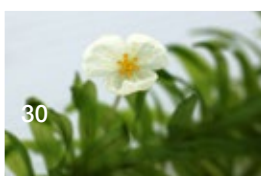
Leafy elodea – *Egeria densa*



Submerged aquatic perennial with stems growing to 5 metres long, usually rooted in mud but also free floating near water surface.

Stems are branched, green to brown in colour, with strap-like leaves 1-3 cm long and about 0.5 cm wide. Large white flowers may be produced in early summer. Reproduces vegetatively.

Tolerates cold conditions, grows in shallow, slow moving freshwater.



IMPACT

- Can form dense stands that restrict water movement, trap sediment, and cause fluctuations in water quality
- Blocks light penetration in water bodies, adversely affecting aquatic wildlife
- Eutrophication from decomposing plants can occur in warm conditions when water levels drop
- Dense beds interfere with water supplies, irrigation projects, and the navigation and recreational use of waterways

To report alert weeds, call the
National Pest Alert Hotline 1800 084 881

For more information contact your local
Landscape Board
www.statewide.landscape.sa.gov.au

or visit the PIRSA website
pir.sa.gov.au

For assistance in weed identification,
email the State Herbarium of
South Australia at **stateherbsa@sa.gov.au**

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