

PASTURE PARAMEDIC

Technical manual to
support the use of
the rapid pasture
assessment tool

Southern
high rainfall
perennial
pasture

Online edition

Pasture Paramedic was developed by Cam Nicholson (Nicon Rural Services), Lisa Miller and Jess Brogden (Southern Farming Systems) on behalf of Meat & Livestock Australia (MLA). All photographs are supplied by the authors unless otherwise acknowledged.

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First Edition 2019

Second Edition 2020

Main menu

Assessing & scoring

.....

Late summer / early autumn

- + Ground cover
- + Amount of dry material covering the ground
- + Live sown perennial grasses

Winter / early spring

- + Sown perennial grasses
- + Improved clovers
- + Example weeds for categories A, B & C

Sown perennial grass identification

.....

- + Perennial ryegrass
- + Phalaris
- + Cocksfoot
- + Tall fescue

Clover identification

.....

Improved clovers

- + Sub-clover
- + White clover
- + Balansa clover
- + Persian clover
- + Strawberry clover
- + Arrowleaf clover

Commonly confused species

- + Medic
- + Nodding clover
- + Oxalis, soursob
- + Suckling clover

Oestrogenic sub-clovers

- + Yarloop
- + Dinninup
- + Dwalganup

[Weed identification](#) ➤

Main menu

Weed identification

.....

Grass weeds

- + Annual ryegrass
- + Bent grass
- + Barley grass
- + Fog grass
- + Silver grass
- + Soft brome grass
- + Sweet vernal
- + Wild oats
- + Winter grass

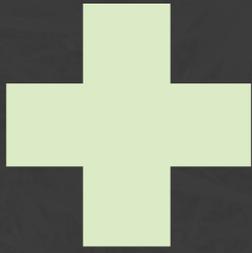
Narrowleaf weeds

(look similar to grasses)

- + Onion grass
- + Toad rush
- + Wireweed

Broadleaf weeds

- + Capeweed
- + Dock
- + Erodium
- + Flatweed, Catsear
- + Mallow
- + Mouse-ear chickweed
- + Nightshade
- + Oxalis
- + Paterson's curse
- + Sorrel
- + Thistles
- + Wild radish



Main menu

Assessing & scoring

Late summer / early autumn

- + Ground cover
- + Amount of dry material covering the ground
- + Live sown perennial grasses

Winter / early spring

- + Sown perennial grasses
- + Improved clovers
- + Example weeds for category A, B & C



Ground cover



70% ground cover



90% ground cover

Amount of dry material covering the ground



Less than one handful
of loose litter



More than two handfuls
of loose litter (loose litter
still on ground)



Assessing and scoring Late summer / early autumn

Main menu

Live sown perennial grasses



The pinch and pull test

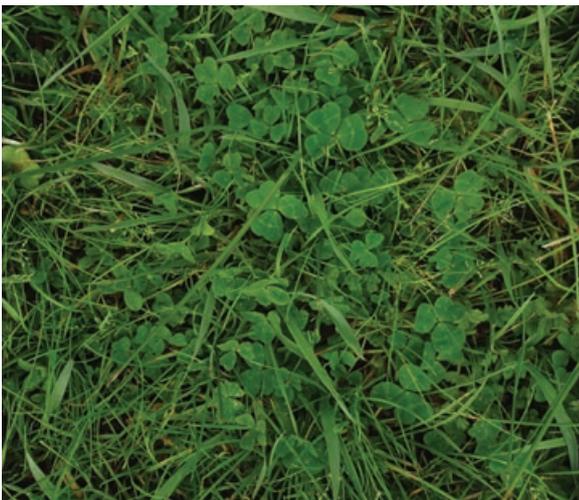


Number of live plants
(photo shows seven)



Assessing and scoring Winter / early spring

Sown perennial grasses



10% to 30% sown grass



30% to 50% sown grass

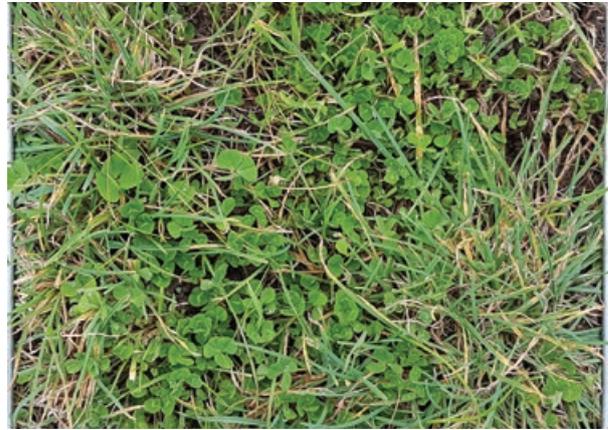
Looking for something else? *Click on the links below to take you to another menu.*



Improved clovers



5% to 20% improved clovers



20% to 40% improved clovers

Example weeds for category A, B and C

Cat.	Description	Example weeds
A	<ul style="list-style-type: none"> • high grazing value • palatable; grazed readily by stock • few animal health effects • grow rapidly and are competitive against desirable grasses and clovers 	Annual ryegrass, barley grass, capeweed, soft brome grass
B	<ul style="list-style-type: none"> • some grazing value • less palatable, so less readily eaten by grazing animals • possible product contamination problems 	Bent grass, dandelion, dock, erodium, fog grass, mallow, mouse-ear chickweed, oxalis, silver grass, sorrel, sweet vernal, thistles, wild oats, wild radish, winter grass, wireweed
C	<ul style="list-style-type: none"> • little or no grazing value • not palatable • major animal health issues 	Nightshade, onion grass, Paterson's curse, toad rush

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Main menu

Sown perennial grass identification

.....

- + Perennial ryegrass
- + Phalaris
- + Cocksfoot
- + Tall fescue



Sown perennial grass identification

Perennial ryegrass

Main menu

Species

Appearance of the leaf surface

Perennial ryegrass
(*Lolium perenne*)

Shiny on the back of the leaf. Soft bright green leaves, no hairs.



Appearance of emerging leaf

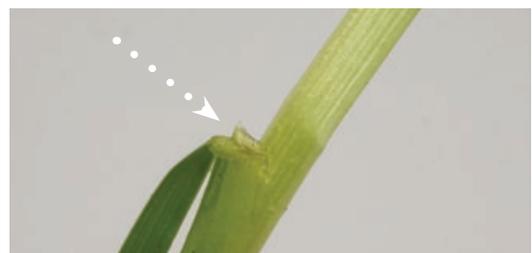
Other distinguishing features

Folded (leaf opens like a book).

May show red pigment at base of stem.



Short membranous ligule.



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Sown perennial grass identification

Phalaris

Main menu

Species | Appearance of the leaf surface

Phalaris
(*Phalaris aquatica*)

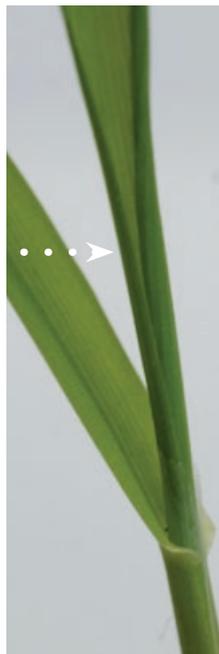
Dull bluish green leaves,
no hairs.



Appearance of emerging leaf | Other distinguishing features

Rolled (leaf rolls open).

Long membranous ligule.



Base of the tiller will 'bleed' reddish sap if cut or pinched with a fingernail.



Looking for something else? Click on the links below to take you to another menu.



Sown perennial grass identification

Cocksfoot

Main menu

Species Appearance of the leaf surface

Cocksfoot
(*Dactylis glomerata*)

Dull, light green leaves,
no hairs.



Appearance of emerging leaf Other distinguishing features

Folded (leaf opens like a book).

Long membranous ligule.



Looking for something else? Click on the links below to take you to another menu.



Sown perennial grass identification

Tall fescue

[Main menu](#)

Species

Appearance of the leaf surface

Tall fescue
(*Festuca arundinacea*)

Shiny on back of leaf. Rough, coarsely ribbed dark green leaves, no hairs.



Appearance of emerging leaf

Other distinguishing features

Rolled (leaf rolls open).

May show red pigment at base of stem, more often green.



Looking for something else? [Click on the links below to take you to another menu.](#)



Clover identification

Improved clovers

- + Sub-clover
- + White clover
- + Balansa clover
- + Persian clover
- + Strawberry clover
- + Arrowleaf clover

Oestrogenic sub-clovers

- + Yarloop
- + Dinninup
- + Dwalganup

Commonly confused species

- + Medic
- + Nodding clover
- + Oxalis, soursob
- + Suckling clover



Species

Leaf appearance

Sub-clover

(*Trifolium subterraneum*)

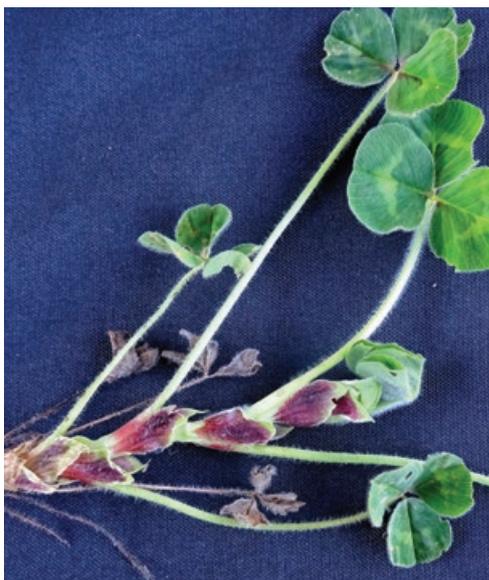


Hairs on leaves, especially underside. Sometimes flecks or white or green markings on leaves.



Other distinguishing features

Produces runners in late winter (non-rooting horizontal stem).



Small white flower, sometimes with red pigmentation located across the flower tube.



Produces a burr.





Species

White clover
(*Trifolium repens*)



Leaf appearance

No hairs. Leaf shape generally rounded with white crescents on upper leaf surface but can be variable.



Other distinguishing features

Perennial, so will grow during summer. Stolons with fibrous roots at nodes, some stolons may be buried.



Aerial seeder. Globular cluster of white-pink flowers on long stalks.

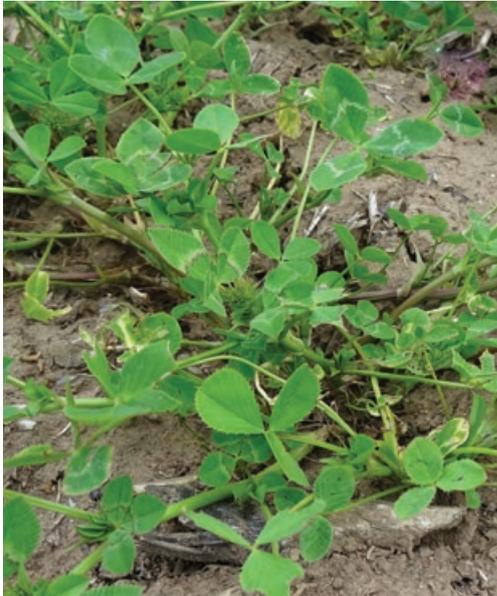




Species

Leaf appearance

Balansa clover
(*Trifolium michelianum*)



No hairs. Trifoliate leaves vary greatly in size, shape and leaf markings. Leaflet margins are generally serrated.



Other distinguishing features

Hollow stem.



Aerial seeder. Globular cluster of white pinkish flowers on long stalks.



Stipules red.



Looking for something else? Click on the links below to take you to another menu.



Species

Persian clover
(*Trifolium resupinatum*)



Leaf appearance

No hairs. No leaf markings. Leaflet margins can be smooth or serrated. Larger leaflets than balansa.



Other distinguishing features

Hollow stem.



Aerial seeder. White pinkish to purple flowers. Flower petals flattened rather than forming a globular shape.



Green stipules, plants erect rather than spreading out.





Species

Strawberry clover
(*Trifolium fragiferum*)



Leaf appearance

No hairs. Leaf shape generally pointed oval with little or no leaf markings. Veins closely spaced, and much branched, showing a curve from the midrib to the leaf edge which distinguishes it from white clover.



Other distinguishing features

Perennial, so will grow during summer. Stolons with fibrous roots at nodes.



Aerial seeder. Flower head resembles a strawberry fruit. White pinkish flowers.





Species

Leaf appearance

Arrowleaf clover
(*Trifolium vesiculosum*)

No hairs on leaf. Distinct steep angled white arrow or V-shaped marking on upper leaf. Mature plants have pointed oval shaped leaflets.



Other distinguishing features

Aerial seeder. Large white flowers which develop a pink tinge with maturity.

Flowering stems thick and red in colour. Stipules long narrow with prominent veins.



Looking for something else? Click on the links below to take you to another menu.



Species

Leaf appearance

Medic
(*Medicago* spp.)

Stalk of middle leaflets longer than those of side leaflets. May have sparse hairs on leaves. Leaflets often serrated.



Other distinguishing features

Yellow flowers.

Produces a burr.



Looking for something else? Click on the links below to take you to another menu.



Clover identification commonly confused

Nodding clover, cluster clover

[Main menu](#)

Species	Leaf appearance
---------	-----------------

Nodding clover and cluster clover
(*Trifolium cernuum* and *Trifolium glomeratum*)

Leaflets hairless. Leaflet stalks very short. Slightly serrated leaf margin.



Other distinguishing features

Plants hairless but occasionally a few hairs at the base of the leaflets and on the flower tube. Both species look identical with small pink flower head.

Nodding clover has flowers on short stems which turn down on maturity. Cluster clover clasps flower head close to the stem.



Looking for something else? [Click on the links below to take you to another menu.](#)



Clover identification commonly confused Oxalis, wood sorrel, soursob

[Main menu](#)

Species

Oxalis, wood sorrel, soursob
(*Oxalis pes-caprae* and
Oxalis corniculata)



Leaf appearance

Heart-shaped leaves, sometimes with dark flecks. Few hairs on underside of leaf.



Other distinguishing features

Yellow tubular flowers on stalks.



Has bulbs (*Oxalis pes-caprae*) or tubers (*Oxalis corniculata*) which regrow each year.



Looking for something else? [Click on the links below to take you to another menu.](#)



Species

Leaf appearance

Suckling clover
(*Trifolium dubium*)



Pointed oval leaflets with the narrower end at the base. Middle leaflet has a slightly longer stalk. Slightly hairy or no hairs. Leaf markings absent. Leaflet margins at top can be serrated. Small leaflets compared to other clovers.



Other distinguishing features

Stems are sparsely hairy, commonly red. Aerial seeder. Clusters of small yellow flowers.





Clover identification oestrogenic
Yarloop sub-clover

Main menu

Leaf

No central crescent, small white arms can be present or absent. Lots of space between leaflets. Leaf stem hairless.



Stipule and runner hairiness

Veins red and red pigmentation covering half or more of the stipule surface. Runners hairless.



Flower tube

Whole calyx can have zero pigmentation to 1/4 pink pigmentation when exposed to sunlight. Flower stem hairless.



Other comments

Tends to have brown midrib under cold conditions.



Looking for something else? Click on the links below to take you to another menu.



Clover identification oestrogenic

Dinninup sub-clover

Main menu

Leaf

Green flattened crescent extends across most of the leaflet. May have small white arms, although only present under ideal conditions. Leaf stem hairy.



Stipule and runner hairiness

Distinct red veins and red pigmentation covering half of the stipule surface. Runners hairy.



Flower tube

Calyx tubes with red pigmentation covering one quarter to half of upper tube. Pigmentation fades with plant maturity. Flower stems hairy.



Other comments

Mt Barker is similar with red pigmentation on the calyx and stipule, which does not fade with maturity. It is also prone to blackish flecking on leaflets and a triangular shaped leaf marking.



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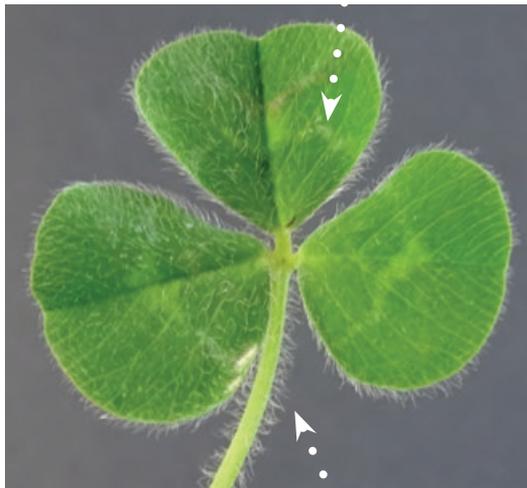


Clover identification oestrogenic Dwalganup sub-clover

Main menu

Leaf

Green triangle shaped crescent in leaf centre with white arms angled down from crescent to leaf margin edge. Hairy upper leaf and flower stem.



Stipule and runner hairiness

Veins on stipule red.
Hairy to very hairy runners.



Flower tube

Calyx tube has no pigmentation or some are light pink on the tip of calyx tube. The flower stem is very hairy.



Other comments

Most similar in features to Dalkeith but Dalkeith has greater leaflet indentation, which gives the appearance of heart-shaped leaves.



Looking for something else? Click on the links below to take you to another menu.



Weed identification

Grass weeds

- + Annual ryegrass
- + Bent grass
- + Barley grass
- + Fog grass
- + Silver grass
- + Soft brome grass
- + Sweet vernal
- + Wild oats
- + Winter grass

Narrowleaf weeds

- + Onion grass
- + Toad rush
- + Wireweed

Broadleaf weeds

- + Capeweed
- + Dock
- + Erodium
- + Flatweed, catsear
- + Mallow
- + Mouse-ear chickweed
- + Nightshade
- + Oxalis
- + Paterson's curse
- + Sorrel
- + Thistles
- + Wild radish



Name	Leaf or seedling appearance
------	-----------------------------

Annual ryegrass
(Lolium rigidum)

Bright green, narrow leaves.
 Hairless. The leaves are shiny,
 more so on the back of the leaf.
 The emerging leaf is rolled.



Other distinguishing features	Seed heads	Commonly confused species
-------------------------------	------------	---------------------------

The lower stems are often reddish purple in colour at the base.

Seedhead is a spike growing off stems with alternate placed flattened spikelets generally without awns.

Perennial ryegrass, silver grass and toad rush appear similar at the seedling stage.



Very small membranous ligule (1.5 mm), small auricles.

Perennial grass has a folded emerging leaf and forms more a tussock while annual ryegrass has more of an erect open habit.



Silver grass has a white base and is less shiny on the back of the leaf. Toad rush is not a grass and so does not have a ligule.

Looking for something else? *Click on the links below to take you to another menu.*



Name	Leaf or seedling appearance
------	-----------------------------

Bent grass
(*Agrostis* spp.)

Fine (0.5 to 5mm wide) bluish dark green leaves. Hairless. Leaf blade flat.



Other distinguishing features	Seed heads	Commonly confused species
-------------------------------	------------	---------------------------

Horizontal runners (stolons) may grow if lightly grazed, which can root into the ground with soil contact. Difficult to pull out of ground due to forming a mat of underground rhizomes. Ungrazed bent grass trash will often be visible. Membranous ligule.

The seedheads are open with spreading branches and are red brown to light brown.

Distinguished from common couch, which has a row of fine hairs for the ligule.



Looking for something else? Click on the links below to take you to another menu.



Name	Leaf or seedling appearance
------	-----------------------------

Barley grass
(*Hordeum leporinum*)

Leaf colour tends to be a lighter green than other species. Covered with soft hairs. Leaf blade tends to twist in growth. Emerging leaf is rolled.



Other distinguishing features	Seed heads
-------------------------------	------------

Auricles are obvious and clasp stem.

Seedheads have sharp awns giving a bristly appearance.



If seedlings are pulled from soil, remnants of awned seed are often still attached.



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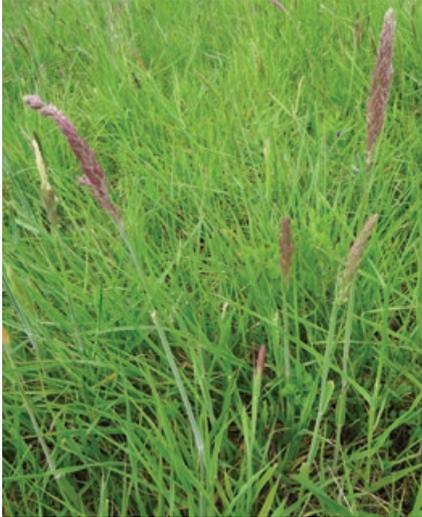


Name

Leaf or seedling appearance

Fog grass
(*Holcus lanatus*)

Covered with soft downy hairs.
Feels velvety to touch. Pale greyish-green colour. Emerging leaf rolled.



Other distinguishing features

Seed heads

Veins of leaf sheaths are pinkish-red towards the base.

Young flower heads are often pinkish in colour and often remain partly enclosed in the leaf sheath. Older flower heads turn whitish in colour and become quite open with many spreading branches.





Name	Leaf or seedling appearance
------	-----------------------------

Silver grass
(Vulpia bromoides)



Fine hairless leaves (0.5 to 3.0mm wide). Leaves are rolled on emergence but this can be difficult to see due to leaf fineness.



Other distinguishing features	Seed heads	Commonly confused species
-------------------------------	------------	---------------------------

It has a small membranous ligule, no auricles and slender hairless stems. Grows solitary or in tufts.

Fine, long seedheads that attach to the stem by short branches. Seedheads have long awns.

Can be distinguished from wallaby grass (*danthonia*), which has a row of fine hairs for the ligule.



Looking for something else? Click on the links below to take you to another menu.



Name	Leaf or seedling appearance
------	-----------------------------

Soft brome grass
(Bromus hordeaceus)

Pale green. Hairs on upper and lower surface. Emerging leaf rolled.



Other distinguishing features	Seed heads	Commonly confused species
-------------------------------	------------	---------------------------

Hairs on stems (sheath). No auricles. Sheath is tubular and does not overlap or have joints.

Softly hairy seedhead.

Can be distinguished from barley grass due to the absence of auricles.



Looking for something else? Click on the links below to take you to another menu.



Name	Leaf or seedling appearance
------	-----------------------------

Sweet vernal
(*Anthoxanthum odoratum*)



Generally, leaves are hairy but sometimes the leaves can be hairless. The leaf blade is rolled in the bud.



Other distinguishing features	Seed heads
-------------------------------	------------

Long hairs located around the membranous ligule.
The leaves, when crushed or wilted, smell like newly mown hay.



Its spike-like seedheads consist of numerous hairy flower spikelets. Flower spikelets turn from green to light brown or straw-coloured as they mature.



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Name	Leaf or seedling appearance
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Wild oats
(*Avena* spp.)

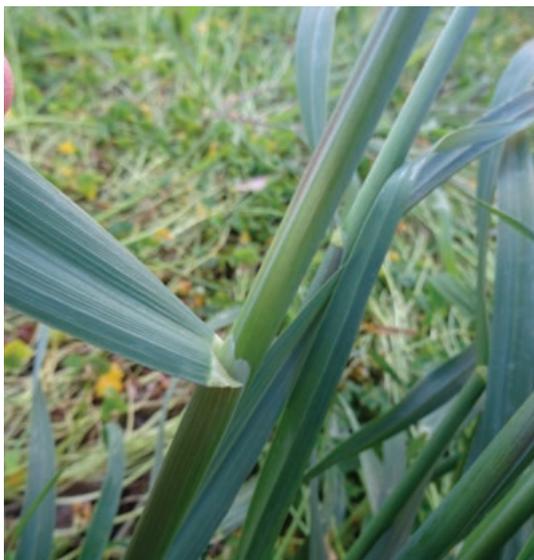


The leaf and sheath have scattered hairs. Sometimes rough to touch. Leaf blade has an anticlockwise twist and may have a bluish hue.



Other distinguishing features	Seed heads
-------------------------------	------------

Leaf sheath rolled and overlaps. Ligule membranous, long with jagged edge.



Drooping awned seedheads extend off stalks attached to main stem.



Looking for something else? Click on the links below to take you to another menu.



Name Leaf or seedling appearance

Winter grass
(*Poa annua*)

Hairless, light green leaves. Emerging leaf blade is folded to give the appearance of a canoe. Blade often crinkled or puckered when young.



Other distinguishing features

Pulls out easily because of shallow roots. Often small in size when growing in pastures. Membranous ligule. Stems flattened.

Seed heads

Flowers in late winter and starts to yellow and die off.



Open seedheads formed on branches off the main stem.



Looking for something else? Click on the links below to take you to another menu.



Name

Leaf or seedling appearance

Onion grass
(*Romulea rosea*)

Leaves are dark, shiny green and flattened. Hairless. Leaves are slender, but very tough and strappy.



Other distinguishing features

Seed heads

No auricles or ligule. Grows from whitish corm (bulb) at base.

Has pink flowers with yellow centre which grow off stems. Small capsules extend off stems which contain seeds.





Name	Leaf or seedling appearance
------	-----------------------------

Toad rush
(*Juncus bufonius*)

Tufted. Leaves are fine, shiny, flat, hairless and channelled on one side.



Other distinguishing features	Seed heads
-------------------------------	------------

No ligule or stem sheath because it is not a true grass. Can form a cushiony mat on the soil when dense.

Seedheads arranged along the stem which contain reddish brown capsules.



Looking for something else? Click on the links below to take you to another menu.



Weed identification narrowleaf weed Wireweed, hogweed Category B

Main menu

Name

Wireweed, hogweed
(*Polygonum aviculare*)



Leaf or seedling appearance

Two small spear-shaped, cotyledons which are hairless and attach to the stem with no stalk. Later leaves are similar shaped but have a short stalk. Very young plants look like fine grass.



Other distinguishing features

Hairless, ground-hugging plant with small narrow leaves which grow at different heights along the stem. At the base of each leaf is a white membranous sheath around the stem. The stems are slender, up to 1m long, wiry and branched.



Seed heads

In the leaf and stem junction there are small clusters of pink-tinged flowers. Forms a strong tap root.



Looking for something else? Click on the links below to take you to another menu.



Name	Leaf or seedling appearance
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Capeweed
(Arctotheca calendula)

Hairless clubbed-shaped cotyledons. First two leaves are scalloped.



Other distinguishing features	Seed heads	Commonly confused species
-------------------------------	------------	---------------------------

Subsequent leaves are deeply lobbed. The upper leaf surface is hairy and the lower surface is covered with a mat of white hairs giving it a whitish appearance.

Solitary 'daisy-like' flower heads are yellow with a blackish purple centre. Seeds are covered in woolly hairs.

Wild radish, flatweeds and erodium.



Looking for something else? Click on the links below to take you to another menu.



Name

Leaf or seedling appearance

Dock
(*Rumex* spp.)

Cotyledons are club shaped, hairless. First leaves of the seedling are also oval shaped.



Other distinguishing features

Seed heads

Forms a basal rosette of leaves at first, and later produces upright (i.e. erect) flowering stems.

Has thick clusters of red/brownish or green flowers on tough upright stems.

Leaves broadly spear-shaped, pointed at tip with wavy leaf margin. Fiddle dock constricted in middle or fiddle shaped.



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Name

Leaf or seedling appearance

Erodium
(*Erodium* spp.)

Two deeply lobed oval cotyledons with fine hairs. First leaves have leaf margins lobed, prominent veins and covered in long hairs.



Other distinguishing features

Seed heads

Young plants form a flat rosette. Leaves are dark green with older leaves turning purple red. Leaves and stems hairy.

Pinkish purplish flowers which form distinct sharp pointed awns which twist under desiccation to become a sharp, spiral corkscrew.



Looking for something else? Click on the links below to take you to another menu.



Weed identification broadleaf weed
Flatweed, catsear Category B

Main menu

Name	Leaf or seedling appearance
------	-----------------------------

Flatweed, Catsear
(Hypochoeris radicata)

Hairless clubbed-shaped cotyledons with the end rounded.



Other distinguishing features	Seed heads	Commonly confused species
-------------------------------	------------	---------------------------

The leaves form a flat rosette. Leaves are deeply lobed, and bristly from stiff hairs growing on the lower surface. Variable hairiness.

Yellow daisy type flowers on simple or branched, leafless stalks. Sticky white sap oozes from stems when cut.

Can be distinguished from dandelion (*Taraxacum officinale*). Flatweed flowering stems are branched, whereas dandelions possess single flowering stems that are hollow. Dandelion leaves are jagged in appearance, whereas those of catsear are more lobe-shaped and hairy.



Looking for something else? Click on the links below to take you to another menu.



Name	Leaf or seedling appearance
------	-----------------------------

Mallow
(*Malva parviflora*)

Two upside-down heart shaped cotyledons with indented base attached to long stalk. First leaves rounded shaped with scalloped edges.



Other distinguishing features	Seed heads
-------------------------------	------------

Leaf blades dull dark green, round to kidney shaped, with evenly scalloped edges and radiating veins that are prominent of the lower surface. Sparse hairs.

Small, five-petalled white or pink flowers that develop into 1cm fruits that look like tiny pumpkins.



Looking for something else? [Click on the links below to take you to another menu.](#)



Name	Leaf or seedling appearance
------	-----------------------------

Mouse-ear chickweed
(*Cerastium glomeratum*)

Small oval cotyledons.



Other distinguishing features	Seed heads
-------------------------------	------------

Oval leaves opposite in pairs with conspicuous dense short hairs, soft with appearance like mouse ears.

The seedheads are grouped into dense clusters at the tips of the stems, with small white flowers.



Looking for something else? Click on the links below to take you to another menu.



Name

Leaf or seedling appearance

Nightshade
(*Solanum nigrum*)

Two cotyledons are oval with pointed tip and hairy. First leaves of seedling are also oval with pointed tips.



Other distinguishing features

Seed heads

Mature leaves are pointed and hairy, dull dark green in colour, often with a purplish tinge which become more diamond shaped as they grow.

A bushy annual with white flowers plus yellow centres and green berries which become black/purplish at maturity.



Looking for something else? Click on the links below to take you to another menu.



Name	Leaf or seedling appearance
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Oxalis
(*Oxalis pes-caprae* and *Oxalis corniculata*)

First leaves are trifoliate derived from existing bulbs. Few hairs.



Other distinguishing features	Seed heads	Commonly confused species
-------------------------------	------------	---------------------------

Heart shaped trifoliate leaves, sometimes with dark flecks which forms a rosette. A few hairs can occur on the underside of leaves.

Oxalis pes-caprae and *Oxalis corniculata* have yellow flowers on long tall stems, some other species can have purple flowers. Annual top growth and perennial bulbs or white bulb like tubers.

Can be distinguished from sub-clover by its absence of stipules (leafy outgrowth at the junction of the petiole and stem).



Looking for something else? Click on the links below to take you to another menu.



Name	Leaf or seedling appearance
------	-----------------------------

Paterson's curse
(*Echium plantagineum*)



Two oval-shaped cotyledons with short hairs. Seedlings are similar with longer hairs.



Photo Graham Charles, NSW DPI

Other distinguishing features	Seed heads
-------------------------------	------------

Forms a rosette before erect branches emerge. Has green to light-green hairy, oval shaped leaves that are deeply veined.



Tubular trumpet flowers are mostly purple, but white, blue and pink flowering plants are sometimes found.



Looking for something else? Click on the links below to take you to another menu.



Name	Leaf or seedling appearance
------	-----------------------------

Sorrel
(*Acetosella vulgaris*)

Two long hairless, narrow and club-shaped cotyledons. First leaves are hairless and oval-shaped with round tip.



Other distinguishing features

Leaves are arrow-shaped, with a pointed tip which forms a loose rosette. Hairless.



Older leaves can turn red.



Seed heads

The tiny reddish tinged flowers are arranged in whorls up the slender flower spikes.

It has annual tops with a perennial, rhizomatous root system.



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Name	Leaf or seedling appearance
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Thistles
(*Cirsium vulgare*)



Two hairless club-shaped cotyledons. Edges spiny. The true leaves have scalloped edges which are hairy.



Other distinguishing features	Seed heads
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Forms a flat rosette. Leaves dark green with hairs and prickles on the upper surface and soft woolly hairs on the lower surface. Warts on upper leaf surface. Spiny edges.



Pink/purple flowers, globular flowering heads.



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Name	Leaf or seedling appearance
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Wild radish
(*Raphanus raphanistrum*)



Hairless heart-shaped cotyledons. Occasionally, there can be more than two. First leaves are oval. Edge usually toothed or lobed, especially near the base. Short stiff hairs make them rough to touch. Prominent veins.



Other distinguishing features	Seed heads
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Early leaves form a flat rosette which disappears in time. Strong turnip or radish like odour when crushed. Leaves are alternate with uniform serrated margins covered with prickly hairs on leaves and lower part of stem.



Long and open flowerheads with four white or pale yellow coloured petals that can have dark veins.



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