Your guide to the

GRASSES OF CENTRAL VICTORIA

Acknowledgement of country

Macedon Ranges Shire Council acknowledges the Traditional Owners of this land, the Wurundjeri Woi-wurrung, Dja Dja Wurrung and Taungurung, their rich culture and their spiritual connection to Country. We also acknowledge the contribution and interests of Aboriginal people and organisations in the management of land and natural resources.

Acknowledgements

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The Healthy Landscapes - Practical Regenerative Agricultural Communities (PRAC) program, through its work with private land managers, identified the need and desire for a simple beginners guide to grasses. The program goal is to work with private land managers to improve their land, soil, waterways and livestock.

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All images are by John Walter unless otherwise marked by the initials of the photographer. For full list of sources and photographers see pages 93–94.

Thanks to Heather Hoare (Pixel City Design) for the layout, production of graphics and assistance with printing.

Cover: *Austrostipa semibarbata* - Fibrous Spear-grass

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PURPOSE

This guide is an easy reference guide for beginners to use in the farm paddock or bushland to identify the common grass species in the Central Victoria region.

Being a beginner's guide, it is not a complete guide of all grasses or grassland plants in Central Victoria.

Understanding the flower structure of grasses is the quickest way to narrow down and identify most species. As a result, this guide is ordered by the type of flower structure, then by scientific name. Where possible, the guide uses simplified language.

The descriptive text and photographs will assist in identifying features of the grass.

Keep this guide handy when out in Central Victoria and use it to improve your skills in identifying grasses. A small pocket hand lens to view distinctive features may also be helpful. Be careful if transporting unidentified grassland plants and seeds as you may be unknowingly spreading invasive exotic plants.

Resources available for further reading at the end of the guide may also help in identifying species.

GUIDE LAYOUT

We have not followed traditional convention or language when setting out this guide. The species are ordered according to the design of the mature flower heads with each design having its own colour code. The species are then listed alphabetically by scientific name within each colour code.

Each grass is labelled as follows.

- Exotic or native
- Annual or perennial
- Common name
- Scientific name
- C_3 and C_4

NATIVE PERENNIAL

BRUSH WIRE-GRASS

Aristida behriana

C4

To help you identify grasses, we have attempted (where possible) to include an image for growth habits as well as a close up image of the flower head. Descriptive text of growth, flower head, leaves and notes provide more detail.

Icons are used as a quick reference for growth habit and flower type, along with a calendar for when traditionally seeding or in flower.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

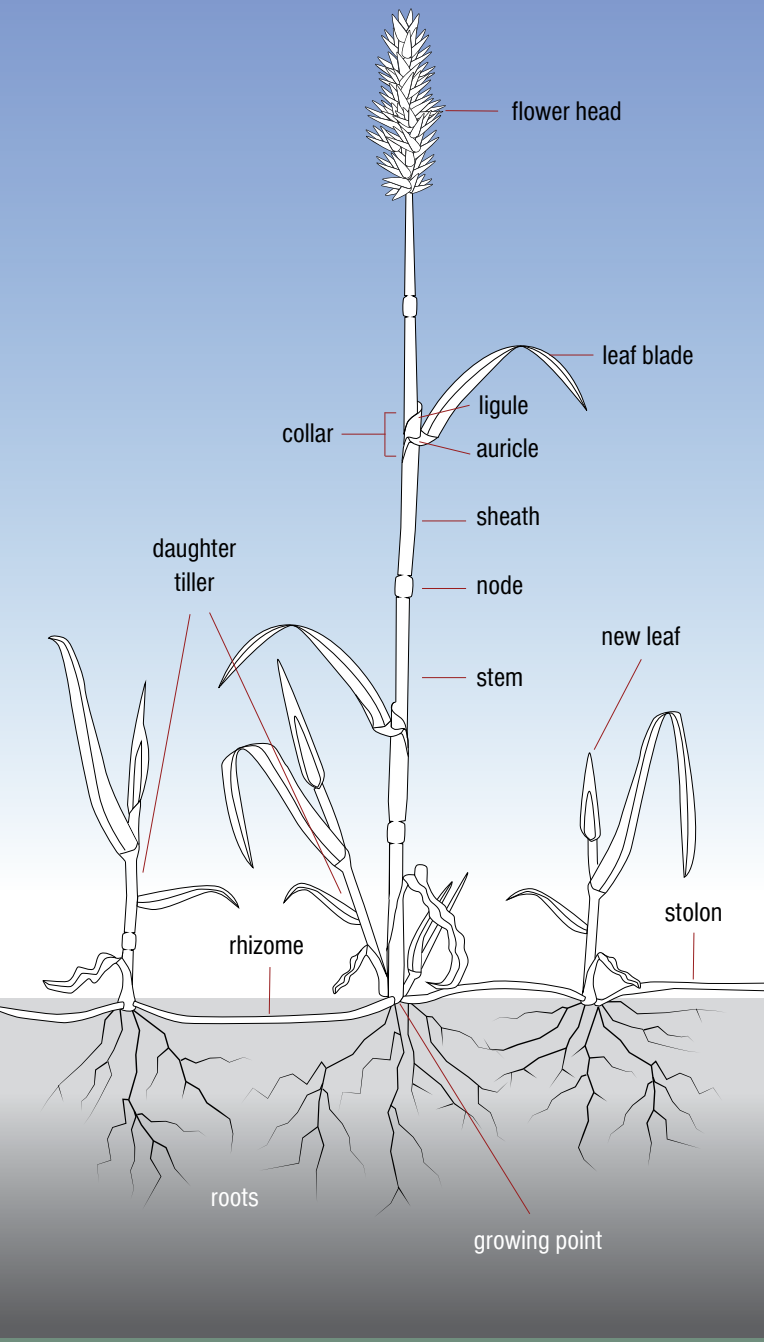
WHAT IS A GRASS?

Grasses are flowering plants in the family Poaceae. They have evolved to reproduce via wind pollination. Grass flowers are plain and small, as they do not need to attract fauna with bright petals or sources of nectar.

Grasses are defined as a plant with hollow and jointed stems, and narrow alternate leaves (grow left then right side of the plant). The leaf (blade) grows from the crown (base) and the blade grows up through the middle of the stem.

Grass species are found in a diverse range of ecosystems. This guide refers to the most commonly found grasses in pasture or grassland in Central Victoria.

GRASS STRUCTURE

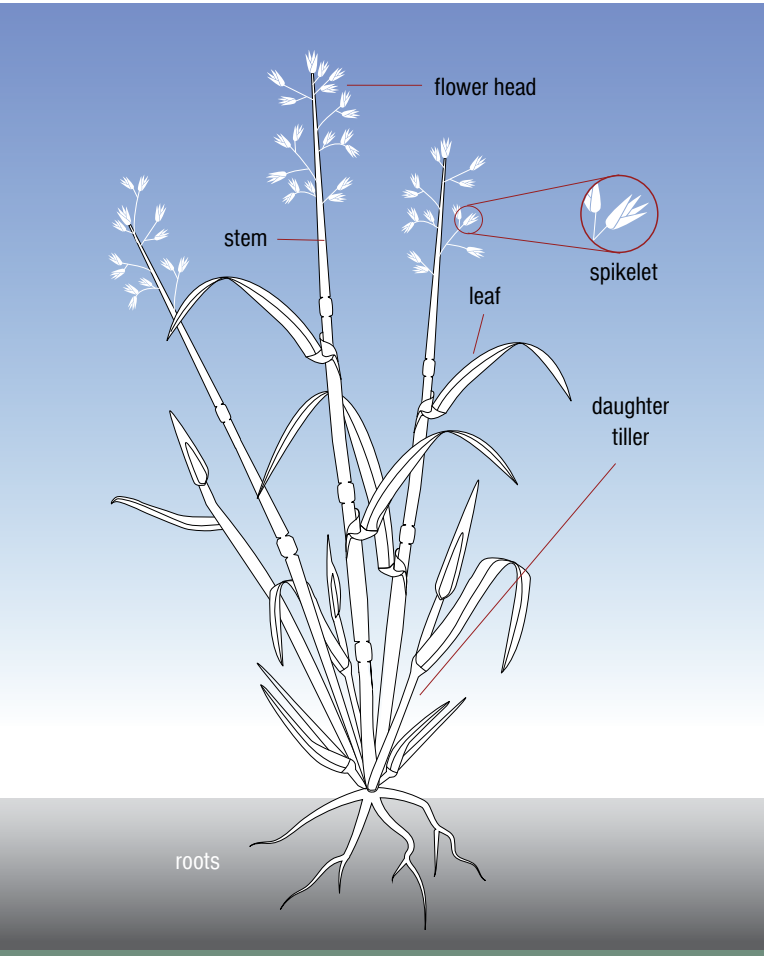


FLOWER HEAD TYPES

Grass flower heads are commonly used to identify species. Throughout this guide, we have used the term flower head, rather than the scientific name ‘inflorescence’.

The flower head is made up of spikelets, which contain the grass flowers.

Each spikelet is encased in outer husks called glumes. Within the glume are a number of florets which contain the reproductive flower parts; the ovule which becomes the grain seed when fertilised, the pollen receiving stigma and the pollen producing anthers.



Some florets may have a stiff hair or bristle called an awn which has evolved for a number of reasons. An awn can help a grass seed catch onto passing animals, dispersing the seed to a distant location. In some species, such as Kangaroo Grass (*Themeda triandra*), the awn can twist and curl with humidity changes, drilling the seed into the soil.

The flower head can be one of many different types. The flower heads of some species start out tightly closed or contracted before opening on maturity.

In this guide, the mature flower heads are colour coded to fit one of six main flower head shapes.

Open panicle - a number of branching stems, each of which carries one or more flowers.

Spike-like panicle - spikelets are attached to the main stem with very short stalks to form a dense flower.

Spike - flowering groups rise from the main stem without individual flower stalks.

Raceme - individual flowers attach to the main stalk by short equal length stalks with the oldest flowers at the base.

Windmill - branching like the fingers of a hand from one central point on the stem.

Spathe – leaf-like structure surrounding the seeds.

Exotic and Native

Each grass is firstly assigned the status of Exotic or Native at the top of the page.

Native species are of Australian origin, while exotic species are introduced to Australia and have a different origin from various other countries.

While exotic species are commonly referred to as “weeds”, not all exotic plants are weeds. The definition of a weed is a plant growing in an undesirable location. An example could be the exotic Large Quaking Grass (*Briza major*) in a grassy woodland, or the native Hedgehog Grass (*Echinopogon ovatus*) in your veggie patch.

Some grasses are considered weeds by legislation, such as Serrated Tussock (*Nassella trichotoma*), a Weed of National Significance and regionally controlled under the Catchment and Land Protection Act 1994.

With this understanding, some grasses will be highlighted in the notes section as grasses that we need to be extra vigilant for monitoring spread as they are damaging to both agriculture and environment.

Annual and Perennial

An annual plant completes its life cycle and dies within one year or growing season. These plants are dependent on producing seed each year to continue the next generation. Some species are very short lived (ephemeral), such as *Poa annua* which can complete its life cycle in as little as eight weeks.

The term perennial refers to the ability of the plant to grow longer than two years. Perennial plants tend to invest more energy into growing deeper roots. Perennial plants traditionally dominated grasslands due to these root systems which can withstand a greater variety of conditions.

While perennial grasses also reproduce via the production of seed, many species are also able to reproduce themselves using a process called tillering. The original plant, known as the 'parent plant' produces one or more secondary shoots known as a 'daughter tillers'. The daughter tillers are partially dependent on the parent plant until they grow their own roots and enough leaves to produce its own sugars. (see graphic on pages 7–8)

A simple practical method (although not fool proof) to identify an annual from a perennial is pulling the plant up. If the roots remain attached to the plant material when pulled out, it is more likely to be an annual grass species.

Understanding the grass life cycle is important to understanding its ongoing management. Management may take the form of grazing, ploughing, mowing, spraying or burning. Considering when the plant is actively growing, dormant or finished growing altogether (annual plant) can determine the management for the aims of grass plants proliferation, growth or reducing spread.

Common name

The common name refers to the name known to the general public of a particular region. These can lead to confusion as some species have different common names in different regions.

Scientific name

These are unique names used by the scientific community to accurately and universally identify a species. Although a rare occurence, scientific names can change when plant knowledge is increased leading to the reclassification of species.

C_3 and C_4 grasses

The terminology C_3 and C_4 refers to the number of carbon atoms produced as energy by photosynthesis. C_3 plants store their energy as fructan, a complex carbohydrate formed with sugar molecules, while C_4 plants store excess energy as starch. The C_3 photosynthesis process evolved before the C_4 photosynthesis. C_4 requires higher temperatures and is more water efficient, compared to C_3.

The temperate or cooler climate C_3 species includes the greatest number of the world's grasses which grow best in soil temperatures of 10-18°C and have a higher frost tolerance.

The warmer/summer C_4 grass species appreciate soil temperatures of 18-30°C. These grasses often dominate full-sun conditions but have a low frost tolerance.

Both C_3 and C_4 grasses are important, filling their unique niches in the ecosystem and ensuring ground cover is possible all year round in Central Victoria.

GROWTH HABIT

This guide uses four broad categories to describe the growth habit of various grass species.

These include:

Tufted
or bunch-type; grows in a clump

Semi-aquatic
grows part time in water, or partially submerged in water

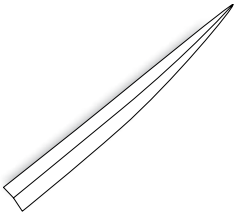
Stoloniferous
has a modified stem which grows **above** ground to propagate growth

Rhizomatous
has a modified stem which grows **below** ground to propagate growth

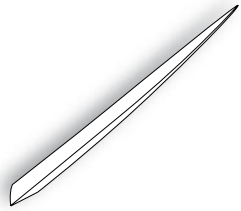
The stem is the part of the plant that the flower grows from. The height used throughout this guide is the height of the stem and flower, not the vegetative leaves.

LEAF TYPES

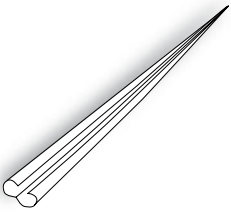
The leaf blade description of colour, size and feel are often useful clues to the identification of a grass species, as well as the way the leaf blade presents as it is emerging from the sheath/stem, or when mature. The description used in this guide are simplified to:



Flat
The leaf is flat



Folded
The leaf is folded along the middle (midrib)



Inrolled
The leaf is rolled over on itself

The leaves may present differently under varied conditions such as moisture stress (dry or wet), temperature or soil nutrient levels.

OTHER PLANTS IN GRASSLANDS

A healthy grassland has a diversity of plants, grasses as covered in this guide, and broadleaf herbaceous species known as forbs (not covered in this guide).

Forbs include:

- Chicory (*Cichorium* spp.)
- Clover (*Trifolium* spp.)
- Daisies (*Microseris* spp.)
- Lilies (*Dianella* spp., *Anthropodium* spp.)
- Orchids (*Dendrobium* spp.)
- Plantains (*Plantago* spp.)
- Peas (*Platylobium* spp.)

Some plants are commonly mistaken for grasses and therefore are not included in this guide. These plants include:

- Onion grass (R*omulea* spp.)
- Onion weed/false garlic (*Nothoscordum* spp.)
- Rushes (*Juncaceae* family) e.g. *Juncus australis*
- Sedges (*Carex* spp.)
- Nutgrass (*Cyperus rotundus*)
- Mat rushes (e.g. *Lomandra* spp.)

BROWN-TOP BENT

Agrostis capillaris

C4

Growth: small to medium grass, can become major plant of disturbed sites and pasture. The stem is erect, 10-70 cm tall.

Flower head: open panicle 2–20 cm long. Spikelets are 1-3 mm and purplish-brown. A fine, bent awn may emerge from the back side of the floret with this Victorian variant.

Leaves: the leaf blade is flat or inrolled, fine, up to 20 cm long and 4 mm wide. Dark green leaves.

Notes: mat-forming, can be invasive in native grasslands. Monitor for spread.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SILVERY HAIR-GRASS

Aira caryophyllea

C3

Growth: grows in dense clumps, can be invasive.

Flower head: initially contracted, becoming an open, sparse spreading panicle with maturity, up to 15 cm long and 12 cm wide. Spikelets are 2–3.5 mm long with a silvery sheen becoming straw coloured to white with maturity.

Leaves: the leaf blade is inrolled, to 8 cm long and 0.5 mm wide.

Notes: small, fine grass. Seed heads are silvery in appearance. Grows in dry sandy soils.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

QUICKSILVER GRASS

Aira cupaniana

C3

Growth: small, delicate grass. The stem is up to 40 cm tall but often smaller.

Flower head: initially contracted, becoming an open, sparse spreading panicle with maturity, up to 15 cm long and 12 cm wide. Spikelets are 1.8–2.5 mm long.

Leaves: the leaf blade is inrolled, to 8 cm long and 0.5 mm wide.

Notes: disturbed grassland. Often in drier sites on shallow, rocky soils.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

DELICATE HAIR-GRASS

Aira elegantissima

C3

Growth: small, delicate grass. The stem is up to 40 cm tall but often smaller.

Flower head: initially contracted, becoming an open, sparse spreading panicle with maturity. Spikelets 1.5-2.5 mm long.

Leaves: the leaf blade is inrolled, to 8 cm long and 0.5 mm wide.

Notes: disturbed grassland. Often in drier sites on shallow, rocky soils.

Growth

Flower type

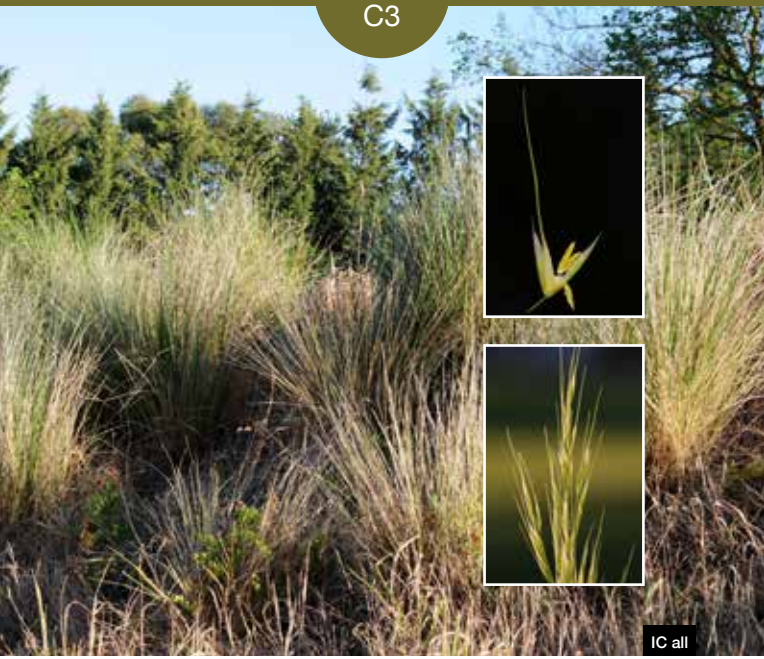
J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

ESPARTILLO

Amelichloa caudata

C3



Growth: medium sized densely tufted grass. Stems erect, up to 80 cm high, often shorter than foliage.

Flower head: loose, narrow panicle up to 25 cm long. Spikelets are 6-9 mm long, with a twice bent, 10–20 mm long awn, usually purplish at the base with maturity.

Leaves: the leaf blade is inrolled, up to 80 cm long and 3 mm broad.

Notes: monitor for spread, high risk it can be confused with natives.

Confused with: Large tussock-grass (*Poa labillardieri*): Espartillo has rolled leaves that are much stiffer than those of Large tussock-grass, which has folded leaves.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

FLOATING SWAMP WALLABY-GRASS

Amphibromus fluitans

C3

Growth: semi-aquatic grass, stem to 80 cm high.

Flower head: slender sparse flower head up to 25 cm long. Almost hidden by the leaf. Often with only the flower heads above the water.

Leaves: the leaf blade is flat and rough to touch, 25 cm long and up to 4.5 mm wide.

Notes: If not growing in water, requires seasonal flooding to maintain wet soil conditions.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

COMMON SWAMP WALLABY-GRASS

Amphibromus nervosus

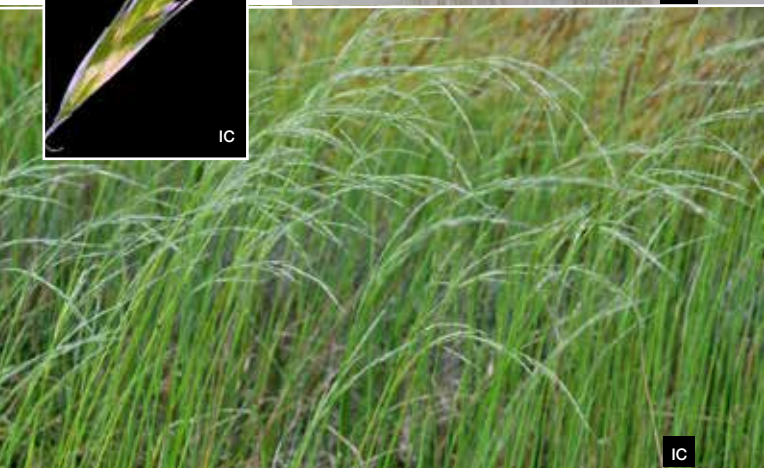
C3

Growth: tufted grass, stem to 1.2 m high.

Flower head: a slender, upright panicle. 4-6 flowered, green, spikelets, 10-16 mm long

Leaves: are smooth and hairless with flat or inrolled blades, to 30 cm long and 1.5-3.5 mm wide.

Notes: Common in swamps and drains.



Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

BRUSH WIRE-GRASS

Aristida behriana

C4

Growth: short tufted grass, stems to 40 cm high.

Flower head: a dense, cylindrical or oval shaped panicle, to 15 cm long and 12 cm wide, pale or purplish; awn branches.

Leaves: leaf blade loosely inrolled, to 20 cm long and 3 mm wide when flattened out, with tufts of hairs at the sides.

Notes: an uncommon grass occurring in lighter soils in drier areas.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SPEAR-GRASS

Austrostipa species

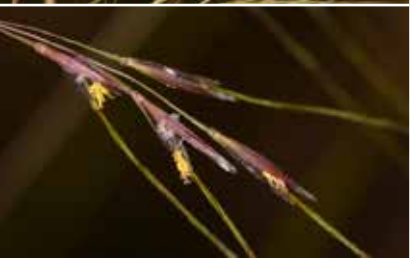
C3

FINE-HEAD SPEAR-GRASS

Austrostipa oligostachya

VEINED SPEAR-GRASS

Austrostipa rudis



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Growth

Flower type

J F M A M J J A S O N D

Flowering season

ROUGH SPEAR-GRASS

Austrostipa scabra

NW

Austrostipa are found in all states of Australia, but mostly in the southern states. Part of the grass family, *Austrostipa* are commonly called spear-grass. Tufted perennials that can grow 1 m – 2.5 m tall. Flowers for long periods.

All known species are native to Australia, most of them found nowhere else. With close to 65 species endemic to Australia, look online for more details about *Austrostipa* spp.

FIBROUS SPEAR-GRASS

Austrostipa semibarbata

BEARDED OAT

Avena barbata

C3

Growth: medium to tall sized grass. The stem is erect, up to 60 to 80 cm high.

Flower head: open, spreading panicle up to 40 cm long. Spikelets 18-30 mm long, drooping down the panicle.

Leaves: the leaf blade is flat, up to 30 cm long, and up to 20 mm wide.

Notes: Very common along roadsides and in weedy areas. Very similar to Wild Oat.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

WILD OAT

Avena fatua

C3

Growth: medium to tall grass. The stem is erect, up to 1.5 m high.

Flower head: open, spreading panicle up to 40 cm long and 20 cm wide. Spikelets 18-30 mm long, drooping down the panicle.

Leaves: the leaf blade is flat, 45 cm long and 15 mm wide with a prominent midrib.

Notes: one of the most commonly distributed grasses worldwide. Similar to Bearded Oat.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

BROME SPECIES

C3

PRAIRIE GRASS
Bromus catharticus

GREAT BROME
Bromus diandrus

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SOFT BROME

Bromus hordeaceus

NB

Bromes are a medium to tall tufted grass, where the stem could be up to 1.2 m high. Leaf blades can be flat or folded and flowers are a dense open panicle or large spikelets.

IC

RED BROME

Bromus rubens

NB

COCKSFOOT

Dactylis glomerata

C3

Growth: densely tufted, medium sized grass. The stem is up to 150 cm high.

Flower head: the panicle is 2–30 cm long, initially erect and tightly contracted, spreading with maturity. The lower branches of the panicle up to 20 cm long. Spikelets 5–9 mm long in oval to egg shaped clusters.

Leaves: 50 cm long and 12 mm wide, rough to the touch with short hairs.

Notes: the flower changes from contracted, to spreading with maturity. Thick tough leaves, light blue. Can colonise pastures, grasslands and disturbed sites quickly.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

PANIC VELDT-GRASS

Ehrharta erecta

C3

Growth: medium sized loosely tufted grass. The stem is up to 60 cm tall.

Flower head: open panicle, 10–40 cm long. Spikelets are 3.5–4.5 mm long, small oval in shape.

Leaves: the leaf blade is flat, up to 20 cm long and 2–12 mm broad. Light green leaf.

Notes: prolific seeder.

Growth

Flower type

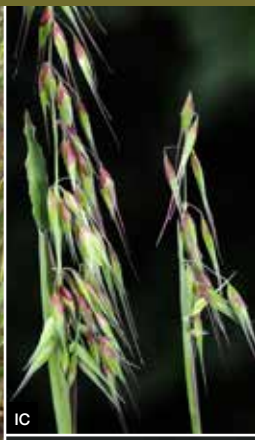
J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

ANNUAL VELDT-GRASS

Ehrharta longiflora

C3



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IC IC

Growth: medium sized loosely tufted grass. The stem is up to 90 cm tall.

Flower head: open, slender panicle 8–15 cm long. Spikelets are 10–28 mm long, drooping from the panicle.

Leaves: the leaf blade is flat, up to 40 cm long, 5–25 mm broad.

Notes: red to purplish stem, shallow rooted.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

COMMON LOVE-GRASS

Eragrostis brownii

C4

Growth: small to medium sized native grass growing 10-60 cm high with thin, slender branches. Stems are horizontal to stretching upright or erect, up to 60 cm high.

Flower head: flowers from a slender panicle as short as 4 cm, to a widely spreading, open panicle 30 cm long and 20 cm wide. Spikelets are 4–12 mm long, narrowly oblong in shape and grey-green to purplish green in colour.

Leaves: the leaf blade is flat to slightly inrolled, 30 cm long and 4 mm wide.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

AFRICAN LOVE-GRASS

Eragrostis curvula

C4

Growth: medium to tall densely tufted erect grass. The stem is up to 120 cm high.

Flower head: contracted panicle becoming open with maturity, up to 30 cm long and 20 cm wide. Spikelets are 4–10 mm long and 1–1.5 mm wide.

Leaves: the leaf blade is folded, up to 30 cm long and 3 mm wide, tapering and often curling near the tips, sheath yellow to purplish.

Notes: forms dense infestations, high fire risk. Grey-green in colour. Monitor for spread.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

TALL FESCUE

Festuca arundinacea

C3

Growth: stems from 30 cm to up to 2 m high.

Flower head: panicle loose, up to 18 cm long with branches erect or spreading. Spikelets are 5–14 mm long, often purplish.

Leaves: leaf blades are tightly inrolled, rarely flat, and strongly ribbed, up to 40 cm long and 1 mm wide (2 mm unrolled).

Notes: this grass prefers damp areas.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

AUSTRALIAN SWEET-GRASS

Glyceria australis

C4

Growth: semi-aquatic to aquatic species inhabiting swamps, shallow lakes and waterbody edges, spreading with rhizomes and stolons, sometimes rooting from lower nodes. Rigid, erect stems up to 1.5 m high.

Flower head: slender, open panicle, 20–50 cm long. Spikelets are 3–5 mm long with no awn.

Leaves: leaf blade is flat to loosely rolled, up to 50 cm long and 8 mm wide, hairless.

Notes: similar to Swamp Wallaby-grass (*Amphibromus*), but recognisably distinct as unlike Swamp Wallaby-grass, Australian Sweet-grass has no awn.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

YORKSHIRE FOG-GRASS

Holcus lanatus

C3

Growth: the stem is up to 1 m high, erect.

Flower head: a dense, narrow panicle 3-20 cm long pinkish and contacted when young, becoming whitish and spreading out with maturity, exerting from the leaf sheath.

Leaves: leaf blade flat, 25 cm long and 3–10 mm wide, lightly hairy giving a greyish appearance.

Notes: the name *lanatus* is Latin meaning ‘woolly’ describing its soft texture with fuzzy leaves and flower with a fluffy appearance.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

COMMON BLOWN-GRASS

Lachnagrostis filiformis

C3

Growth: stems are 80 cm high, erect to knee-like bend. With maturity, the stem will often break below the panicle.

Flower head: open, loose panicle up to 30 cm long, branches often drooping with the base, often enclosed by the upper leaf sheath until maturity. Spikelets 2-4.5 mm, usually pale green in colour, but sometimes purplish.

Leaves: leaf blade is flat or folded, to 25 cm long and 3.5 mm wide.

Notes: flower cluster is easily blown around by the wind, giving the name ‘blown grass’.

Growth

Flower type

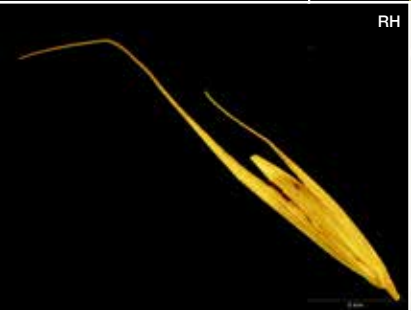
J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

WEEPING GRASS

Microlaena stipoides

C3



Growth: mat-forming grass spreading with rhizomes. The round stem grows up to 1 m.

Flower head: slender panicle, 5–18 cm long, weeping when fully expanded. Spikelets are 13-40 mm long, green to dark purplish-brown in colour.

Leaves: leaf blade is flat, 2–20 cm long, 1–12 mm broad.

Notes: weeping, arching seed head. Commonly used as a native lawn.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

CANE NEEDLE-GRASS

Nassella hyalina

C3


RB


RB


RB

Growth: the stem is round, resembling a cane. Stem is erect and occasionally branched, up to 70 cm high, with hairless nodes.

Flower head: contracted panicle to 25 cm long. Spikelet is 9–12 mm long, pale brown or purplish at maturity, awn twice bent, 35–40 mm long, 4–8 mm to the first bend.

Leaves: leaf blade flat to somewhat inrolled, up to 20 cm long and 4 mm broad.

Notes: distinctive bend in stem from node. Grey in colour. Extra vigilant to monitor for spread.

Confused with: Native spear grasses.

Growth

Flower type

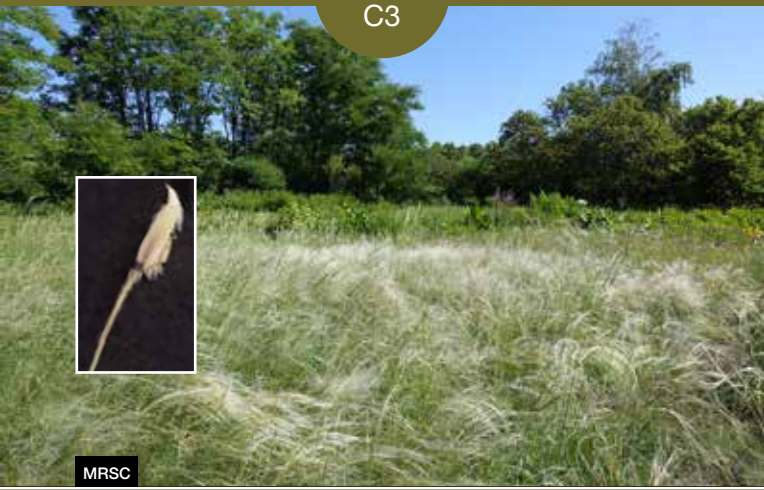
J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

TEXAS NEEDLE-GRASS

Nassella leucotricha

C3



MRSC

Growth: the stem is up to 1 m high, nodes hairless or only slightly hairy.

Flower head: contracted panicle to 25 cm long. Spikelet is 11–15 mm long, pale brown or purplish at maturity. Awn twice bent, 35–60 mm long, 10–20 mm to the first bend.

Leaves: leaf blade is flat to inrolled, to 30 cm long and 5 mm broad.

Notes: lime green in colour. Larger in size than Chilean Needle-grass, although seed is shorter. **Extra vigilant to monitor for spread.**

Confused with: Chilean Needle-grass.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

CHILEAN NEEDLE-GRASS

Nassella neesiana

C3

Growth: tufted grass, growing up to 1 m in height.

Flower head: loose panicle up to 40 cm long. Spikelets are 16–20 mm long, strongly purple with light green awns twice bent, 60–90 mm long, 15–30 mm to the first bend. Awns often twisting together at maturity.

Leaves: leaf blade is flat, up to 30 cm long and 5 mm broad, rough with short erect hairs on the upper surface. Leaves are coarser and wider than those of wallaby grass.

Notes: **Extra vigilant, monitor for spread.** Weed of National Significance, regionally controlled under the Catchment and Land Protection Act 1994. This grass produces seeds in the flower, and hidden in the leaf sheath from the base of the stems.

Confused with: native spear grasses.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SERRATED TUSSOCK

Nassella trichotoma

C3

Growth: densely tufted grass. Stems up to 50 cm high, shorter than or slightly exceeding the foliage, weeping form.

Flower head: slender panicle, stems are weeping and will almost touch the ground. The flower heads break off at maturity and are tumbled by the wind, dispersing seeds. Older, dead beige leaves may remain attached to the plant for several years, while younger plants are bright green in colour, plants recovering from burning or slashing may be light green in colour.

Leaves: blade is thin and tightly inrolled, up to 60 cm long. Rough to touch.

Notes: Extra vigilant, monitor for spread. Weed of National Significance, regionally controlled under the Catchment and Land Protection Act 1994. Leaf is rough when rubbed towards the base of the leaf, feels round. The foliage will remain green in summer, while many other grasses will be yellow or brown.

Confused with: Poa species

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

HAIRY PANIC

Panicum effusum

C4

Growth: the stem is erect, up to 1 m high. Branching stems, nodes are hairy.

Flower head: an open panicle 8–40 cm long, fully extending from the leaf sheath with maturity with thin, spreading branches. Spikelets are clustered towards the tips of the branching panicle, plump in shape, 2.2–3 mm long. When dry, the flower head can break off and become a tumbleweed, dispersing seeds.

Leaves: the leaf blade is flat, to 25 cm long and 7 mm wide, greyish green and hairy with coarse spreading hairs.

Notes: uncommon, fast growing, native grass. Dry soils.

Confused with: Exotic Rigid Panic, Hillmann's Panic-grass, and Witch grass.

Growth

Flower type

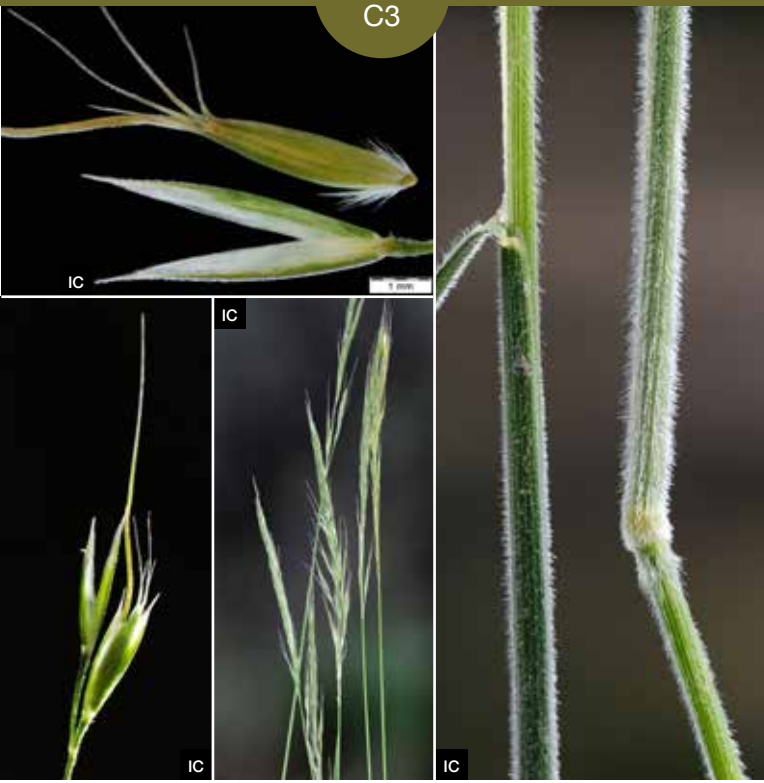
J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

FIVE AWNED SPEAR-GRASS

Pentapogon quadrifidus

C3



Growth: tufted grass with hairy nodes. The stem is erect to bent, like a knee, usually growing 30-60 cm, but can reach up to 1m.

Flower head: sparse panicle, 3-20 cm long with a narrow oval outline. Spikelet is 4.3–8 mm long. Central awn longest 10-25 mm.

Leaves: leaf blade is flat or rolled, up to 20 cm long, 0.5–3 mm wide.

Notes: a distinctive grass as it has five awns in the spikelet.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

COMMON REED

Phragmites australis

C3

Growth: the stem is erect, leafy, up to 3 m high, can potentially grow to 6 m.

Flower head: dense panicle 10-40 cm long creating an ovoid outline, spikelets are 10-18 mm long with a tuft of fine hairs at the base. The flower has a soft, feathery appearance.

Leaves: leaf blade is flat to loosely inrolled, up to 80 cm long and 4 cm wide.

Notes: a tall cane-like grass that grows on the edges of waterbodies and poorly drained flats.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

ANNUAL MEADOW-GRASS

Poa annua

C3


NB


NB


IC

Growth: short tufted growing grass, can complete its lifecycle within 2 months. Stems are as short as 2 cm, but often up to 30 cm high.

Flower head: open panicle 10 cm long and 6 cm wide forming an oval outline. Spikelets are 3.5–6 mm long.

Leaves: folded when young, becoming flat or channelled with maturity, up to 2 cm long and 5 mm wide.

Notes: shallow rooted, quickly grows after autumn rain on bare soil.

Confused with: Ryegrass due to its purple colour at base of tiller. base of the tiller. Annual Meadow-grass can be easily identified due to having the leaf tip shaped like the bow of a boat.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

COMMON TUSSOCK-GRASS

Poa labillardierei

C3

IC

NB

Growth: the stem is erect, up to 1.3 m high.

Flower head: open panicle with a triangular outline, up to 25 cm long and 15 cm wide. Spikelets are 4–8 mm long, green or purplish in colour.

Leaves: leaf blade 30-80 cm, rough to the touch with short stiff hairs.

Notes: blue-green foliage. Widely used in revegetation and landscaping.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

GREY TUSSOCK-GRASS

Poa sieberiana

C3

Growth: small dense tussocks. Stem is stiff with a triangular outline, can grow up to 80 cm.

Flower head: open panicle, spikelets are hairy, purplish in colour.

Leaves: leaf blade is flat or sometimes inrolled.

Notes: rough blue-green leaves. Also known as Blue Tussock-grass.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

NATIVE PERENNIAL

WALLABY-GRASS

Rytidosperma species

C3

COMMON WALLABY-GRASS

Rytidosperma caespitosum

HILL WALLABY-GRASS

Rytidosperma erianthum

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SMOOTH WALLABY-GRASS

Rytidosperma laeve

Wallaby grasses are tall and tufted grasses. These species are recognisable for their distinctive hairy flower where spikelets appear in the inner parts of the spikelet and are covered in hairs in tufts or rows, making the spikelets appear fluffy.

The genus *Rytidosperma* was previously called *Danthonia*, but Australian species have been reclassified. Look online for more details about *Rytidosperma* spp.

SILVERTOP WALLABY-GRASS

Rytidosperma pallidum

DESMAZERIA

Tribolium acutiflorum

C3

AM

Growth: the stem is erect, can grow up to 1m high.

Flower head: dense spike-like panicle, 1-6 cm long, green to purplish in colour, partially encased by leaves. Can flower as short as 4 cm.

Leaves: the leaf blade is flat or inrolled, to 15 cm long and 1–3 mm wide, mostly hairless.

Notes: red to bronze stems.

AM

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SQUIRREL-TAIL FESCUE

Vulpia bromoides

C3

Growth: small to medium sized grass usually growing 5-40 cm tall but can reach up to 60 cm, with a one-sided flower. The stem is slender, erect, up to 50 cm high.

Flower head: one sided panicle, erect when young to drooping and exceeds from the leaf sheath with maturity. Spikelets are 6–11 mm long with a bristly awn up to 10-20 mm long. Green in colour to straw coloured with maturity.

Leaves: leaf blade is soft, up to 20 cm long and 3 mm wide.

Notes: often insignificant leaves, feathery seed head.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

MEADOW FOX-TAIL

Alopecurus pratensis

C3

IC

Growth: medium sized grass with a cylindrical flower. Stems are erect, up to 1 m high.

Flower head: densely clustered cylindrical panicle 2–9 cm long, 7–10 mm wide. Colour changes from a light green, to light brown with maturity.

Leaves: the leaf blade is up to 40 cm long and 14 mm wide, finely rough to the touch with short hairs.

Notes: this species can form dense patches, outcompeting other grasses and native plants. Preferring moist, fertile soils.

IC

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SWEET VERNAL-GRASS

Anthoxanthum odoratum

C3

Growth: small to medium sized, tufted grass. The stem is erect, up to 80 cm high, rarely taller.

Flower head: densely clustered cylindrical panicle 2–10 cm long, becoming a light brown to straw colour as summer progresses and seeds are shed.

Leaves: the leaf blade is flat, up to 20 cm long and 2–8 mm wide. Leaves are mostly basal with a papery sheath.

Notes: this species releases chemicals into soil to suppress the growth of other plants. When in flower has the sweet scent of hay and vanilla.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

KIKUYU

Cenchrus clandestinus

C4

Growth: this mat-forming grass was previously called *Pennisetum clandestinum*. Due to its vigorous long rhizomes and stolons it is commonly used in lawns.

Flower head: enclosed in the upper leaf sheaths, hidden to the naked eye.

Leaves: leaf blade is flat or folded, 1–15 cm long, 1–5 mm wide, with a hairy sheath.

Notes: flowers hidden within the upper leaf sheath.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

PAMPAS GRASS

Cortaderia selloana

C3

Growth: very tall grass with a distinct feathery plume flower. The stem is erect, up to 4.5 m high.

Flower head: dense, plume-like panicle with a silky, feathery appearance from 25-100 cm long. White-yellow or purplish in colour.

Leaves: the leaf blade is flat and up to 1.8 m long, 2 cm wide. Leaves are long, drooping and sharp edged.

Notes: monitor for spread.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

ROUGH DOG'S TAIL

Cynosurus echinatus

C3


NB


IC

Growth: the stem is erect, up to 80 cm high.

Flower head: dense, one-sided panicle, narrow oval shaped, 0.5-4 cm long, often slightly encased within the leaf sheath until maturity. Very bristly with awns 6–16 mm long.

Leaves: the leaf blade flat, up to 20 cm long and 10 mm wide, rough on the upper surface.

Notes: *Cynosurus* spp. name comes from the Greek kynos (meaning dog) and oura (meaning tail), named after the "dog tail" appearance of the flower. Echinatus is Latin for spiny, referring to the dense panicle with spiky awns.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

REED BENT-GRASS

Deyeuxia quadriseta

C3

Growth: tufted with slender stems and variable in height from 15 cm -1.5 m high.

Flower head: the flower is a dense, cylindrical panicle, up to 18 cm long, with spikelets green or purplish in colour, becoming straw coloured with maturity.

Leaves: the leaf blade is rough to the touch with short, stiff hairs, flat to loosely inrolled and up to 30 cm long and 9 mm wide.

Notes: find in damp areas such as creeks, swamps, and moist poorly drained areas.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

LONG-HAIR PLUME-GRASS

Dichelachne crinita

Growth: the stem is erect, up to 1 m high.

Flower head: dense, narrow, cylindrical panicle, 6–25 cm long, appearing straw coloured and hairy with maturity due to threadlike and curly awns up to 55 mm long.

Leaves: the leaf blade is flat or inrolled, up to 20 cm long, 2-5 mm wide. Often smooth but rough to the touch with fine hairs on the upper surface. Green to blueish green in colour.

Notes: hairy refers to the feathery flower clusters.

Confused with: Hairy Plume-grass

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

HEDGEHOG GRASS

Echinopogon ovatus

C3

Growth: the stem is up to 1 m high, with 3-7 nodes.

Flower head: dense, oval to egg shaped panicle 1-4 cm, with long awns 7-16 mm expanding outwards to give the appearance of a spiky egg.

Leaves: the leaf blade is flat, to 20 cm long and 1 cm wide but usually smaller, rough to the touch with short hairs.

Notes: this name is derived from Greek echinos, meaning hedgehog and pogon, meaning beard.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

PHALARIS

Phalaris aquatica

C3

Growth: shortly rhizomatous, the stem is erect, up to 1.6 m high. The lower nodes are often swollen.

Flower head: the flower is a dense, cylindrical panicle 5-15 cm long.

Leaves: the leaf blade is smooth and up to 30 cm long and 20 mm wide.

Notes: this species has historically been grown as a fodder grass but has become widely naturalised along roadsides. Also commonly called Canary Grass.

Growth

Flower type

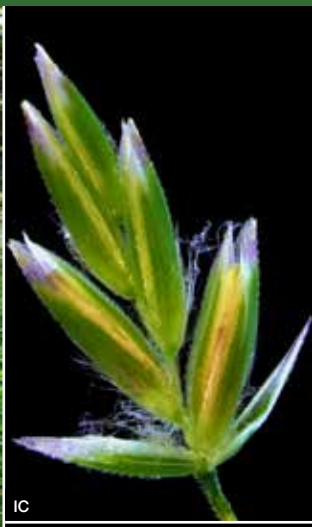
J	F	M	A	M	J	J	A	S	O	N	D

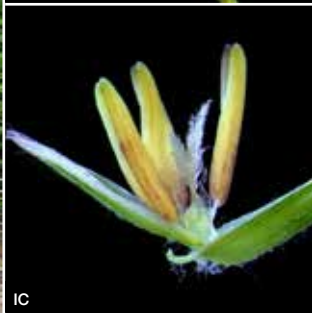
Flowering season

SWORD TUSSOCK–GRASS

Poa ensiformis

C4





Growth: loosely tufted, sometimes developing rhizomes. Stems erect up to 1.2 m high.

Flower head: is open in a pyramid shape and up to 30 cm long. Green to purplish spikelets.

Leaves: leaf blade is flat, rough and dark green in colour with a purplish sheath, up to 40 cm long.

Notes: Also known as Purple-sheath tussock-grass.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

ANNUAL BEARD-GRASS

Polypogon monspieliensis

C3

Growth: small to medium grass with a bristly, beardy oval shaped flower. Stems are erect, up to 90 cm high.

Flower head: dense, narrow oval panicle 2–15 cm long and 1–3.5 cm wide. 4–7 mm awns give the cluster a soft grey-green colour and beardy texture.

Leaves: leaf blades are flat, 15–32 cm long, 1–11 mm wide and rough to the touch with short fine hairs.

Confused with: Rough Dog's tail.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

ANNUAL CAT'S TAIL

Rostraria cristata

C3

Growth: slender tufted annual, stems to 60 cm high but often less than 15 cm.

Flower head: 1–8 cm long, mostly dense, spikelets 3–5 mm long.

Leaves: softly bristled flat leaf blade, to 20 cm long and 8 mm wide (often much less).

Notes: looks similar to Phalaris but growth is smaller.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

COMMON WHEAT-GRASS

Anthosachne scabra

C3

Growth: the stem is up to 1.2 m high. Stem is erect young, becoming drooping or weeping when maturing.

Flower head: spike with 1-10 spikelets. Spikelets are 18–35 mm long, narrow oblong in shape with an awn 18–35 mm long.

Leaves: the leaf blade is flat or inrolled, 10–30 cm long and 1–4 mm wide, rough on the upper surface, green to blueish in colour.

Notes: very fine grass with small tuft. Also known as Weakly tufted grass.
Confused with: Wheat.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

LARGE QUAKING GRASS

Briza maxima

C3

Growth: small, slender tufted grass with a distinctive flower. The stem is up to 65 cm high.

Flower head: slender panicle with few branches, up to 7 cm long. Spikelets are drooping, plump, oval shaped 5–20 mm long with overlapping layers. Green in colour when young but light brown and break apart when mature.

Leaves: the leaf blade is flat, up to 20 cm long, 8 mm wide.

Notes: forms seasonal dense patches.

Also known as: Briza, Shelly Grass, Blowflies, Blowfly Grass, Shell Grass.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

LESSER QUAKING GRASS

Briza minor

C3

Growth: small, tufted grass with a distinctive flower. The stem is up to 60 cm tall.

Flower head: open, oval shaped panicle up to 8 cm long. Spikelets are drooping, plump, egg to cone shaped, 5-15 mm long with a shiny finish.

Leaves: flat leaf blade, up to 14 cm long and 10 mm wide.

Notes: similar to Large Quaking grass, but smaller. Also known as Shivery Grass.

Growth

Flower type

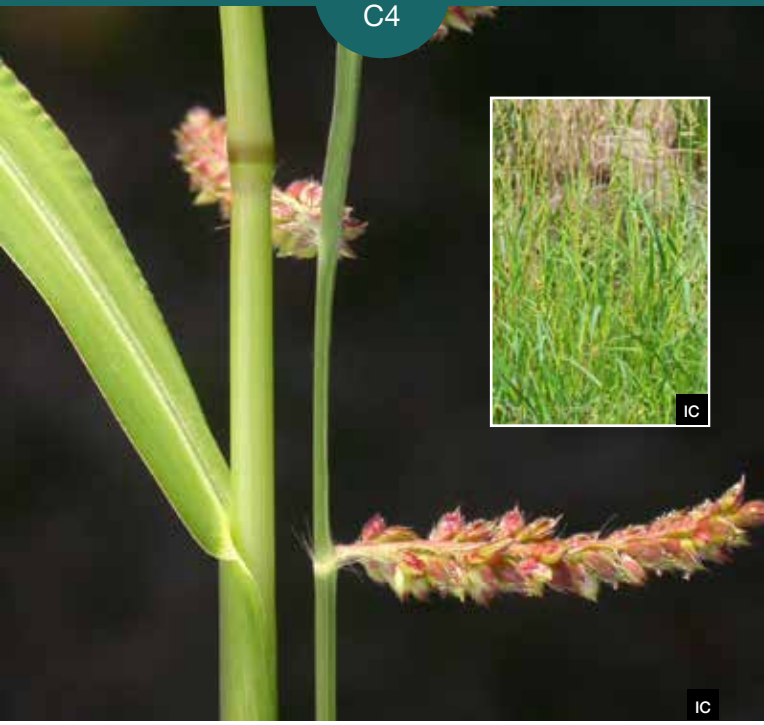
J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

BARNYARD GRASS

Echinochloa crus-galli

C4



Growth: the stem is erect, up to 1.5 m high.

Flower head: a 6–20 cm panicle of up to 15 purplish spikes, each 2-10 cm long. Spikelets 3–3.7 mm long with awn up to 5 cm, fully emerging from the leaf sheath with maturity.

Leaves: the leaf blade is flat, 10-35 cm long, 6-20 mm wide, lower sheaths often reddish.

Notes: monitor for spread. It reduces yields and causes crops to fail by removing up to 80% of the available soil nitrogen. Usually found in fresh-water habitats but has been reported to have good salt tolerance and can even grow partially submerged. Also known as Barnyard millet.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

MAT GRASS

Hemarthria uncinata

C4

Growth: low growing, mat-forming grass. Stems are erect, up to 80cm high and occasionally branched.

Flower head: very small distinctive flower spike 5–12 cm long.

Leaves: the leaf blade is up to 20 cm long and 5 mm wide, flat or folded. Often reddish at the lower margins.

Notes: superficially appears like Kangaroo grass, due to colour and summer growing habit. Growth similar to Kikuyu.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

BARLEY GRASS

Hordeum leporinum

C3

Growth: small to medium grass, 5-50 cm tall stems covered with loose hairs.

Flower head: 3–10 cm long spike with bristles 10–35 mm spiking outwards, creating an oval to egg-shaped outline.

Leaves: the leaf blade is flat, velvety-hairy, up to 4–15 cm long and 2–8 mm wide.

Notes: dry area grass. More common in disturbed areas, like stock camp areas.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

PERENNIAL RYEGRASS

Lolium perenne

C3


IC


NB


NB


NB

Growth: stems are erect, 60 cm high, in some cases up to 90 cm.

Flower head: narrow spike, 8–22 long with spikelets 7–23 mm long.

Leaves: the leaf blade is folded when young, becoming flat with maturity, up to 20 cm long and 5 mm wide, smooth, often shiny.

Notes: purple at the base. Glossy and prominent veins along the leaf.

Confused with: Annual Meadow-grass when not in seed and Wimmera Ryegrass.

Growth

Flower type

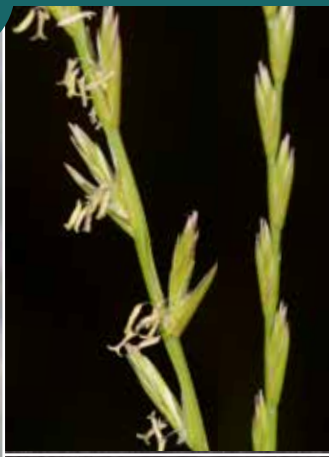
J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

WIMMERA RYEGRASS

Lolium rigidum

C3



Growth: medium to tall tufted grass rooting from lower nodes. The stem is erect, up to 1 m high, lower stems typically reddish to purple in colour around the nodes.

Flower head: narrow spike up to 30 cm long, with spikelets 4–18 mm long borne alternating side of the stem.

Leaves: the leaf blade is rolled when young, becoming flat with maturity, 20 cm long and 8 mm wide.

Notes: also known as Annual Ryegrass.

Confused with: Perennial Ryegrass.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

FOREST WIRE-GRASS

Tetrarrhena juncea

C3

Growth: long trailing, wiry and can grow as long as 8 m. Often becoming tangled and rooting from lower nodes.

Flower head: 2–7 cm long, with 5-16 spikelets on each branch. Spikelets are 4.5–6.5 mm long, often purplish in colour.

Leaves: the leaf blade is flat, up to 8 cm long, 2-5 mm wide, spread distantly up the stem, rough to the touch with fine hairs.

Notes: found in tall damp forests with a climbing habit.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

WHORLED PIGEON-GRASS

Setaria verticillata

C4

Growth: medium sized tufted grass 10cm -1 m tall. The stem is erect or knee-bent growing up to 1 m high.

Flower head: dense, cylindrical, 3–12 cm long and 1 cm wide, green to purple in colour with downwards facing bristles arising from just below the spikelet.

Leaves: leaf blades are flat, rough, up to 25 cm long and 12 mm wide.

Notes: bristles that easily catch onto fur and clothing.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

RAT'S-TAIL FESCUE

Vulpia myuros

C3

Growth: slender tufted grass. The stem is slender, erect or ascending, up to 70 cm high.

Flower head: a one-sided panicle, erect or slightly drooping, 5–30 cm long, partially encased or barely exceeding from the upper leaf sheath.

Leaves: leaf blade is flat or inrolled, to 15 cm long and 3 mm wide.

Notes: wiry, hairy flower.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

RED LEG-GRASS

Bothriochloa macra

C4

Growth: medium sized slender grass spreading with rhizomes. Stems are ascending to erect, sometimes branching, up to 80 cm high.

Flower head: 2-6 raceme branches, each 2–9 cm long, radiating from the apex almost vertically. Spikelets are 5-7 mm long with a tuft of silky hairs at the base, and an awn once or twice bent, 15–20 mm long.

Leaves: the leaf blade is flat, to 20 cm long and 5 mm wide, mostly green with some red colouring along the tips and margins.

Notes: reddish stems and hairy flowers.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

PASPALUM

Paspalum dilatatum

C4

Growth: the stem is horizontal to stretching upright to erect, up to 1 m.

Flower head: 2–10 semi-erect to drooping racemes up to 12 cm long on slender stems 3–20 cm long. With maturity, the flowers resemble a caterpillar.

Leaves: the leaf blade is broad and smooth, to 20 cm long and 15 mm wide.

Notes: vigorous growth in moist, fertile soils or locations receiving good rainfall over warmer months.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

WATER COUCH

Paspalum distichum

C4

IC

AM

Growth: semi-aquatic, mat-forming grass. The stem is erect or ascending, up to 60 cm high.

Flower head: forked, two slender racemes of spikelets 2-6 cm long, arising from the stem terminal, with spikelets in two rows.

Leaves: the leaf blade is flat, 20 cm long and 7 mm wide

Notes: common in or near fresh water, may tolerate some brackishness.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

WINDMILL GRASS

Chloris truncata

C4

Growth: small tufted grass forming a low, dense growth. The stem is erect, up to 40 cm tall.

Flower head: a windmill shape of 5-10 spikes, 5-17 cm long, that radiate horizontally from the main stem. Spike becoming purple to blackish with maturity.

Leaves: the leaf blade is folded, up to 15 cm long and 5 mm wide.

Notes: found in roadside vegetation, grasslands and grassy wetlands.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

COUCH GRASS

Cynodon dactylon

C4

Growth: short, mat-forming grass spreading with tough, wiry rhizomes and stolons. The stem is erect, up to 30 cm high, but can grow through other vegetation to 1 m.

Flower head: a windmill shape of 2-6 spikes, 2-6 cm long, ascending from the apex of the stem. Spikelets are 1.5–3 mm long, usually dark purplish.

Leaves: leaf blade flat with a blunt tip, 15 cm long and 4 mm wide.

Notes: also known as Bermuda grass. Prefers moist sites and has a high salinity tolerance.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SUMMER GRASS

Digitaria sanguinalis

C4

Growth: medium sized grass with a low form, spreading from lower nodes. The stem is growing horizontally with the tips curving upright, up to 60 cm high.

Flower head: a windmill of 3-11 spikes, 5–15 cm long. Spikelets are in pairs, 2.6–3.2 mm long.

Leaves: leaf blade mostly flat, 3–15 cm long, 2–15 mm wide, with soft, sparse hairs.

Notes: this grass is named from the Latin digitus meaning finger, after the finger-like windmill appearance of the flower.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

SILKY BLUE-GRASS

Dichanthium sericeum

C4

Growth: a blue-grey tufted grass. The stem is erect, sometimes branching at the base, up to 80 cm high.

Flower head: 2-6 racemes each 1-6 cm long, radiating from the apex of the stem, densely silky-hairy.

Leaves: the leaf blade is mostly hairless, rarely with hairs, up to 15 cm long and 4 mm wide.

Notes: windmill shape remains closed, resembling a spike. Has fringed hairy nodes and a silky hairy flower.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

BARBED-WIRE GRASS

Cymbopogon refractus

C4

Growth: the stem is up to 1.2 m high, nodes purple.

Flower head: sparse clusters of racemes with a reddish base, 10-25 cm long, bent downwards giving a barbed-wire appearance.

Leaves: the leaf blade is flat, up to 50 cm long and 3 mm wide, smooth.

Notes: this species is tolerant of low nutrient and various soil types. At present, only seen near Sunbury. Slightly lemon scented.

Growth

Flower type

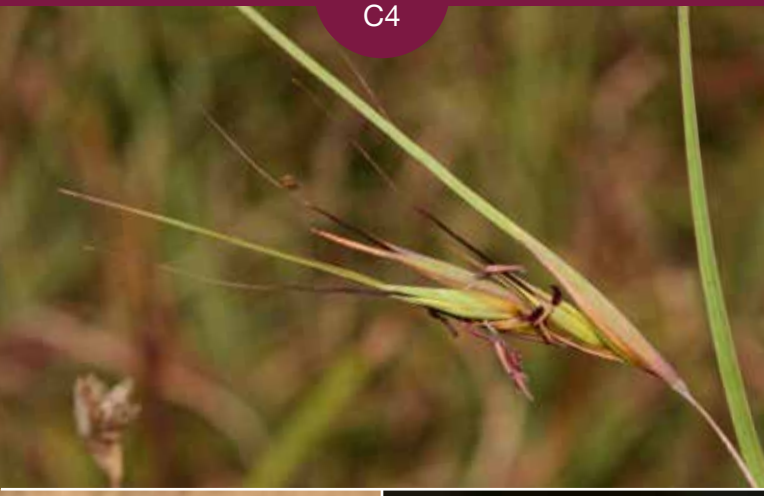
J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

KANGAROO GRASS

Themeda triandra

C4



Growth: tufted grass, stems often reddish, erect growing up to 1 m high.

Flower head: flower is distinctive, rusty red in late summer.

Leaves: leaf blade flat or channelled, to 50 cm long and 5 mm wide, blue-green to reddish in colour. Leaf sheath is strongly folded.

Notes: grows in a wide range of soil types and growing conditions.

Growth

Flower type

J	F	M	A	M	J	J	A	S	O	N	D

Flowering season

OTHER

WINTER CROP - CEREALS

These C_3 plants are usually planted for a crop, occasionally will appear in a grazing pastures from purchased feed (hay and grains).

- *Triticale* (× *Triticosecale*)
- Oat (*Avena sativa*)
- Rye or Rye-corn (*Secale cereale*)
- Wheat (*Triticum* spp.)
- Barley (*Hordeum vulgare*)

SUMMER CROP GRASS

These C_4 plants are usually planted for a summer crop and usually require summer rain, high soil moisture or irrigation to grow in a Central Victorian environment. Will occasionally appear in grazing pastures from purchased feed (hay and grains).

- Millet (*Echinochloa esculenta*)
- Sorghum (*Sorghum* spp.)
- Maize/corn (*Zea mays* var.)
- Rice (*Oryza sativa*)


NB

GLOSSARY

Annual: an annual plant will complete its life cycle and die within one year or growing season.

Awn: grass awns are sharp, stiff, bristle-like structures which grow from the flower. An awn is not an essential part of a plant, some can have an awn, be awnless or have a short awn, called an awnlette.

Contracted panicle: where the branches of the panicle are held close to the main stem, or open, where the spikelets are borne on spreading branches.

Culm: we have used the word 'stem' throughout the guide. Culm is a stem or stalk.

C_3: cool season. Adapted to grow in cooler months where there is higher moisture and lower light.

C_4: warm season. Adapted to warmer conditions, lower moisture, dominate full-sun conditions, low frost tolerance.

Dense cylinder: where the spikelets are close together and to the main stem creating a dense flower head.

Digitate flower: branching from the stem, windmill like the fingers of a hand.

Exotic: species that is non-native.

Flower head: a group or cluster of flowers arranged on a stem. We have used the word 'flower head' throughout the guide in reference to the inflorescence.

Floret: one of the small flowers making up a flower head.

Forbs: herbaceous flowering plants, often seen in grasslands, although are not grasses.

Fructan: is a polymer of fructose molecules. Fructan is found widely in plants and acts as a reserve of carbohydrates, and improves cold and drought tolerance.

Glume: a leaf-like structure below a spikelet in the flower cluster.

Growth habit: refers to the form or shape that a grass takes. In this guide, we have also used growth habit to describe the root systems of grasses.

Inflorescence: see Flower head.

Midrib: the central, and usually most noticeable, vein of a leaf.

Native: species that are naturally found, or indigenous to a region.

Open Panicle: a number of branching stems, each of which carries one or more flowers.

Panicle: arrangement of flowers on main stem.

Photosynthesis: the chemical process in which plants use sunlight to make their own food.

Perennial: a plant that lives for many years.

Raceme: along the main stalk, has individual flowers attached by short equal length stalks, with the oldest flowers at the base.

Rhizomatous or **Rhizome:** a modified stem which grows horizontally below ground to propagate new tiller growth.

Semi Aquatic: grows part time in water, or partially submerged in water.

Spathe: leaf-like structure surrounding the seeds.

Spike: flowering group from the main stem without individual flower stalks.

Spike-like panicle: spikelets are attached to the main stem with very short stalks to form a dense flower.

Spikelet: group of flowers in plants, one to many flowers.

Stem: main stalk of the plant which the flower grows from.

Stoloniferous, **Stolon** or **Runner:** a modified stem which grows horizontally along the ground surface to propagate new tiller growth.

Tiller: a tiller is a shoot that grows from the base of a grass plant. The original shoot can sometimes be known as the 'parent plant'; new tillers are named 'daughter tillers'. A daughter tiller is the name given to a secondary shoot from the plant.

Tufted: grows in small dense clumps or tufts.

Weed: a wild plant growing where it is not wanted.

Weed of National Significance (WoNS): Weeds of National Significance is a list of the most problematic plant species in Australia as determined by the Federal Government.

Windmill: branching like the fingers of a hand from one point on the stem.

INDEX

All grasses by common name A-Z

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