

JUST LEAVES

VEGETATIVE IDENTIFICATION OF SOME COMMON ANNUAL GRASS WEEDS OF TASMANIAN PASTURES.



The ability to identify grasses in grazed pastures is a skill that rewards managers with specific, personalised information about their pastures and grazing system. This factsheet focuses on recognising some of the common annual grass weeds that are well represented in many pastures in low rainfall areas.

USING THIS GUIDE

Annual grasses can be significant, competitive weeds during pasture establishment and invaders of bare ground within establishing and established pastures. Recognising their presence and seeing the proportions of desirable sown species versus weeds is critical information guiding management.

Get a feel for the appearance of annual grasses from the following descriptions and photos - with attention to detail, key differences become visible. Those differences can be used to return value directly as you assess future feed supply, potential growth responses, fertiliser and grazing priorities, overall pasture performance, limitations, potential resurrection or resowing.

KNOWING WHAT YOU HAVE

Knowing what species are present is a key step in assessing current pasture condition and understanding the capability of that pasture to meet the needs of livestock and sustain the stocking rate being managed. This knowledge helps establish realistic expectations of the pasture and its responses to both growing conditions and potential management inputs.

Recognising changes in grass species composition also provides an early warning of weedy invasion or alternatively a recognition of improvement, or of sustained desirability. Species composition provides direct feedback on what's working well or not - but only if you can recognise what's present.

COMMON GRASSES GUIDE

The 2025 edition of "Common grasses of Tasmania" is a useful resource for practical identification of pasture species. The guide most often relies on a grasses' most distinguishing features, the seedheads, but identification can be more difficult when only leaves are present.



The Common Grasses of Tasmania guide is available to download from the NRM South resource library.

JUST LEAVES?

For much of the year, including when many important management decisions are being made, these seedheads, are absent.

Identification must instead rely on leaves and tillers. While at first, these features may appear to be so similar that identification becomes difficult, there are key differences that allow for the easy identification of common species.

ANNUAL GRASSES

These grasses germinate, grow, flower, set seed and die within the same growing season. This is usually from autumn/winter to late spring/early summer. Unlike perennial grasses, they do not persist as plants from year to year but reproduce from seed. As a result they will appear as seedlings and then plants with generally shallow root systems, making for less well anchored plant bases. This may be common across species, but there are features that are far more specific.

VULPIA (*Vulpia spp*)

There are a few species of vulpia, but they are functionally similar and can be considered together. Vulpia commonly has a wiry, thin leaved appearance - and unsurprisingly is not very palatable to stock.

It typically appears to have more stem than leaf even when short. Vulpia is an undesirable species, a poorly productive invader of bare ground resulting from the absence or decline of more productive species.

Large amounts of shed seed can lead to thick patches of small thin leaved seedlings. In new pastures, vulpia seedlings can be significant competition for the newly sown seedlings.



Key features: Dull green leaves. Leaves (3mm) are either flat and thin or in-rolled and thin. Leaves are hairless to the naked eye but appear to have very short hairs when magnified. The plants can appear like a tufted patch of hairs (referred to as 'hair grass'). Often appears short and wispy, tending to wiry as it grows. It can grow tall in good conditions, but as it does so it always has far less leaf than stem. Its shallow roots and poor palatability often mean it appears as pulled and spat out plants when grazed.

Similar species: At first, it can appear similar to seedling ryegrass, however unlike ryegrass the lower side of the leaf is dull and not shiny or waxy, and the leaf will appear more rolled and not flat. Other similar species include thin-leaved wallaby grass (*Rytidosperma*), but this perennial often has well-developed crowns, with hairy leaves and a tuft of hairs at the base of the leaf blade; and thin-leaved *Poa bulbosa*, but the main difference is that *Poa* has swollen, bulbous, tiller bases.

BARLEY GRASS (*Hordeum leporinum*)

Barley grass is the Jekyll and Hyde of annual grasses. It can be a vigorous invader, particularly of areas of more fertile bare ground under trees and around stock camps/bedding sites. It is valued for its winter growth and can provide valuable high-quality feed in autumn/winter and early spring, before it turns into a spiky and rejected nightmare and dies having protected all its seed. While this mix of attributes prompts discussion of its relative merit, its annual nature and spiky seeds are a big limitation.

Barley grass is best managed either as weed to be controlled or in discrete areas and not allowed to become distributed everywhere, compromising more desirable perennial pastures. Because stock reject it at flowering, it can accumulate a competitive advantage that degrades these pastures.



Image: Thick patch of Barley Grass with twisted, slightly yellow green leaves. Old seedheads are corroborating evidence.



Image: Barley Grass with twisted leaves surrounds clumps of phalaris (broader blue/grey green leaves). The barley grass is lots of small establishing plants, while the phalaris is a few bigger more robust, more tillered perennial plants.



Key features: Wide (to 8mm) flat leaves that tend to display a twist. Prominently hairy. Where the leaf blade meets the tiller sheath or stem, clasping auricles project out (much like the wings of a 70's shirt collar). Under good fertility, as in stock camps, leaves can be a rich green but are also often paler and tending to yellowish in response to stress or frost. Tufted, leafy many-tillered plants can become quite large. Looks great until the first hints of flowering, when nothing will eat it.

Similar species: Other hairy annual grass weeds (such as soft brome and great brome).

SOFT BROME (*Bromus hordeaceus*)

Soft brome is a more benign annual grass, but still an opportunistic invader that is less productive than sown pasture grasses. It is initially somewhat palatable, and grazed, but becomes less palatable as stem elongation and flowering commences.

It can be quite widespread and less obviously present in thick stands and its presence is a warning of a trend to annual species responding to bare ground and probably lower fertility. Whilst a weed, it is not the worst.



Key features: Leaves soft, clearly hairy, flat, relatively broad (to 8mm) and greyish green. The plant often has a small crown of relatively few tillers and leaves. No auricles (unlike barley grass), but with a short ligule (to 2.5mm). The ligule is a membrane that look similar to a priests collar at the base of the leaf blade. The seedhead is far less of a grazing deterrent than most other annual grass weeds.

Similar species: Other hairy annual grass weeds such as barley grass and great brome. Could also be confused with Yorkshire fog grass, but the latter is perennial, softer and has red stripes at the tiller base.

Vulpia, barley grass and soft brome are probably the most significant of the annual grass weeds in grazed pasture.

SPEAR GRASS/ GREAT BROME (*Bromus diandrus*)



Not to be confused with native spear grass (*Austrostipa*). This introduced weed has long, flat and broad leaves bearing long hairs. Like soft brome, has no auricle, but a more prominent ligule (to 6mm) with a jagged edge. Lower parts of the tiller sheath may be purple as well as hairy. Like soft brome, spear grass contributes some feed, but only before its immensely spikey flowers develop.

ROUGH DOGSTAIL (*Cynosurus echinatus*)



Often only a minor component of the grass weed population. Can be tufted crowns or with few or single tillers. Leaves wide (to 10mm) hairless and often quite broad adjacent to the tiller sheath, with a long taper to a slender tip. No auricles, but a prominent translucent ligule. Often a grey green in colour, plants appear fleshy with stiff twisting leaves and a white base.

WINTER GRASS (*Poa annua*)






Winter grass is the classic opportunist, taking advantage of and invading bare ground. Often found where there is disturbance (e.g. gateways and around holding areas). It can be a vigorous competitor in newly sown pastures. The plant is usually small but tufted with many tillers. Leaves are hairless and green to pale yellow-green with a prominent white ligule. The leaf tip is notably hooded (in-curved or cupped like the prow of a boat).

Table 1: A summary of distinguishing vegetative features of selected annual grass weeds compared to one another and to common sown grass species.

	Hairs	Auricle	Ligule	Leaf and tiller features
Weed species				
Vulpia	No *	No	Yes, blunt, v. short	Thin, wiry, in-rolled leaves.
Rough Dogstail	No	No	Yes, big, translucent	Broad, flat, grey green stiff, twisted leaves tapering to a point.
Winter grass	No	No	Yes, blunt	Broad folded leaves with a keel/mid rib and hooded tip
Sown species				
Barley Grass	Yes	Yes	No	Leaves soft, twisting
Soft Brome	Yes	No	Yes blunt	
Great Brome	Yes	No	Yes big jagged	Purple-tinged tiller sheath
Sown species				
Cocksfoot	No	No	Yes, big, blunt	Flat tillers broad folded leaves
Phalaris	No	No	Yes, big, blunt	Tubular tillers, broad flat leaves.
Perennial ryegrass	No	No	Yes, short, translucent	Lower leaf surface shiny, tiller base reddened.
Tall fescue	No	Very small, fringed with short hairs	No	Upper leaf prominently ribbed, leaves stiff and pointed.

*Not to the naked eye, but with minute hairs

IN SUMMARY

-  Being able to identify weedy annual grasses is key to unlocking significant pasture value.
-  Identifying grasses from leaves and tillers alone can appear daunting, however, a few key distinguishing features help untangle the leaves and tell us what's what.
-  Vulpia, Barley Grass, Soft Brome, Spear Grass, Rough Dogstail and Winter Grass are common annual grass weeds.
-  Management is assisted by timely observation, often before seedheads are present, requiring identification using vegetative characteristics.
-  Knowing what is present guides management priorities, stimulates questions about the causes of weedy invasion and what can be done to address it.