

# Mat grass

*Nardus stricta*

Family Poaceae



## Identification

- A **tussock-forming** perennial grass, usually 15-30cm high
- Rough to touch, with **narrow, tightly-folded leaves**
- **Leaf blades** are **dark green** to **bluish**, turning a pale yellow or white with age
- **Outer blades** spread out **horizontally and stiffly** from the plant
- Flower spikes are narrow, with most of the flowers on one side



Mat grass in foreground with a native tussock growing behind it. Photo: A.Paltridge



Mat grass seed heads. Inset photo: Mat grass root system.  
Photos: A. Paltridge

## Where is it found?

Mat grass prefers to grow near wetlands and tarns, although it has been noted growing in dry tussock/grassland areas that are close to wetland environments. It is known to be growing in the MacKenzie Basin area.

## Status

Mat grass has no formal pest status but we are very interested in determining its distribution within Canterbury. Please contact the Potential Pest Line on (03)363 9380 or email [weeds@ecan.govt.nz](mailto:weeds@ecan.govt.nz) if you suspect you have seen mat grass.

## Why is it a problem?

At present, there is not too much information available on the ecology and distribution of mat grass. However, we do know that it is a threat to wetlands, as it invades damp areas, crowding out and displacing the existing native wetland species. Mat grass is recognised as a problem species in the Northern hemisphere.

Due to its tussock-like appearance, mat grass can easily be confused with species such as nassella tussock (*Nassella trichotoma*), chewings or red fescue (*Festuca rubra*) and hard tussock (*Festuca novae-zelandiae*) - see comparison table overleaf.



Mat grass (within the blue circled area) invading a wetland environment. It looks very similar to other plant species growing in the wetland. Photo: A. Paltridge

	<i>Nardus stricta</i> mat grass	<i>Nassella trichotoma</i> nassella tussock	<i>Festuca novae-zelandiae</i> hard tussock	<i>Festuca rubra</i> red tussock
<b>Leaf sheath</b> (below where blade joins the stem)	<ul style="list-style-type: none"> <li>▶ tough, strongly ribbed, not hairy, shining</li> <li>▶ pale greyish brown or creamy</li> </ul>	<ul style="list-style-type: none"> <li>▶ rough to touch near ligule and on upper margins, becoming smooth below</li> <li>▶ white at base</li> </ul>	<ul style="list-style-type: none"> <li>▶ finely ridged, slightly rough to touch or smooth, margin sometimes wavy</li> <li>▶ straw-coloured</li> </ul>	<ul style="list-style-type: none"> <li>▶ finely ridged, usually hairy, becoming fibrous</li> <li>▶ red-brown</li> </ul>
<b>Leaf sheath</b>	<ul style="list-style-type: none"> <li>▶ 6-18 cm long</li> <li>▶ 0.5 mm diameter</li> <li>▶ outer blades spread horizontally</li> <li>▶ blades needle-like and hard</li> </ul>	<ul style="list-style-type: none"> <li>▶ to 35 cm long</li> <li>▶ 0.5 mm in diameter</li> <li>▶ stiff, erect to drooping, yellowish green to green</li> </ul>	<ul style="list-style-type: none"> <li>▶ 10-40 cm long</li> <li>▶ 0.4-0.7 mm diameter</li> <li>▶ circular in cross-section</li> </ul>	<ul style="list-style-type: none"> <li>▶ 2-25 cm long</li> <li>▶ 0.3-0.7 mm wide</li> <li>▶ may be folded</li> </ul>
Lower leaf surface	<ul style="list-style-type: none"> <li>▶ smooth, or with minute prickly teeth or hairs</li> </ul>	<ul style="list-style-type: none"> <li>▶ very rough to touch</li> </ul>	<ul style="list-style-type: none"> <li>▶ rough to touch</li> </ul>	<ul style="list-style-type: none"> <li>▶ smooth, or sometimes rough to touch, or hairy</li> </ul>
Upper leaf surface	<ul style="list-style-type: none"> <li>▶ minutely bumpy on the ribs</li> </ul>	<ul style="list-style-type: none"> <li>▶ covered with short dense hairs</li> </ul>	<ul style="list-style-type: none"> <li>▶ short white hairs that point towards the tip</li> </ul>	<ul style="list-style-type: none"> <li>▶ finely hairy</li> <li>▶ ribs prominent</li> </ul>
Leaf margins	<ul style="list-style-type: none"> <li>▶ smooth</li> </ul>	<ul style="list-style-type: none"> <li>▶ smooth</li> </ul>	<ul style="list-style-type: none"> <li>▶ short white hairs that point towards the tip</li> </ul>	<ul style="list-style-type: none"> <li>▶ finely hairy</li> </ul>
<b>Auricles<sup>1</sup></b>	<ul style="list-style-type: none"> <li>▶ none</li> </ul>	<ul style="list-style-type: none"> <li>▶ none</li> </ul>	<ul style="list-style-type: none"> <li>▶ 0.4-1.5 mm, unequal</li> </ul>	<ul style="list-style-type: none"> <li>▶ knob-like swellings at junction of blade and sheath</li> </ul>
<b>Ligule<sup>2</sup></b>	<ul style="list-style-type: none"> <li>▶ 0.5-1.4 mm</li> </ul>	<ul style="list-style-type: none"> <li>▶ to 1.5 mm</li> </ul>	<ul style="list-style-type: none"> <li>▶ 0.4 - 1.5 mm</li> <li>▶ asymmetrical, hairy along the edge</li> </ul>	<ul style="list-style-type: none"> <li>▶ 0.25 mm</li> </ul>
Other	<ul style="list-style-type: none"> <li>▶ flower spike is one sided</li> <li>▶ plants to 40 cm</li> </ul>	<ul style="list-style-type: none"> <li>▶ flower spike open, drooping, purple</li> </ul>		

<sup>1</sup> Projections out from the blade at the point where the blade leaves the stem

<sup>2</sup> The membrane on the inside of the leaf, at the point where the blade leaves the stem

#### References

Edgar E, Connor HE (2000) Flora of New Zealand. Volume V. Gramineae. Manaaki Whenua Press, Lincoln New Zealand  
Lambrechtsen, NC (1986) What grass is that? Government Printing Office, Wellington, New Zealand