

## Summary of EPPO Prioritization process<sup>1</sup> for: *Nassella neesiana*

In 2022/23, a number of species on the EPPO Observation List were re-prioritized with current information to assess if they should remain on the Observation List or be moved to another list. This is the prioritization summary for *Nassella neesiana* where the outcome is the species should remain on the Observation List.

### Section A. Prioritization process scheme for the elaboration of different lists of invasive alien plants (pests or potential pests) for the area under assessment

#### A.1 Is the plant species known to be alien in all, or a significant part, of the area under assessment?

Yes: *Nassella neesiana* is native to Argentina, Bolivia, Brazil, Chile, Ecuador, Paraguay, Peru, Uruguay (<https://powo.science.kew.org/>).

#### A.2 Is the plant species established in at least a part of the area under assessment? (if yes goto A5)

Yes the species is established in the EPPO region. The species has been recorded in Spain, Greece, Madeira (<https://powo.science.kew.org/>), UK, France and Italy (Bourdôt et al. 2012).

#### A. 3 Is the plant species known to be invasive outside the area under assessment?

A yes for question A.2 means this question is skipped.

#### A.4 Based on ecoclimatic conditions, could the species establish in the area under assessment?

A yes for question A.2 means this question is skipped.

#### A.5 How high is the spread potential of the plant in the area under assessment?

High spread potential with a medium uncertainty: *Nassella neesiana* spreads by seeds and can produce more than 20 000 seeds and may also produce hidden seeds at the node and bases of flower stems. The seed is 8-10 mm long and very sharp (EPPO 2012) and with an estimated persistence of seed in soil up to 12 years (Bourdôt & Hurrell 1992). Seeds are spread naturally by wind or water, they adhere to clothing and livestock and can be dispersed on farm machinery or as a contaminant of seeds and fodder (EPPO 2012). *N. neesiana* grows in temperate regions with annual rainfall greater than 500 mm (EPPO 2012). Based on models by Bourdôt et al (2012) eastward expansion of suitable climate into Germany, Poland, Hungary, northern Croatia and Serbia, southern Romania and northern Bulgaria, and coastal areas along the northern part of the Black Sea is projected.

#### A.6 How high is the potential negative impact of the plant on native species, habitats and ecosystems in the area under assessment?

Medium with a medium uncertainty: *Nassella neesiana* has the tendency to replace native flora, reduce ant abundance and alter the entire invertebrate community composition in conservation areas (GISD 2023). Seedlings are usually outcompeted by other plants, but become competitive under conditions of drought or overgrazing when more favourable pasture species have already been consumed by stock. The species also invade banks of continental water, riverbanks/canalsides (dry river beds) and forests.

<sup>1</sup> EPPO (2012) EPPO Prioritization process for invasive alien plants. EPPO Bulletin 42, 463-474.

**A.7 How high is the potential negative impact of the plant on agriculture, horticulture or forestry in the area under assessment?**

Medium with a high uncertainty: *Nassella neesiana* have a high fibre content and a low nutritive value, and form indigestible balls in the stomach of stock, leading to significant losses in stock production. The sharp seeds may cause injury to stock, including blindness. As seeds contaminate wool, they can devalue its value.

**A.8 How high are the potential additional impacts (e.g. on animal and human health, on infrastructures, on recreational activities, other trade related impacts such as market losses)?**

Low with a high uncertainty: The species have been introduced into the EPPO region for ornamental purposes.

**Outcome of Section A: *Nassella neesiana* is included on the EPPO Observation List**

		A5 -Spread potential		
		Low	Medium	High
Adverse impacts (maximum rating from questions A6, A7 and A8.	Low	List of minor concern	List of minor concern	List of minor concern
	Medium	List of minor concern	Observation List	Observation List
	High	Observation List	Observation List	List of invasive alien plants

*Nassella neesiana* is not considered further. The assessment stops here.

**B. Prioritization process scheme for the identification of invasive alien plants for which a PRA is needed**

B.1 Is the plant species internationally traded or are there other existing or potential international pathways?

B.2 Is the risk of introduction by these international pathways identified to be superior to natural spread?

B.3 Does the plant species still have a significant area suitable for further spread in the area under assessment?

**Outcome of section B:**

**Selected references**

Bourdôt, G. W. & G. A. Hurrell (1992) Aspects of the ecology of *Stipa neesiana* Trin. & Rupr. seeds, New Zealand Journal of Agricultural Research, 35:1, 101-108, DOI: 10.1080/00288233.1992.10417707

Bourdôt, G.W., Lamoureaux, S.L., Watt, M.S. et al. 2012. The potential global distribution of the invasive weed *Nassella neesiana* under current and future climates. Biol Invasions 14, 1545–1556 (2012). <https://doi.org/10.1007/s10530-010-9905-6>

EPPO (2012) Mini data sheet on *Stipa trichotoma*, *Stipa neesiana* and *Stipa tenuissima*. Available at: <https://gd.eppo.int/taxon/STDNE/documents>

Plant of the World Online. <https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:948410-1>

Global Invasive Species Database (2023) Species profile: *Nassella neesiana*. Downloaded from <http://www.iucngisd.org/gisd/speciesname/Nassella+neesiana> on 16-04-2023.