

Summary of EPPO Prioritization process¹ for: *Solanum sisymbriifolium*

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: *Solanum sisymbriifolium* is native to South America (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru) (Plants of the World Online, 2023).

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

Yes. *Solanum sisymbriifolium* is present in Austria, Belgium, Czech Republic, Denmark, Ireland, Estonia, France, Italy, Latvia, Lithuania, Morocco, Netherlands, Norway, Portugal, Spain, Turkey, Ukraine. It is established in Italy (Sardinia) (EPPO, 2023).

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 moderate uncertainty: *Solanum sisymbriifolium* seeds can be spread by mammals and each plant can produce 45 000 seeds. Seeds can also be spread as contaminants of used machinery and equipment (EPPO, 2008).

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

Moderate with a high uncertainty: There are no known studies that have evaluated the impact of the species on native biodiversity or habitats or ecosystems. However, the EPPO Panel on Invasive Alien Plants notes that *S. sisymbriifolium* does exhibit invasive behaviour (in the Mediterranean region) which may lead to native plants being outcompeted (pers. comm. G. Brundu, 2023; Lanza et al., 1995).

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

Moderate with a high uncertainty: There are no scientific studies on negative impacts in agriculture or forestry. However, EPPO (Reporting Service 2008/231) note that it can be considered a threat to irrigated

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

crops. It should be noted that *S. sisymbriifolium* is used as a beneficial plant in agriculture as it is used as a trap crop for *Globodera rostochiensis* (Potato cyst nematode).

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 low uncertainty: There are no potential additional impacts reported or predicted for this species.

Outcome of Section A: *Solanum sisymbriifolium* 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

The process stops.

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

Dandrand LM, Knudsen GR (2016) Effect of the trap crop *Solanum sisymbriifolium* and two biocontrol fungi on reproduction of the potato cyst nematode, *Globodera pallida*, *Annals of Applied Biology* **169** 180-189.

EPPO (2008) *Solanum sisymbriifolium* in Sardinia (IT) EPPO Reporting Service no.11-2008 <https://gd.eppo.int/reporting/article-854>

EPPO (2023) EPPO Global Database. <https://gd.eppo.int/>

Lanza B, Camarda I, Natali A (1995) *Solanum sisymbriifolium* Lamarck, an alien new to Sardinia. *Bollettino Museo Regionale di Scienze Naturali di Torino* **13**, 289-295.

Plants of the World Online (2023). <https://powo.science.kew.org/>

Usai M, Foddai M, Brunu A, Azara E, Camarda I (2008) [*Solanum sisymbriifolium* Lamarck exotic casual weed of Sardinia: spread and phytochemical aspects]. *Natural* Dicembre 2008, 22-26 (in Italian).

USDA (2013) Weed risk assessment for *Solanum sisymbriifolium* Lam. (Solanaceae) – sticky nightshade. Available at:

https://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/wra/Solanum_sisymbriifolium_WRA.pdf