

## Summary of EPPO Prioritization process<sup>1</sup> for: *Solanum carolinense*

### 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 carolinense* is native to North America (see EPPO Global Database and references within: <https://gd.eppo.int/taxon/SOLCA/distribution>).

#### **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. *Solanum carolinense* is established in a number of EPPO countries and transient in others (EPPO, 2022). It is considered established in Austria, France, Germany, Georgia, Italy, Romania, and Spain.

#### **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 low uncertainty: In North America, and in Japan, *S. carolinense* has shown to have spread over long distances presumably by both natural and human assisted mechanisms. In the US, long distance spread has been speculated with the inter-state movement of hay. In the EPPO region, spread via human assisted mechanisms is likely to be high (pers comm. S. Follak, 2022).

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

Low with a moderate uncertainty: There is no evidence that the species has a negative impact on native biodiversity in the EPPO region. Predominantly, *S. carolinense* is an agricultural weed.

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

High with a moderate uncertainty. In North America, *S. carolinense* can invade agricultural systems and infest many crops, in particular spring crops such as peanuts, maize, cotton, potato, alfalfa, green beans, tomato, vegetables, and soybeans (e.g. Webster, 2008; Van Wychen, 2015). The potential economic impact of *S. carolinense* in the EPPO region for farmers could be significant if the species spreads and establishes in further areas.

#### **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 moderate uncertainty: No information.

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

**Outcome of Section A: *Solanum carolinense* is included on the EPPO List of invasive alien plants**

		A5 -Spread potential		
		Low	Medium	High
Adverse impacts (maximum rating from questions A6, A7. and A.8)	Low	List of minor concern	List of minor concern	List of minor concern
	Medium	List of minor concern	Observation list	of Observation list
	High	Observation list	Observation list	List of invasive alien plants

**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?

Yes

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

**Outcome of section B: *Solanum carolinense* is a high priority for PRA**

**Selected references**

Bassett IJ, Munro DB (1986) The biology of Canadian weeds: 78, *Solanum carolinense* L. and *Solanum rostratum* Dunal. *Canadian Journal of Plant Science* **66**, 977-991.

Follak S (2019) Distribution and small-scale spread of the invasive weed *Solanum carolinense* in Austria. *EPPO Bulletin*. <https://doi.org/10.1111/epp.12644>

Van Wychen L (2015): 2015 Baseline Survey of the Most Common and Troublesome Weeds in the United States and Canada. Weed Science Society of America National Weed Survey Dataset. Available: [http://wssa.net/wp-content/uploads/2015-Weed-Survey\\_Baseline.xlsx](http://wssa.net/wp-content/uploads/2015-Weed-Survey_Baseline.xlsx).

Webster T (2008): Weed survey – southern States. Proceedings, Southern Weed Science Society 61, 224–243.