EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

22-27343

Summary of EPPO Prioritization process[1] for: *Solanum viarum*

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 viarum is native to South America (see EPPO Global Database and references within: https://gd.eppo.int/taxon/SOLVI/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. The species is established in France (Christians and Maglio, 2020).

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: Solanum viarum can produce thousands of seeds per plant that are dispersed by small mammals and livestock (Medal et al., 2012). High rates of spread through human mediated spread has been documented in the USA (Duncan *et al*., 2004)

A.6 How high is the potential negative impact of the plant on native species, habitats and ecosystems in the area under assessment?
High: *S. viarum* has been identified as a noxious weed that can smother native plant communities where it has been introduced. It out-competes native plant species by crowding or shading them out (Waggy, 2009; Medal et al., 2012). This species also reduces biodiversity in natural forests because plants are able to dominate large areas in the understory affecting the germination and establishment of native species (Waggy, 2009).

A.7 How high is the potential negative impact of the plant on agriculture, horticulture or forestry in the area under assessment?
High: Reservoir for plant viruses (Cooke, 1997). Can invade agricultural habitat reducing yield.

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)?
High economic costs associated with the management and control of the species in North America (Mullahey *et al*. 1998).

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

Outcome of Section A: Solanum viarum 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?
Yes: Limited information on availability in horticulture. Potential international pathways include contaminant of vehicles and machinery, livestock and habitat material

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?
Yes: Currently Solanum viarum has a limited distribution in the EPPO region and has a large area suitable for further spread.

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

Selected references

Christians JF, Maglio M (2020) *Solanum viarum* Dunal (Solanaceae) dans le département du Gard (France): une espèce exotique nouvelle pour la flore de France continentale. *Bulletin de la Société Linnéenne de Lyon* **89**(7-8), 196-204.

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Mullahey JJ, Shilling DG, Mislevy P, Akanda RA, 1998. Invasion of tropical soda apple (*Solanum viarum*) into the U.S.: lessons learned. Weed Technology, 12(4):733-736