

This short description was prepared in the framework of the EU FP7 project DROPSA - Strategies to develop effective, innovative and practical approaches to protect major European fruit crops from pests and pathogens (grant agreement no. 613678). This pest was listed in the DROPSA alert list for *Vitis* fruit.

Xanthomonas campestris pv. viticola (Xanthomonadales: Xanthomonadaceae)

Fruit pathway: Symptoms develop on petioles, pedicels and rachis of grape clusters. On the berries lesions are brown to black; cankerous and severely infected berries are small and shrivelled (Chand and Kishun 1990). The bacteria can be present on asymptomatic berries (USDA 2016).

Other pathways: plants for planting: epiphyte of aerial plant parts (DAFF 2013), leaf spots. Soil: survive in crop debris between production periods (Naue *et al.* 2014).

Hosts: *Vitis vinifera*, *Alternanthera tenella*, *Amaranthus* spp., *Glycine* spp., *Senna obtusifolia* (DAFF 2013), *Azadirachta indica* (CABI CPC); artificially *Mangifera indica* (Chand and Kishun 1990)

Distribution: South America: Brazil; Asia: India (DAFF 2013), Thailand (uncertain (USDA 2016); The high genetic similarity between Brazilian isolates and the Indian type strain supports the hypothesis that this bacterium may have originated in India, and that it was disseminated and introduced through contaminated planting material (Trindade *et al.* 2007). Ukraine (unconfirmed) (CABI CPC).

Damage: The disease causes about 60-80 % loss in yield in severely infected vineyards in India (Chand and Kishun 1990). This bacterium causes leaf blight, cankers on stems and petioles, extensive foliage death. Additionally it causes irregular colour and size in berries and may cause necrotic lesions, reducing the yield and quality of the grapes. Grapevine bacterial canker due to *Xanthomonas campestris* pv. *viticola* in Brazil has caused severe crop losses (DAFF 2013). Actually the most important disease of grapevine in Brazil (Naue *et al.* 2014).

Other information: Quarantine Pest status in Australia (DAFF 2013) and USA (USDA 2016). The pathogen spreads via rain or irrigation, but mainly through infected plant material and vehicles (clothes, cutting tools) (Naue *et al.* 2014). The introduction to Brazil was supposedly via contaminated stock of Red Globe grapes from India (USDA 2016).

Impact: High	Intercepted: Yes	Spreading/invasive: Yes
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References:

- Chand R, Kishun R 1990. Outbreak of grapevine bacterial cancer disease in India. *Vitis* 29, p183-188.
- DAFF 2013. Final review of policy: importation of grapevine (*Vitis* species) propagative material into Australia. CC BY 3.0. Department of Agriculture, Fisheries and Forestry, Canberra.
- Naue CR, Costa VSO, Barbosa MAG, Batista DC, Souza EB, Mariano RIR 2014. *Xanthomonas campestris* pv. *viticola* on grapevine cutting tools and water: Survival and Disinfection. *Journal of Plant Pathology* 96(3), 451-458.
- Trindade L, Marques E, Lopes DB, Ferreira MA 2007. Development of a molecular method for detection and identification of *Xanthomonas campestris* pv. *viticola*. *Summa Phytopathologica*, 33(1), p.16-23.
- USDA 2016. Importation of Grape (*Vitis vinifera* L.) from India into the Continental United States. A Qualitative, Pathway-Initiated Pest Risk Assessment. United States Department of Agriculture, Animal and Plant Health Inspection Service.