

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 lists for *Vaccinium*, apple, *Vitis* fruits.

Argyrotaenia citrana (Lepidoptera: Tortricidae)

Fruit pathway: Eggs may be on fruit, larvae feed on developing fruit (Gilligan and Epstein, 2009). Larvae of later generations feed at the surface of berries (CABI CPC; AQIS 1999, OregonBlueberry, no date; De Francesco and Murray, 2011; Retamales and Hancock, 2012). Larvae may also contaminate mechanically harvested *Vaccinium* fruit/'fall' in fruit at harvest (DeFrancesco and Bell, 2014; BerriesNW, 2014). On grapes, larvae make a nest between berries and include leaves, stems and berries (UC IPM, 2014). The larvae produce generally webbings which would be detected at harvest and packing procedures (AQIS 1999).

Other pathways: plants for planting; larvae also feed on buds and leaves (De Francesco and Murray, 2011; UC IPM, 2014). Eggs may also be on leaves and twigs (Gilligan and Epstein, 2009). Female moths lay egg clusters on any smooth plant surfaces, such as upper leaf surfaces, stems, canes or fruit. Pupation generally takes place in the host (webbing) where the larvae have been feeding (AQIS 1999). Larvae overwinter on the ground or in plants (Gilligan and Epstein 2009); pupae are on webbed leaves or in debris on the ground (OregonBlueberry, no date).
Uncertain pathway: soil.

Hosts: Over 80 hosts (Walker and Welter 2009) incl. *Vaccinium* (incl. *V. corymbosum*, *V. ovatum* - DeFrancesco and Bell, 2014; De Francesco and Murray, 2011; Brown et al., 2008), *Citrus*, *Malus domestica*, *Pinus radiata*, *Prunus armeniaca* (CABI CPC); *Prunus persica* (USPest, 2014); *Vitis vinifera* (UC IPM, 2014, Gilligan and Epstein 2009), *Rubus* (as raspberry, blackberry, boysenberry, loganberry), *Persea americana* (OregonBlueberry, no date).

Distribution: North America: Canada, USA (West) (OregonBlueberries, no date; USPest, 2014; UC IPM, 2014), Mexico (AQIS, 1999. Lopez, 2007, listing pests in 3 municipalities following a 3-year study).

Damage: Feeding on leaves causes relatively minor damage; on growing points on young plants, it can promote stunting and undesirable branching; on blossoms, it can spread *Botrytis*. On blueberry, *A. citrana* causes loss of fruit quality by binding leaves to developing fruit, and if the larvae contaminate fruit in mechanically harvested fields (DeFrancesco and Bell, 2014; BerriesNW, 2014). It is minor problem on blueberry in Oregon (De Francesco and Murray, 2011). *A. citrana* can cause economic damage to citrus, apple, and grapes (Gilligan and Epstein, 2009). It is an important pest on apple and other important fruit crops in Western USA; pest populations usually remain low in orchards treated against codling moth but it can cause significant damage even at relatively low populations (Walker and Welter 2009, Zalom and Pickel 1988) . On grape, it is an occasional pest in California (UC IPM, 2014); damage levels of 25% are mentioned in AQIS (1999). The damage caused by larvae feeding in fruit clusters facilitates the entry of organisms that induce rots (AQIS 1999). It is mentioned as an 'occasional and less well-known' pest of apple (for Mexico, Lopez, 2007). Minor greenhouse pest. Heavy infestations are sporadic. *A. citrana* injuries to the surface of developing fruit may develop scarring. The damage on older fruit leaves a depression, which may not heal if the damage occurs close to harvest (AQIS 1999).

Other information: *A. citrina* was intercepted in Japan (no indication of the commodity; Amano and Higo, 2015) and on table grapes to New Zealand (Biosecurity New Zealand 2009). The species is uni- or bivoltine (Gilligan and Epstein 2009). The synonym *A. franciscana* is used in Brown et al. (2008), Amano and Higo (2015), Gilligan and Epstein (2009) and BerriesNW (2014).

Recorded impact: Moderate	Intercepted: Yes	Spreading/invasive: Not known
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