

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 orange and mandarin and *Vitis* fruits.

***Thaumatotibia leucotreta* (Lepidoptera: Tortricidae)**

Location of life stages on plant parts: Larvae feed inside fruits, nuts, maize ears or cotton bolls (EPPO AL, 2011). Eggs on fruit, or on leaves, fallen fruit, smooth-surfaced tissue.

Hard green citrus fruit may be infested. Larvae prefer the navel end but can burrow anywhere on the fruit. There may be one to three larvae per citrus fruit. Pupae in soil, bark crevices, fallen fruit, debris (Guerrero et al., 2012).

In table grapes, fresh larval penetration holes can be seen, but require careful inspection of the fruit. Sometimes a few granules of frass can be found around a fresh penetration hole or a mass of frass may be found around older penetration holes. Sometimes frass is not visible (CAPS 2007). *T. leucotreta* has only been detected occasionally on grapes in the field and *Vitis* is considered a marginal host. EPPO 2013 considered that the commodity 'table grapes' is not an important pathway. However, as *T. leucotreta* has incidentally been detected at pre-clearance inspections in consignments intended for the USA, it was kept in the Alert List. Uncertain if table grapes are a pathway for this species.

Fruit pathway: yes, as eggs or larvae.

Other pathways: Plants for planting with growing medium attached, cut flowers of *Rosa* sp.; pupae in soil, larvae also in buds (EPPO 2013).

Hosts: Polyphagous, incl. *Citrus* (Guerrero et al., 2012), other fruit (*Ananas comosus*, *Annona muricata*, *Averrhoa carambola*, *Diospyros kaki*, *Eriobotrya japonica*, *Juglans regia*, *Litchi chinensis*, *Macadamia ternifolia*, *Mangifera indica*, *Musa x paradisiaca*, *Persea americana*, *Prunus persica*, *Psidium guajava*, *Punica granatum*, *Vitis*), vegetables and field crops (*Capsicum*, *Gossypium*, *Ricinus communis*, *Zea mays*, *Abelmoschus esculentus*, *Phaseolus*, *Sorghum*) and others (*Camellia*, *Coffea arabica*, *Olea europaea*, *Quercus*, *Theobroma cacao*) (EPPO GD). Apple and pear are not hosts (Pringle et al., 2015). Most relevant hosts in EPPO PRA (2013) are considered to be *Capsicum*, *Citrus reticulata* and hybrids, *Citrus sinensis* and hybrids, *Citrus paradisi*, *Gossypium*, *Litchi chinensis*, *Macadamia*, *Mangifera indica*, *Prunus persica*, *Prunus persica* var. *nucipersica*, *Persea americana*, *Psidium guajava*, *Punica granatum*, *Quercus robur*, *Ricinus communis*, *Rosa*, *Solanum melongena*, *Vitis vinifera*, *Zea mays*.

Distribution: Africa: Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo Democratic Rep., Cote d'Ivoire, Eritrea, Ethiopia, Gambia, Ghana, Kenya, Madagascar, Malawi, Mali, Mauritius, Mozambique, Niger, Nigeria, Reunion, Rwanda, Saint Helena, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe; Asia: Israel (first found 1984) (EPPO GD); Pest eradicated: Netherlands. Absent, intercepted only: Denmark, Finland, Spain, Sweden, UK (EPPO GD; Stibick 2006).

Damage: Damage is caused by larvae feeding on fruit. This can cause premature ripening and fruit drop (Guerrero et al., 2012). Mentioned as a key pest of Citrus in Southern Africa. On citrus, fruit losses as a result of *T. leucotreta* attacks range from below 2% to as high as 90% (1998 reference); on peach, in the early 1970s, it became a serious pest in the Transvaal (South Africa), where peaches were grown near citrus; percentages of infested fruit was in average of 29%, with a maximum of 55%. Significant yield losses ($\geq 30\%$) have also been reported in macadamia crops (1986 reference); in Uganda on cotton, *T. leucotreta* caused 20% yield loss of early sown varieties and 42-90% yield loss of late varieties. On *Capsicum*, there are conflicting information on damage (EPPO, 2013). It is known as a pest of cotton, macadamia nuts, avocado, stone fruit and maize in Africa (EPPO 2013). Larval feeding and development can affect fruit development at any stage, causing premature ripening, fruit drop (EPPO 2013) and infections with fungi (CAPS 2007).

Other information: The generalist feeding strategy enables survival in marginal conditions as is necessary due to lack of diapauses (CAPS 2007). Intercepted in several EU countries (EPPO GD), incl. on *Citrus paradisi* and *Citrus sinensis* fruits, rose cut flowers, etc., and numerous interceptions in cargo and passenger baggage in the USA. (EPPO AL, 2011). An outbreak was reported in the Netherlands on *Capsicum annuum* (origin unknown) and was eradicated (EPPO GD). Proposed in answer to the EPPO questionnaire on pests of concern for Citrus. At December 2015, *T. leucotreta* was under consideration for regulation in the EU (EU Standing Committee, December 2015). *T. leucotreta* is on EPPO A2 List of pests recommended for regulation. Quarantine Pest of Israel, Jordan, New Zealand and the United States (EPPO GD). USDA estimate the potential economic losses if False codling moth establishes of billions of dollar (Stibick 2006).

Recorded impact: High	Intercepted: Yes	Spreading/invasive: Yes
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