

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.

***Carpophilus davidsoni* (Coleoptera: Nitidulidae)**

**Fruit pathway:** Adults feed on fresh or dried fruit (Bartelt and Hossain 2006). Some authors states that only fallen fruit is attacked on crops other than peaches, nectarines and apricots (Learmonth and Woods 2015, refering to the Genus *Carpophilus*). Other authors mention that *C. davidsoni* prefers fruit in early stages of ripening (Brown 2014). As *C. davidsoni* was intercepted on table grapes, it was considered that it can be associated with this pathway with an uncertainty.

**Other pathways:** soil, plants for planting; almonds; larvae pupate in the ground. Eggs of *Carpophilus* spp. are laid in rotten or damaged fruit on the ground and larvae develop in those fruit; adults may overwinter in tree cracks or under the bark (Learmonth and Woods 2015). Adults and larvae of *C. davidsoni* bore into almonds (Brown 2014).

**Hosts:** polyphagous, incl. *Vitis*, *Prunus* spp., *Malus domestica*, *Citrus*, *Fragaria*, *Rubus*, *Ficus carica*, *Solanum* spp., *Zea mays* (James *et al.* 2000, Bartelt and James 1994, Leschen and Marris 2005)

**Distribution:** Oceania: New Zealand (introduced; Leschen and Marris 2005), Australia (Bartelt and James 1994).

**Damage:** belongs to most serious pests of stone fruit in South Australia, crop losses of more than 20% reported (Bartelt and Hossain 2006). Crop losses of 30 % of ripening peaches, nectarines and apricots and serving as carrier for *Monilinia* spp. in Australia has also been reported (Munroe 2005). *Carpophilus* beetle are the major vector of brown rot, due to their preference for rotting fruits (Learmonth and Woods 2015). Since the year 2013 it is a raising problem in almond production in Australia. Adults and larvae feed on and tunnel inside the almonds (Brown 2014). Its economic importance has grown since the 1950s (Aluja *et al.* 2009). The host range of the Genus *Carpophilus* is broadening and it became a significant pest of new crops like cherries and strawberries (Brown 2014). *Carpophilus* beetle are a difficult pest to control with insecticides because they infest crops around the harvest time (SummerGreen IFP Manual 2008).

**Other information:** Intercepted in New Zealand on table grapes (Biosecurity New Zealand 2009). Vector for *Monilinia* spp. or other microorganisms (Bartelt and Hossain 2006). The pest seems to have several characteristics that may favour transfer and establishment from imported fruit: rotting of fruit provides the best conditions for breeding and it is a strong flier (Learmonth and Woods 2015). It has several generations a year and hibernate as mature larvae, pupae or adults (Brown 2014).

<b>Impact:</b> High (on another crop), also vector	<b>Intercepted:</b> Yes	<b>Spreading/invasive:</b> Yes
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**References:**

- Aluja M, Leskey TC, Vincent C (eds) 2009. Biorational tree-fruit pest management. CAB International, Wallingford, UK, 293 p.
- Bartelt RJ, Hossain MS 2006. Development of synthetic food-related attractant for *Carpophilus davidsoni* and its effectiveness in the stone fruit orchards in Southern Australia. *Journal of Chemical Ecology* 32(10): 2145-2162.
- Bartelt RJ, James DG 1994. Aggregation pheromone of Australian sap beetle *Carpophilus davidsoni* (Coleoptera: nitidulidae). *Journal of Chemical Ecology* 20(12): 3207-3219.
- Biosecurity New Zealand 2009. Import risk analysis: table grapes (*Vitis vinifera*) from China. MAF Biosecurity New Zealand, Wellington, New Zealand, 314 p.
- Brown B 2014. All about Allmonds: *Carpophilus* Beetle - Another insect eating your profits. Almond Board of Australia.

- James DG, Vogele B, Faulder RJ, Moore CJ 2000. Efficacy of multispecies pheromone lures for *Carpophilus davidsoni* Dobson and *Carpophilus mutilatus* Erichson (Coleoptera: Nitidulidae). *Australian Journal of Entomology* 39(2): 83-85.
- Learmonth S, Woods B 2015. Dried fruit beetle (*Carpophilus*) - pest of stone fruit. Government of Western Australia, URL: <https://www.agric.wa.gov.au/citrus/dried-fruit-beetle-carpophilus-pest-stone-fruit> (accessed 2015 October 16)
- Leschen RAB, Marris JWM 2005. *Carpophilus* (Coleoptera: Nitidulidae) of new Zealand with notes on Australian species. Landcare Research New Zealand Ltd., 40 p.
- Munroe A (ed.) 2005. Integrated pest and disease management for Australien summer fruit. The State of New South Wales, NSW Department of primary industries, Orange, Australia, 171 p.
- SummerGreen IFP Manual 2008. Section 2. Pest Management. New Zealand.  
[http://www.summerfruitnz.co.nz/users/Image/Files/PDFs/5.4.1.1d%20Section%202\\_Pest%20Management.pdf](http://www.summerfruitnz.co.nz/users/Image/Files/PDFs/5.4.1.1d%20Section%202_Pest%20Management.pdf), accessed 18.11.2016