

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 orange and mandarin fruit.

**Tuckerella knorri (Acarida: Tuckerellidae)**

**Location of life stages on plant parts:** Leaves, fruit, branches (Ochoa, 1989).

**Fruit pathway:** yes.

**Other pathways:** plants for planting, cut flowers and branches.

**Hosts:** Polyphagous incl. *Citrus* (USDA, 2014), *Citrus sinensis*, *Citrus limon*, *Mangifera indica* (Ochoa, 1989), *Achras zapota*, *Carica papaya*, *Persea americana* (Lin, 1982), *Cupressus*, *Platycladus orientalis* (CABI CPC), *Pandanus odoratissimus* (Vacante, 2010), *Annona muricata*, *Camellia assamica*, *Litchi chinensis* (Zhang and Hong, 2010); *Mammea americana* (Cao and Leal, 2011).

**Distribution:** Asia: China, Iran, Philippines, Thailand (Vacante, 2010); Central America: Costa Rica (Ochoa, 1989); Caribbean: Cuba (Cao and Leal, 2011). Introduced to Costa Rica and Cuba from presumed origin in Asia (USDA, 2014).

**Damage:** All records of damage found relate to Costa Rica (where the pest was introduced). *T. knorri* is the most important *Tuckerella* agricultural pest in this country. On *Citrus limon* var. *mesina*, it was found infesting 30-50% of the harvest (fruit) (Ochoa, 1989). In Costa Rica, it is a serious citrus pest requiring control measures and causing significant yield reduction; it is considered as one of the “major pest threats for the California citrus industry” (USDA, 2014, citing others). It occurs in association with *Sphaceloma fawcettii* and may cause significant reduction of yield (Vacante, 2015).

**Other information:** Reported to be spreading, although uncertainty on damage to hosts (Cao and Leal, 2011).

<b>Recorded impact:</b> High	<b>Intercepted:</b> Not known	<b>Spreading/invasive:</b> Yes
------------------------------	-------------------------------	--------------------------------

**References:**

- CABI CPC. Crop Protection Compendium. CAB International, UK. <http://www.cabi.org/cpc>
- Cao J, Leal JL. 2011. Ácaros tuckerélicos (Acari, Tetranychoidae, Tuckerellidae) asociados a *Casuarina equisetifolia* L. en La Habana. Fitosanidad. vol. 15, no. 2, abril-junio 2011. pp. 69-72.
- Lin Y-M. 1982. A new species and two new records of *Tuckerella* from China (Acari: Tuckerellidae). *Acta Entomologica Sinica*, 25(4), 448–449 [in Chinese with English abstract].
- Ochoa R. 1989. The genus *Tuckerella* in Costa Rica (Acari: Tuckerellidae). *International Journal of Acarology*. 15(4), 205-217.
- USDA. 2014. Importation of *Citrus* spp. from China into the continental United States. A Qualitative, Pathway-Initiated Pest Risk Assessment. February 7, 2014.
- Vacante V. 2010. Review of the phytophagous mites collected on citrus in the world. *Acarologia* 50(2): 221–241 (2010) DOI: 10.1051/acarologia/20101969
- Vacante V. 2015. *The Handbook of Mites of Economic Plants: Identification, Bio-Ecology and Control*. CABI, 21 déc. 2015 - 890 pages
- Zhang Z, Hong X. 2010. Xin Centenary and Progress in Chinese Acarology: an introduction. *Zoosymposia* 4: 5–10 (2010)