

***Bactrocera tau* (Diptera: Tephritidae)**

This short description has been prepared in the framework of the EPPO Study on Pest Risks Associated with the Import of Tomato Fruit. The whole study can be retrieved from the EPPO website.

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Africa	Asia	Oceania	North America	South-Central America and Caribbean
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***Bactrocera tau* complex (Diptera: Tephritidae)**

Why	Identified in the EPPO tomato study. <i>B. tau</i> is a pest of Cucurbitaceae and other fruit in Asia. <i>B. tau</i> is now considered as a complex of species. In Thailand, <i>B. tau</i> consists of several forms in different hosts and habitats (Kitthawee and Rungsri, 2011; Sumrandee et al., 2011). Although there may be several species or forms involved, tomato is mentioned as a host of <i>B. tau</i> in publications from India (where it occurs also in the Northern part of the country).
Where	EPPO region: absent Asia: Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China (Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hong Kong, Hubei, Shaanxi, Sichuan, Yunnan, Zhejiang), India (Andaman and Nicobar Islands, Arunachal Pradesh, Bihar, Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Maharashtra, Meghalaya, Punjab, Sikkim, Tamil Nadu, Uttarakhnad, West Bengal), Indonesia, Laos, Malaysia, Myanmar, Singapore, Taiwan, Thailand, Vietnam (CABI CPC, for India distribution, Singh et al., 2010 citing others), Sri Lanka (specimen origin in Nakahara and Muraji, 2008 – although CABI CPC mentions that records for Sri Lanka may arise from misidentification) Recorded to have spread from China (Wu et al., 2011)
Climatic similarity	Low/medium. 3-4 common climates considering the countries and regions listed above.
On which plants	Hosts in the families Anacardiaceae, Cucurbitaceae, Elaeocarpaceae, Moraceae, Myrtaceae, Oxalidaceae, Rutaceae, Sapotaceae, Solanaceae (Carroll et al., 2004 onwards). Plant Health Australia (2011) also mentions Arecaceae, Fabaceae, Loganiaceae, Oleaceae, Vitaceae. Kapoor (2005/6) and Singh et al. (2010) mentions that it is especially on cucurbitaceous plants, tomatoes and other fleshy fruits, and the latter also mention hosts such as <i>Citrullus lanatus</i> , <i>Citrus grandis</i> , <i>Cucumis sativus</i> , <i>Cucurbita maxima</i> , <i>Lagenaria siceraria</i> , <i>Luffa acutangula</i> , <i>Momordica charantia</i> , <i>Passiflora edulis</i> , <i>Syzygium samarangensis</i> . Several publications do not mention tomato as a host (e.g. Huque, 2006), but publications from India do (e.g. Singh et al., 2010; Sharma et al., 2011).
Damage	<i>B. tau</i> is an important horticultural pest (Singh et al., 2010) and qualified as a “devastating pest of tomato” by Sharma et al. (2011). The damage is done by larvae that feed in the fruit. Life stages are studied in Singh et al. (2010).
Dissemination	Adults fly. Larvae are in fruit and pupae in the soil.
Pathway	Fruit of host plants and soil from countries where <i>B. tau</i> occurs.
Possible risks	Cucurbits and tomato are major crops in the EPPO region. The climatic similarity according to the EPPO Study between the area where it occurs and the EPPO region is low to medium. Although the taxonomy of the species or forms in the <i>Bactrocera tau</i> complex is not clear from the above, there is a <i>B. tau</i> in India that causes damage to tomato.
Categorization	Quarantine lists of Japan 2011, Korea Rep 2011, Seychelles 2010 (from IPP), Jordan 2007 (from PQR)
Sources	Carroll LE, Norrbom AL, Dallwitz MJ, Thompson FC. 2004 onwards. Pest fruit flies of the world – larvae. Version: 8th December 2006. http://delta-intkey.com (accessed January 2014) Huque R. 2006. Comparative Studies on the Susceptibility of Various Vegetables to <i>Bactrocera tau</i> (Diptera:Tephritidae). Pakistan Journal of Biological Sciences, 9: 93-95. Kapoor VC. 2005-6. Taxonomy and Biology of Economically Important Fruit Flies of India. In Biotaxonomy of Tephritoidea. Isr. J. Entomol. Vol. 35-36, 2005/6, pp. 459-475 Kitthawee S, Rungsri N. 2011. Differentiation in wing shape in the <i>Bactrocera tau</i> (Walker) complex on a single fruit species of Thailand. ScienceAsia 37 (2011): 308–313 Nakahara S, Muraji M. 2008. Phylogenetic Analyses of <i>Bactrocera</i> Fruit Flies (Diptera: Tephritidae) Based on Nucleotide Sequences of the Mitochondrial COI and COII Genes Res. Bull. Pl. Prot. Japan No. 44: 112 (March, 2008)

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PQR

Quarantine lists of Japan 2011, Korea Rep 2011, Seychelles 2010 (from the IPP)

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