

Mini data sheet on *Bactrocera latifrons*

Bactrocera latifrons was added to the EPPO A1 List in 2017. A full datasheet will be prepared, in the meantime you can view here the data which was previously available from the EPPO Alert List (added to the EPPO Alert List in 2015 - deleted in 2017).

Bactrocera latifrons (Diptera: Tephritidae)

Why: *Bactrocera latifrons* was identified in the EPPO study on pest risks associated with the import of tomato fruit as possibly presenting a risk for the EPPO region. This fruit fly species was later selected as a priority for PRA by the EPPO Panel on Phytosanitary measures. An EPPO Expert Working Group will meet in December 2015 to conduct PRAs on several tomato pests, including *B. latifrons*.

Where: *B. latifrons* originates from Asia but its range has expanded through introductions into Africa (Kenya and Tanzania, first found in 2007 and 2006 respectively) and the islands of Hawaii (US, first found in Honolulu in 1983) and Yonaguni (Okinawa prefecture, Ryukyu Archipelago, Japan, first found in 1984).

EPPO region: absent.

Africa: Kenya, Tanzania.

Asia: Brunei Darussalam, China (Fujian, Guangdong, Guangxi, Hainan, Xianggang (Hong Kong), Yunnan), India (Karnataka, Kerala, Himachal Pradesh, Tamil Nadu, West Bengal), Indonesia (Kalimantan, Sulawesi), Japan (Ryukyu), Laos, Malaysia (Sabah, West), Myanmar, Pakistan, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam.

North America: USA (Hawaii only). Isolated outbreaks have been reported occasionally from California, but have been eradicated.

On which plants: *B. latifrons* is a pest of fruit and vegetable species, mainly belonging to Solanaceae and to a lesser extent to Cucurbitaceae, such as: *Capsicum annuum*, *C. chinense*, *C. frutescens*, *Physalis peruviana*, *Solanum aethiopicum*, *S. lycopersicum*, *S. melongena*, *S. torvum* - *Cucumis sativus*, *C. melo*, *Cucurbita maxima*, *Citrullus lanatus*, *Lagenaria siceraria*, *Momordica charantia*. A recent review has also identified more than 50 plant species (in 14 plant families) on which field infestations by *B. latifrons* have been recorded (e.g. *Citrus aurantifolia* (Rutaceae), *Dimocarpus longan* (Sapindaceae), *Passiflora foetida* (Passifloraceae), *Psidium guajava* (Myrtaceae), *Punica granatum* (Lytraceae)).

Damage: similar to other tephritid fruit flies, damage is caused by larvae feeding inside the fruits. Attacked fruits usually fall prematurely and rot. Eggs are laid under the fruit skin and hatch within a few days (2-3 days) and the larvae feed during approximately a week. Pupation takes place in soil (approximately 10 days). Adults occur throughout the year, females begin oviposition after 6-17 days, and continue laying eggs for 6-117 days.

Dissemination: adult flight is the main means of natural spread. No data is specifically given for flying distances of *B. latifrons*, but several *Bactrocera* spp. have been reported to fly 50-100 km. Over long distances, movement and trade of fruit and vegetables can transport the pest. In the EPPO region, *B. latifrons* has been intercepted several times in imported fruits and vegetables from Asia, thus showing that the pest has pathways to enter the region.

Pathway: fruits and vegetables of host plants, soil, from countries where *B. latifrons* occurs.

Possible risks: some of the major host plants of *B. latifrons*, such as tomato, aubergine, sweet pepper, cucumber, melons and other cucurbits are widely grown in the EPPO region,

in both field and protected conditions. Economic damage has been reported from countries where *B. latifrons* occurs. According to the EPPO study on pest risks associated with the import of tomato fruit, the climatic similarity between the area where *B. latifrons* occurs and the EPPO region is medium. Although more data would be needed, it seems that *B. latifrons* has the potential to establish, at least in some parts of the EPPO region which remain to be better defined. As experience has shown that control and eradication of fruit flies is complex and costly, the introduction of *B. latifrons* in the EPPO region should be avoided.

Sources

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