

Mini data sheet on *Ceratothripoides brunneus*

Ceratothripoides brunneus 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 2016 - deleted in 2017).

Ceratothripoides brunneus (Thysanoptera: Thripidae)

Why: *Ceratothripoides brunneus* (Thysanoptera: Thripidae - tomato thrips) 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 thrips species was later selected as a priority for PRA by the EPPO Panel on Phytosanitary Measures. An EPPO Expert Working Group met in December 2015 to conduct PRAs on several tomato pests, including *C. brunneus*. The conclusions of this PRA will then be reviewed by different EPPO bodies before being published.

Where: *C. brunneus* is considered to be of African origin but it has spread to Asia and the Caribbean. *C. revelatus* was previously considered as a synonym of *C. brunneus* but is now thought to be a distinct species. These recent taxonomic changes have brought some uncertainties about the geographical distribution of the pest.

EPPO region: absent.

Africa: Angola, Burundi, Cameroon, Congo, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Sierra Leone, South Africa, Tanzania, Togo, Uganda, Zimbabwe.

Asia: Indonesia (Java, Sumatra), Malaysia (peninsular).

Central America and the Caribbean: Cuba, Guadeloupe, Puerto Rico.

On which plants: *C. brunneus* is mostly a pest of Solanaceae but it has been found on 23 species in 15 families. Solanaceous hosts include aubergines (*S. melongena*, *S. aethiopicum*), *Capsicum* spp., tomato (*Solanum lycopersicum*), and potato (*S. tuberosum*). Various crops such as cucurbits (*Citrullus lanatus*, *Cucumis melo*, *Cucurbita maxima*, *Momordica charantia*), basil (*Ocimum basilicum*), beans (*Phaseolus vulgaris*), carrot (*Daucus carota*), cowpea (*Vigna unguiculata*), cocoa (*Theobroma cacao*), coffee (*Coffea arabica*), tea (*Camellia sinensis*), and weeds (e.g. *Ageratum conyzoides*, *Bidens pilosa*, *Datura stramonium*, *Galinsoga parviflora*, *Solanum incanum*, *Solanum villosum*, *Sonchus oleracea*, *Tithonia diversifolia*) are reported to host *C. brunneus*.

Damage: larvae and adults feed on leaves, as well as on fruits, buds, and flowers. Pupae develop in the soil. Larvae and adults can cause direct damage, primarily on leaves and fruit, and to a lesser extent on stems by feeding. Damage on flowers and buds is rare. In a study on thrips species conducted in four major tomato production areas in Kenya, *C. brunneus* was found to be the predominant thrips species in all areas. In the literature, it is also noted that damage in Kenya and Uganda on tomato, due to thrips (with *C. brunneus* as the dominant species) could be 'as high as 30%. No data could be found to indicate that *C. brunneus* might be a virus vector.

Dissemination: adult thrips can fly and ensure natural spread within crops. *C. brunneus* can be transported over long distance by the horticultural trade. EPPO member countries have occasionally intercepted *C. brunneus* on consignments of vegetables (e.g. on *S. melongena*, *Momordica charantia*) imported from African countries.

Pathway: fruits and vegetables, cut flowers?, plants for planting of host plants, soil, from countries where *C. brunneus* occurs.

Possible risks: several host plants of *C. brunneus* (e.g. aubergine, capsicum, carrot, cucurbits, tomato and potato) are major crops in the EPPO region. *C. brunneus* has been regularly intercepted on traded commodities, thus demonstrating that pathways for entry do exist. According to the EPPO Study, the climatic similarity between the area where it occurs and the EPPO region is medium and more studies are needed to better determine areas at risk within the EPPO region. However, it seems probable that indoor and protected conditions would allow the pest development in many parts of the EPPO region.

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