

Mini data sheet on *Oligonychus perseae*

Added in 2003 - Deleted in 2008

Reasons for deletion:

Oligonychus perseae has been included in EPPO Alert List for more than 3 years and during this period no particular international action was requested by the EPPO member countries. In 2008, it was therefore considered that sufficient alert has been given and the pest was deleted from the Alert List.

Oligonychus perseae (Acari: Tetranychidae - Persea mite)

Why	<i>Oligonychus perseae</i> came to our attention because it was recently found on avocado in Israel (see EPPO RS 2003/044), together with another pest <i>Tetrалеurodes perseae</i> . <i>O. perseae</i> has also been introduced in 1990 in California, most probably from Latin America. In both cases, it is suspected that the pest was brought on illegally introduced avocado planting material (budwood). As <i>O. perseae</i> is a new pest to the EPPO region which can be transported with avocado material, the EPPO Secretariat decided to add it to the EPPO Alert List.
Where	<i>O. perseae</i> was first described in 1975 on intercepted avocado foliage from Mexico at a quarantine facility in Texas (US). <i>O. perseae</i> originates from Mexico where it damages avocado in arid regions. It was first found in Californian orchards in 1990, in San Diego county (it was then misidentified as <i>O. peruvianus</i>). It is now widespread in California. This species has been detected in Israel in 2001 and is now subject to official control. EPPO region: Israel (under official control), Spain (Andalucía in 2004). North America: Mexico, USA (California, Florida). Central America: Costa Rica.
On which plants	<i>Persea americana</i> (avocado). <i>O. perseae</i> can also feed on a wide range of fruit species (e.g. <i>Ceratonia siliqua</i> (carob), <i>Diospyros virginiana</i> (persimmon), <i>Prunus</i> , and <i>Vitis</i>), ornamentals (e.g. <i>Acacia</i> , <i>Bambusa</i> , <i>Bixa orellana</i> (annatto), <i>Rhus</i> , <i>Rosa</i> , <i>Salix</i>) and weeds (e.g. <i>Asclepias fascicularis</i> , <i>Chenopodium album</i> , <i>Sonchus</i>).
Damage	The mites feed beneath protective web nests along midribs and veins on the undersides of leaves. Feeding damage produces characteristic circular necrotic spots (of about 1-5 mm ²). High populations (>500 mites per leaf) can cause partial or total tree defoliation, and as a consequence increase the risk of sunburn to young fruit and exposed tree trunks. Premature fruit drop may occur. In California, <i>O. perseae</i> is considered as a serious pest of economic importance. More data is needed on the biology of the pest.
Dissemination	The mites can move over short distances. Over long distances, movements of infested avocado plants, and other hosts can ensure dissemination. The risk associated with movements of fruits appears very low.
Pathway	Plants for planting of <i>P. americana</i> and other hosts, fruits (?).
Possible risks	Avocado is not widely grown in the EPPO region but is of economic importance at least in Israel and Spain. Control measures (removal of weeds and of fallen leaves, use of predators (<i>Neoseiulus californicus</i> , <i>Galendromus annectens</i> , <i>G. helveolus</i>), applications of acaricides) are available but may not be very easy to apply in practice. In Israel, official control measures are being implemented to prevent any further spread of <i>O. perseae</i> . Trade essentially concern avocado fruits which are not a risky pathway, but more attention should perhaps be paid to the movements of planting material to avoid any further introduction.
Source(s)	Anonymous (2004) Incidencia de plagas y enfermedades en las Comunidades Autónomas en 2004. Phytoma-España no. 168, 17-58. Halbert SE (2007) Entomology section. <i>Tri-ology</i> 46(4), 6-10. http://www.doacs.state.fl.us/pi/enpp/pdf/triology/4604.pdf Tanako-Lee, M.; Hoddle, M.S. (2002) <i>Oligonychus perseae</i> (Acari: Tetranychidae) population responses to cultural control attempts in an avocado orchard. Florida Entomologist, 85(1), 216-226.

Swirski E, Wysoki M & Izhar Y, 2002. Subtropical Fruits Pests in Israel, Fruit Board of Israel, 284 pp. NPPO of Israel, 2003-03.

INTERNET

Protecnet - Diagnostico Fitosanitario. Listado de plagas (insectos y acaros) en cultivos de importancia economica en Costa Rica.
<http://www.protecnet.go.cr/diagnosticofitosanitario/plagcul/cultivoa.htm>

Santa Barbara County Agricultural Commissioner's Office. Pest Notes. Persea mite.
<http://www.countyofsb.org/agcomm/perseamt.htm>

University of California, Riverside (US). The biology and management of Persea mite, *Oligonychus perseae* Tuttle, Baker & Abbatiello (Acari: Tetranychidae) by M.S. Hoddle.
<http://www.biocontrol.ucr.edu/mite1.html>

EPPO RS 2003/044, 2003/168, 2005/050, 2008/062

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