

# New Record of *Tuta absoluta* (Meyrick) (Lepidoptera: Gelechiidae) on Greenhouse-Grown Tomato in Southwestern Turkey (Antalya)<sup>1</sup>

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Infestations of the tomato moth, *Tuta absoluta* (Meyrick) (Lepidoptera: Gelechiidae), were detected in the Antalya-Kumluca district of Turkey on 24 January 2010 in a 2400-m<sup>2</sup> commercial tomato greenhouse (36°20'39"N, 30°17'30"E) containing 2 varieties of tomato ('Victori' and 'Orient') and on 27 January 2010 in a second greenhouse (~3000 m<sup>2</sup>; 36°53'16"N, 30°44'54"E) with the tomato variety Orient. The Antalya-Kumluca district is located in southwestern Turkey and borders the Mediterranean Sea to the south. We detected the infestations with pheromone traps (Qlure-TUA, Russell IPM Ltd., Deeside, Flintshire, UK) and visual inspections of tomato plants. Specimens were initially identified using related keys accompanied by figures, and the identification was verified by coauthor Thierry Pradier (France). This appears to be the first record of occurrence of *T. absoluta* in Turkey. Verbal reports rumored its occurrence in Izmir province (in western Turkey) in the summer of 2009; yet, there is no scientific record to document this occurrence.

This exotic pest is native to South America (García and Espul 1982, Rev. Invest. Agro. 17: 135 - 146) where it has been a serious agronomic pest since the 1980s (Salas 2004, Rev. Colomb. Entomol. 20: 75 - 78). In addition to tomato, it reportedly attacks potato, aubergine, common beans, and tobacco (Mallea et al. 1972, Rev. Fac. Cienc. Agrar. Univ. Nac. Cuyo 18: 13 - 15; Galarza 1984, IDIA Nos. 421/424, 30 - 32; Notz 1992, Rev. Fac. Agron. [Maracay] 18: 425 - 432; CIP 1996, third edn. Cent. Inter. Papa, Lima [PE]).

It was first detected in Europe (Spain) in 2006 and has subsequently spread rapidly across southern Europe and northern Africa to affect all Mediterranean countries (<http://www.fera.defra.gov.uk/>, accessed 28 January 2010). It is currently reported

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from Italy, France, Malta, United Kingdom, Greece, Switzerland, Portugal, Morocco, Algeria, Tunisia, Libya and Albania (<http://www.tutaabsoluta.com/>, accessed on 28 January 2010). It damages the apical buds, leaves, stems, flowers and fruits on tomato, and larval presence is often detected by the presence of black frass on the infested plants (<http://www.tutaabsoluta.com/>, accessed on 29 January 2009). Larvae mine the leaves producing large galleries and burrow into the tomato fruits, causing a substantial loss of tomato production in protected and open-fields, which makes it an important economic pest for tomatoes. Yield and quality can be significantly reduced by direct feeding and occurrence of secondary pathogens that may enter through the feeding wounds ([http://www.eppo.org/QUARANTINE/insects/Tuta\\_absoluta/](http://www.eppo.org/QUARANTINE/insects/Tuta_absoluta/), accessed 29 January 2010).

The immediate response by Turkish tomato producers will likely be use of chemical insecticides to control infestations, but the efficacy of currently approved products is doubtful, and we lack experience with chemical or integrated approaches in managing this pest. Thus, we might expect heavy use of chemical insecticides in tomato greenhouses to manage this pest. Consequently, we hope that early detection of this exotic pest may encourage the Turkish government to take measures to control this pest.

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