First record of South American tomato moth, *Tuta absoluta* (Meyrick) (Lepidoptera: Gelechiidae) in Tamil Nadu, India

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**ABSTRACT:** The South American tomato moth (SATM), *Tuta absoluta* is a quarantine pest, native to South America which was detected first time in Maharastra, India in late 2014 and then in Karnataka. The border district of Tamil Nadu was under vigil to monitor the activity through regular surveillance from March 2015 to know the presence of SATM in Dharmapuri district and the occurrence of *T. absoluta* was first noticed in Karimangalam block in the tomato hybrid Sivam. The widely cultivated tomato hybrids Sivam and Sagar were equally susceptible to the SATM with 20-32 per cent leaf damage and 28 - 53 per cent fruit damage. The sex pheromone traps attracted more number of adults per day. The damage was mostly found in the middle and lower leaves and half ripened and ripened fruits. In a single fruit 8-12 holes were noticed during the survey. This is the first report of this pest in Tamil Nadu. Main characteristics of the species are briefly reviewed, with notes on biology, distribution and damage. © 2016 Association for Advancement of Entomology

**KEY WORDS:** *Tuta absoluta*; Tomato; Quarantine pest; Tamil Nadu

Non-native invasive insect species are a significant threat to biodiversity and their ecological impacts are difficult to reverse. They also affect economic interests particularly within agriculture, horticulture and forestry (Mace and Kunin, 1994). The South American tomato moth (*Tuta absoluta* (Meyrick)) (Lepidoptera: Gelechiidae) is one such pest, originating from South America, that devastates tomato and closely related solanaceous crops in the world since, 1960’s (EPPO, 2005). In 2004, *T. Absoluta* was added by the European and Mediterranean Plant Protection Organization (EPPO) to the A1 List of pests recommended for regulation (pests absent from the EPPO region), and in 2009 was transferred to the A2 list (pests locally present in the EPPO region), 3 years after its arrival in Spain (Urbancaja *et al.*, 2007). During 2006–2012, the pest spread rapidly throughout the Mediterranean basin. *Tuta absoluta* is considered a typical invasive species, due to its capacity to develop very quickly in suitable agro- ecological conditions, spreading rapidly in new areas and causing economical damage (Desneux *et al.*, 2010).

In India, it was first reported from Pune, Maharashtra during October 2014 (ICAR, 2014) and has rapidly moved across the states and later detected in Karnataka during the *rabi* (November) season of 2014, where, it has become a serious threat to tomato production in both greenhouse and outdoor crops (Sridhar *et al.*, 2014). Since then alert notice was issued by the Indian Council of Agricultural Research to keep vigil on the incidence of *T. absoluta* in different states. As a district

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