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D. suzukii (Diptera Drosophilidae family, sub-genus *Sophophora*); is a vinegar fly, known as Spotted Wing Drosophila (SWD) in USA. This insect gained an increasing attention for its heavy infestations on strawberry, blueberry and raspberry in the U.S.A, occurred in 2008 and 2009. *D. suzukii* has been reported also in Europe, (Spain October 2008), and later on in Italy and France. The first captures occurred in Italy, in Trento province, in 2009. By 2010-2012, other captures were done in Italy, involving other regions, such as: Piemonte, Val d'Aosta, Lombardia, Liguria, Marche Campania and Sicilia. *D. suzukii* has been indicated by EPPO, as a possible threat for Mediterranean fruit production.

An advanced study was carried out in order to find out the potential phytosanitary risk for Mediterranean grapes producing areas, considering that there are only few reports for damages on this crop. By the way Italy is at the third place in the world for grapes production (2011) and at the first place for grapes economical value (2011).

The first identification of *D. suzukii* in Apulia was made in October 2012 and reported to the regional plant protection service in January 2013 by the Mediterranean Agronomic Institute of Bari (IAMB) and by Bari University (UNIBA).

The aim of this study is to estimate the susceptibility of different grapes varieties to such a pest. Ten varieties of table grapes from nine different localities of Bari and Taranto province were used in this study. We tested 23 samples cultivated with organic agriculture method and 16 samples cultivated by conventional agriculture. Thirty berries were collected from each sample and put in contact with adults of *D. suzukii* (5 males and 5 females) for 24 hours. Infestation percentages were expressed by numbers of eggs and infected berries per sample. As a preliminary results, we found a relevant infestation on the varieties "Italia" (75%) and "Scarlotta" (60%); coming from organic agriculture fields. The number of eggs collected from each berry ranged from 1 to 5. Twelve samples on a total of 19 came from conventional agriculture, five samples on a total of 23 came from organic agriculture, were found without damages. "Victoria" variety, came from an organic field located at IAMB was seen more resistant to *D. suzukii* than the varieties "Italia" and "Scarlotta".

As a conclusion, there is the evidence that *D. suzukii* can become a big problem for grape cultivation in Puglia region, jeopardizing a very economically important sector of the regional agriculture. Therefore, it is necessary a further investigation to understand the population dynamic and behaviour of this species as well as the possible control strategies for a control in organic agriculture.

Key words: *Drosophila suzukii*, *Vitis vinifera*, Puglia, infestation, damages, organic agriculture, conventional agriculture