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HOW RESEARCH CAN SUPPORT SOLUTIONS

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DRAFT

BOOK OF ABSTRACTS



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dorsalis, *Erythrogonia phoenicia*, *M. cavifrons*, *S. paula* and *Oncometopia facialis*. *X. fastidiosa* was detected in samples of *Clasoptera* sp.1 (53%), *M. cavifrons* (20%), *P. luteomaculata* (50%), *S. paula* (20%) and *S. bimaculata* (33%) collected in São Bento do Sapucaí, but in none of the four predominant species collected in Maria da Fé. Combined results of predominance and natural infectivity show that the spittlebug *Clasoptera* sp.1 and the sharpshooters *M. cavifrons*, *P. luteomaculata*, *S. paula* and *S. bimaculata* may be epidemiologically relevant for disease spread in the MMR region, if confirmed as vectors of *X. fastidiosa* in olives.

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Abundance of spittlebug nymphs (Hemiptera: Aphrophoridae) in Trás-os-Montes region, Portugal

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The present work was presented in the framework of the Joint Annual Meeting of the EU Horizon 2020 Projects POnte 'Pest Organisms Threatening Europe' (GA 635646) and XF-ACTORS 'Xylella fastidiosa Active Containment Through a multidisciplinary-Oriented Research Strategy' (GA 727987).

Abstract: Spittlebugs (Hemiptera: Aphrophoridae) are considered the main European vector of *Xylella fastidiosa*, a gram-negative bacterium responsible for serious diseases in important agronomic crops. Nymphs of spittlebugs develop in vegetation cover where they produce a spittle mass that provides protection from natural enemies and solar radiation. This spittle mass is visible to the unaided eye which facilitates its monitoring, the understanding of nymph's dynamics and the implementation of control strategies against *X. fastidiosa*. In this context, the goals of this work were monitoring the abundance of spittlebug nymphs and identifying the host plants in the natural ground cover in the Trás-os-Montes region, Portugal. For that, the presence, number of spittles per plant, number of nymphs per spittle, and spittle position low, medium or high were recorded over a sample unit of 100 × 25 cm in one olive grove (spring 2017 and 2018), in one almond orchard and one vine (spring 2018) from Trás-os-Montes. Thirty sample units randomly distributed over a transect covering 1 ha were selected per sampling date and sampling site. The peak of spittlebug nymphs occurred in the middle of April and first weeks of May in 2017 and 2018, respectively, in all sampling sites. Nine spittle masses and a mean of 1.93 ± 0.35 plants with spittle per m² were recorded respectively in 2017 and 2018. In 2017, *Crepis vesicaria* L. and *Bromus diandrus* Roth were the most attacked species. In 2018, the presence of nymphs of the genus *Neophilaenus* was more abundant in the vine, presenting a mean of 0.60 ± 0.19 nymphs per m², while *Philaenus* nymphs showed a higher abundance in the olive grove, presenting a mean of 0.17 ± 0.08 nymphs per m². Nymphs of the genus *Neophilaenus* were identified with high frequency in the species *Avena barbata* subsp. *lusitanica* (Tab. Morais) Romero Zarco and *Cynodon dactylon* (L.) Pers and the *Philaenus* nymphs were identified more frequently in the species *Erodium cicutarium* (L.) L'Her. and in the genus *Trifolium* spp. It was verified that the number of nymphs registered in the Trás-os-Montes region was much lower than the numbers reported in other European regions, being necessary more years of study to understand the dynamics of spittlebug nymphs.

Mobility of sharpshooter vectors of *Xylella fastidiosa* in areas adjacent to citrus groves in São Paulo State, Brazil

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Abstract: Mobility is an important attribute of a vector, allowing faster and farther spread of plant pathogens. *Xylella fastidiosa* is transmitted by a wide range of sharpshooters and