

5.15 Seasonal distribution of *Philaenus spumarius* and *Neophilaenus campestris* in Apulian olives groves.

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Abstract: A two years investigation was performed in Apulia region to study the population in olive groves of *Philaenus spumarius* and *Neophilaenus campestris*, the vector and the putative vector of *Xylella fastidiosa*, respectively. Adults of these two species were monthly collected from ground vegetation and olive canopy in four severely infected olive groves. This study showed that adults of both species were present from May to December. During this period abundance of *P. spumarius* was constantly increasing to reach its peak in September with no significant difference between ground and canopy levels. Conversely, the pick of population of *N. campestris* was noticed in May-June with a significant decrease until December due to the absence of grassland. However, the latter was greatly preferred by *N. campestris* with respect to the olive canopy. Our findings confirm that weed control in olive groves during Spring could reduce the population of both species. Interestingly, this study shows that treatments against adults of *P. spumarius* should be applied at canopy level during Summer months.

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5.16 Effect of different plant species and temperatures on the survival of *Philaenus spumarius*

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Abstract: The spittlebug *Philaenus spumarius* (L.) has been identified as vector for the damaging bacterium *X. fastidiosa* in Europe. The knowledge about this insect biology and survival developing on native plants from Europe is crucial to establish ground cover management strategies in olive orchards to control the *X. fastidiosa* spread. In this study we aimed to evaluate the survival of adults developing on two native and common plants in Europe as well as the effect of different temperatures on the *P. spumarius* survival. The species selected for the survival analysis were *Medicago arabica* (L.) Huds. and *Sanguisorbaverrucosa* (Link exG.Don) Ces. These plants are distributed all across Europe and presented foams near the campus, where they were collected. New born adults (<24h) were used for survival analysis. Six treatments (*M. sativa* 21°C, *M. sativa* 25°C, *S. verrucosa* 21°C, water 21°C, water 25°C and water 4°C) with 21 to 30 replicates were accomplished. Results indicated that survival of *P. spumarius* could improve when developing on different plants species. Variation in temperatures also affected the *P. spumarius* survival, being particularly remarkable the improvement of survival under 4°C when compared with the other water treatments.

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