



## First assays on the response of adults of *Philaenus spumarius* (Hemiptera: Aphrophoridae) to different host plants

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Spittlebugs are responsible for the spread of *Xylella fastidiosa* in several European countries. This bacterium (*X. fastidiosa* subspecies *multiplex*) was found attacking almond trees in the Valencian Community (Eastern Spain) in 2017, producing the “Almond Leaf Scorch Disease”. Since then, *Philaenus spumarius* has been identified as the main insect species involved in transmission between plants. One key factor in understanding the epidemiology of the bacterium is to determine the host plant feeding preference of its insect vectors. One way to establish this preference is studying the attraction of the vectors to the different plants, depending on the emitted volatile compounds. In this work, we are analyzing the attraction of *P. spumarius* to several host plants by using a Y-tube olfactometer. Individuals of *P. spumarius* came from a greenhouse, where we reared the insects in semi-field conditions, or directly from the field. Common sowthistle (*Sonchus oleraceus* L.) has been used as a preferred host plant of the insect. Therefore bermuda grass (*Cynodon dactylon* (L.) Pers.), olive (*Olea europea* L., var Arbequina) and citrus (*Citrus sinensis* (L.) Osbeck, var Pineapple) have been compared against it. Besides activated common sowthistle (a plant previously attacked by insects) has been tested. The results have shown that: i) common sowthistle was preferred over no plant, ii) an activated common sowthistle was preferred over a not-activated plant, iii) common sowthistle was preferred over bermuda grass, iv) common sowthistle was preferred over citrus, and v) common sowthistle was similarly preferred to olive. In some cases, it seems that responses to plants depends on insect sex.

The study is ongoing and more tests with *P. spumarius*, as well as the analysis of *Neophilaenus campestris*, are being carried out.