

Remote surveillance of invasive and geographically expanding fruit flies with electronic traps

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Most National Plant Protection Organization (NPPO) around the world keep surveillance systems in sensitive locations to promptly detect exotic, or geographically expanding, pestiferous fruit flies that may threaten their fruit production. These surveillance systems allow the NPPO's, or grower's organizations, to react in case that an exotic fruit fly is detected, reducing the probability of establishment and economic damage. In general, in the best of the cases surveillance systems are serviced on a frequency of once a week by scouts, while most surveillance systems have longer delays in their frequency of service. Most of these surveillance systems are highly demanding in investment of large amount of resources and efforts. In addition, current surveillance systems of exotic fruit flies have an intrinsic "delay" in the detection and reporting of invasive fruit fly species, affecting NPPO's response to the threat. During the last years we have been developing an electronic trap that remotely transmit images of captured fruit flies through cellular communication. The current e-trap prototype is being tested within the framework of the *FF-IPM* Horizon 2020 project, and is expected to be implemented in future pilot tests in several regions. This talk will present the concept of the e-trap as an «Early-Warning Tool», and current advances in the direction of its future implementation in novel surveillance strategies being designed by the *FF-IPM* project to increase the efficacy of current surveillance systems.

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