

senseApest CONSORTIUM

Coordinator:



airmotec



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senseApest

senseApest will use volatile organic compounds (VOCs) signatures released by pests or attacked plants to quickly and non-invasively identify the presence of pests. To this end, a portable detection unit (PDU) will be developed and ultimately used at EU borders during plant import controls.



CONTACT US



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www.senseapest.unistra.fr

1 - source: <https://www.zahrada.sk/>



senseApest



Nezara viridula



Japanese beetle¹



Eggs of Nezara

Development of a portable air analysis device for on-site pest detection during plants import controls.



The project has various objectives and is organised into different Workpackages.

WP2

Determine **VOC profiles** emitted by imported host plants attacked by different pest groups.

Provide datasets for algorithm trainings.

WP3

Develop **calibration tools** for all analytical means used in the project.

Produce gas-generation devices capable of delivering VOC mixtures (1-100 ppb).

Characterise permeation tubes to enable prediction of emission rates.

WP4

Develop **sensors** (fluorophores, quenched fluorescence, D-PID) for the senseApest platform.

Adapt components and sensors from collaborating projects.

ABOUT THE PROJECT

SenseApest is a EU project aiming at developing innovative **pest-specific VOC sensor** devices that are fully integrated into a **portable detection unit (PDU)**, to enhance early detection and plant-health surveillance systems in Europe.

WP5

Develop a **functional, portable, and connected PDU** & design miniaturised electronics compatible with all components.

WP6

Test and validate the two versions of prototypes of the PDU

WP7

Conduct **field measurements** with the 1st and 2nd PDU prototypes.

Organise training and demonstration activities for stakeholders

WP8

Develop fast and robust algorithms to analyse sensor data & an **AI-based algorithm** for automatic detection of pest infestation from VOCs measured by the PDU.

WP9

Develop and implement the Dissemination, Exploitation and Communication Plan (PDEC), during & after the project in a **multi-actor approach** with stakeholders.

WORKPACKAGES

WP1

Coordination and Management

WP2

Specification of VOC profiles

WP3

Industrial and laboratory calibration methods

WP4

Sensor development for specific pests

WP5

Integration of sensors and components into portable detection unit (PDU)

WP6

Laboratory studies and validation of analytical tools

WP7

Field studies and validation of analytical tools

WP8

Enhanced automatic data treatment

WP9

Dissemination, exploitation and impact

