

Services to companies: Laboratory trials – insects & mites

## Asiatic Fruit Fly (*Drosophila suzukii*) olfactometer trial

### Technical question? Aims of the trial

Determination of the odor preferences of *Drosophila suzukii*:

- Screening for lures or repellents of *D. suzukii*
- Evaluation and improvement of attractive blends
- Dose-response curve for different concentrations of volatile compounds (identification of repellency in higher concentration)
- Optional: field or semi-field trials to determine the concentration and effect in practice

### Trial summary

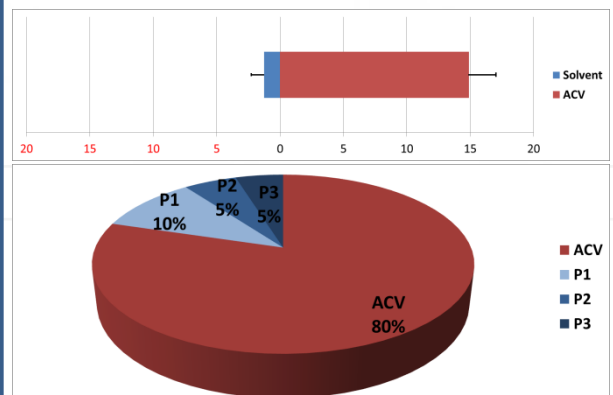
Trial in a two or four way olfactometers in plant growth chambers under controlled conditions:

- Rearing of selected *Drosophila suzukii* populations for the trial with age synchronization
- Preparation of the choices: pipetting a standard amount of a suitable neutral solvent with or without the volatile compound
- Choices with or without trapping mechanism to determine primary choice or final choice after a given number of hours
- Isolation of 20 *D. suzukii* and starvation period
- Anesthesia of the 20 *D. suzukii*
- Start of the trial: transfer to the olfactometer
  - 10 replicates per compound and concentration
  - Different test products at different concentrations
  - Positive reference: apple cider vinegar
  - Negative reference (check): suitable neutral solvent
- Assessments (0-24 h after start of the trial)
  - Number of *D. suzukii* per choice and undecided individuals
- Statistical analysis of outcomes

### Trial output

- Data in xls/ARM + Report (M&M, graphs, summary, conclusions)
- Attraction rates of volatiles compounds or blends
- Dose-response curves of olfactory attraction
- Attraction rates for males versus females

Example of results obtained for apple cider vinegar (ACV)



- Certified and (inter)nationally recognized centre of excellence in fruit research
- 75 years of experience and expertise
- GEP accredited
- Highly valued contractor for numerous product developments the past 75 years

**Interested?** Please do not hesitate to contact us:

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