

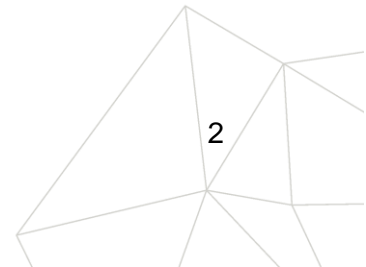
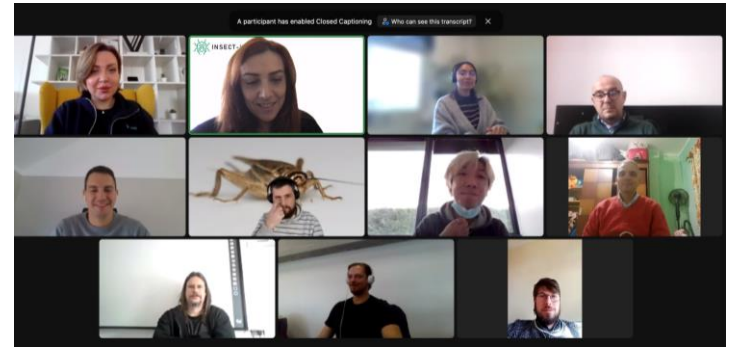


WG-2 Mating control

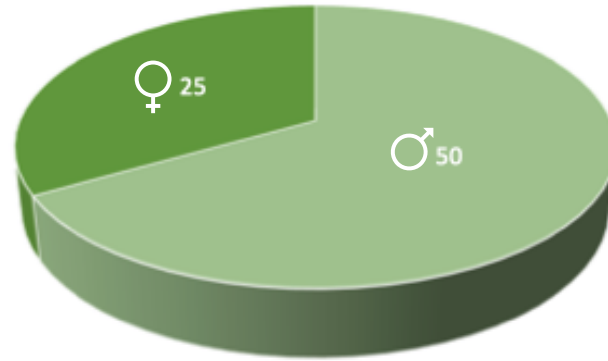
Olga Ameixa

olga.ameixa@ua.pt

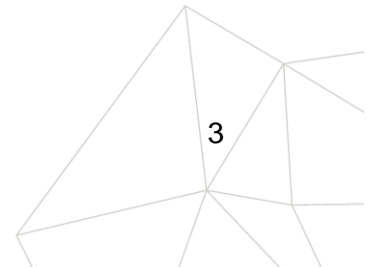
- A total of 3 meetings were organized (the fourth is schedule for September) since the beginning of the action.



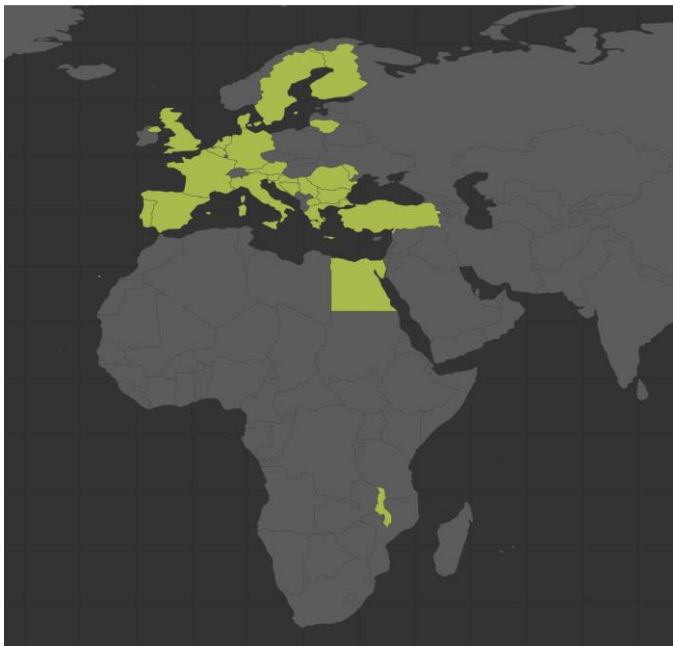
Participants:



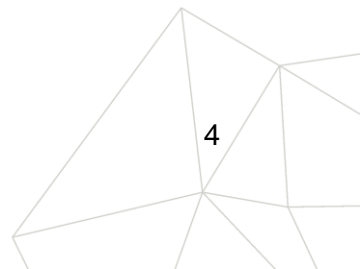
33 young researchers



Countries:

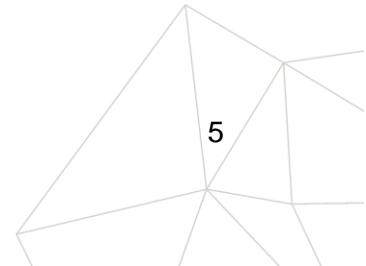


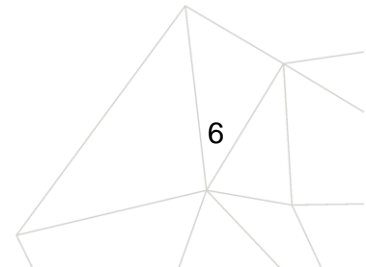
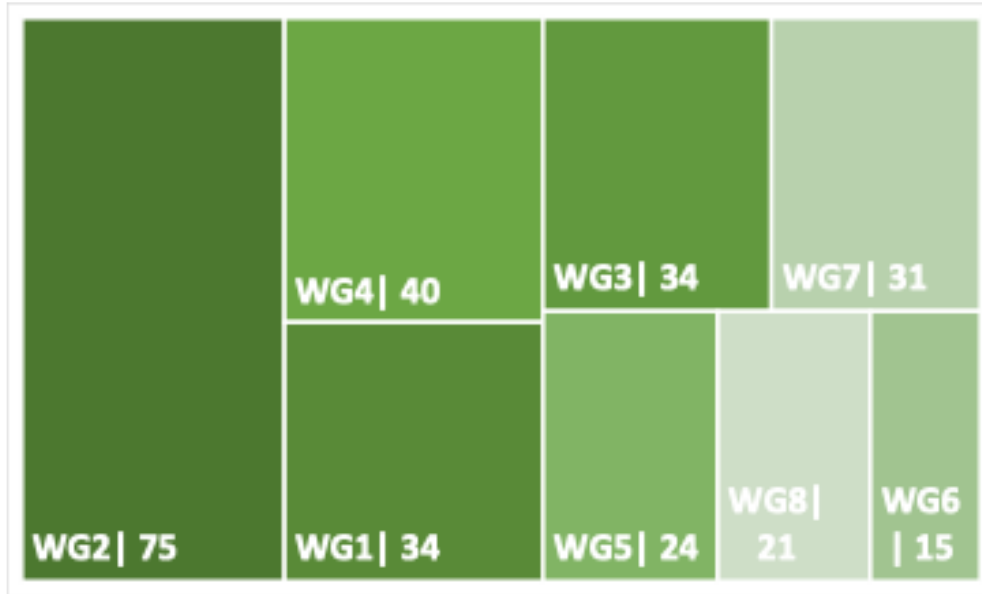
spain
bulgaria macedonia slovenia
netherlands italy romania croatia
germany finland denmark sweden
portugal bosnia austria malawi united
egypt lithuania belgium
north greece france kingdom
serbia turkiye



Industry:

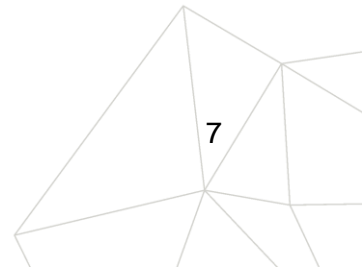
nasekomo protix
biossistems
ynsect





Agenda:

- **Welcome and presentation of participants** The meeting began with the presentation of the participants and the meeting agenda.
- **General introduction to CA 22140: Insect-IMP** A small presentation regarding Insect-IMP COST Action was done to present the main objectives of the action.
- **Working Group 2 Main challenges, main objectives and Expected deliverables:** A small presentation regarding WG2 was done to present the main objectives and challenges of the action and discuss the expected deliverables.
- **Discussion starters**
- **Brainstorm break-out room session (15 minutes)**
- **Wrap-up and Closing Remarks**
- **Action Planning and Next Steps**



Main conclusions:

- Separate different farmed species and review what has been done so far on mating behaviours
- Separate:
 - Pre-mating behaviours
 - In mating behaviours
 - Post mating behaviours
- For industry: It is important to do basic research which they are not able to perform.
- It is easier to get information on mating behaviour from fruit flies and mosquitoes than from biological control companies.
- There was a general feeling that there was a need to have more participants working on Orthoptera.
- Attention should be paid to pheromones and other semiochemicals in mating behaviours and how important they are in mass-rearing
- There is a need to standardise the conditions and data collection.
- Nasekomo and Protix are ready to perform a large-scale trial.



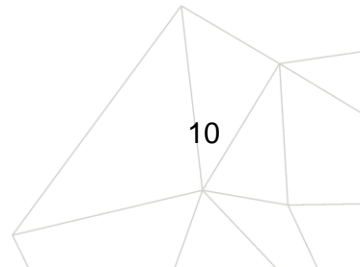
Agenda:

- Presentation entitled “Research and Findings on the Mating Behaviour of the Black Soldier Fly” made by one of the working group members, Dr Marco Meneguz, researcher at BEF Biosystems, Italy.
- In the second half of the meeting the group discussed various topics, including:
 - The frequency and duration of meetings.
 - The need for expertise in pheromone signalling and engage research groups in this area.
 - The importance of sperm analysis and sperm quality control in different production systems.
 - The potential for a review paper analysing the problems with mating behaviour in production systems for different species.
 - The need for standardization of conditions and data collection on mating behaviours.
 - Agreed on creating a shared document to draft a protocol for standardizing conditions and data collection on mating behaviours.
 - Discussed the possibility of organizing a workshop to discuss the mating biology of different species.



Agenda:

- Guidelines for a shared publication on mating behaviour and compiling related information for industry transfer.
- A shared folder for data collection was created. The group discussed the fields to include in this database.
- Discussion on the type of publication to produce, considering options like a literature review, meta-analysis, or critical review.
- The WG2 Leader created the first draft of this publication



- ✓ **Revise, collate, and distil all available knowledge on mating behaviour in farmed insect species and identify common features;**
- Where applicable, coordinate with WG1 (Pop. structure & genetic diversity) to investigate genetic architecture of mating behaviours around e.g., inbreeding avoidance through kin recognition;
- Revise established methods in insect breeding programs and explore the transferability across insect species in Workshops and potential Training Schools to upskill Participants.

What needs to improve - the attractiveness of the group activities

