European Wireworm Research Network

2nd European Wireworm Workshop
9th October 2025

The Organising Committee:

Annette Folkedal Schjøll (NIBIO-Norway), Martyn Cox (Blackthorn Arable - UK), Vitore Shala-Mayrhofer (LKO – Austria), Willem Desmedt (ILVO – Belgium), Larissa Collins (Fera Science – UK), Bruno Ngala (inov3PT – France)

Program

Time (CET)	Contents	Speakers
09h00	Connection of participants to the meeting room (Invitation sent to parties)	All
Morning sessions: Chairpersons – (Larissa Collins & Annette Folkedal Schjøll)		
09h10	Welcome message, appointment of chairpersons and introduction of the Keynotes	Organising Committee
09h30	Keynote 1: **IPM strategies against wireworms in Europe: What can be implemented immediately and knowledge gaps**	Lorenzo Furlan (Veneto Agricoltura, Italy)
10h15	Keynote 2: **Implementing IPM for wireworm management in potatoes, recent experience in the U.K.**	Martyn Cox (Blackthorn Arable - UK)
11h00	**Coffee break (20 minutes)**	
11h20	Session1: **A multidisciplinary collaborative industry project to improve wireworm IPM**	Larissa Collins, Fera Science Limited, UK
11h40	Session 1: **Epi- and endosymbionts in different Agriotes species and biocontrol implications**	Adrian Wolfgang, Graz University of Technology, Austria
12h10	Session 3: **TaupiFAST2 project – A French national action plan to combat wireworms in crop production**	Bruno Ngala, Inov3PT, France
12h30	Session 4: **Potato varietal resistance to wireworm: Behavioural and chemical insights for biocontrol**	Fanny Ruhland, University of Liège, Belgium
12h50	**Luch break (60 minutes)**	
Afternoon session: Chairpersons - (Martyn Cox & Willem Desmedt)		
13h50	Session 2: **RNA interference on wireworm species from Northern Italy**	Giovanni Bernacchia, University of Ferrara
14h10	Session 2: **Using bioproducts of entomopathogenic bacteria to control wireworms: ovicidal, larvicidal and behaviour effect.**	Andrea Chacon-Hurtado, University of Liège, Belgium
14h30	Session 2: **Biofumigation with sorghum and brown mustard against wireworm damage in potato. First results and perspectives from Switzerland.**	Geoffrey Darbon, Agroscope, Switzerland
14h50	Session 2: **Experiments to increase the efficacy of biological wireworm control**	Giselher Grabenweger, Agroscope, Switzerland
15h10	Session 2: **Evaluating the efficacy of bioinsecticides against wireworms in controlled conditions**	Lotte Caarl, WUR, The Netherlands
15h30	**Coffee break (20 minutes)**	
15h50	General Assembly Meeting (Agenda to be disclosed during the meeting): Chaired by the OC	All
18h00	Closing remarks and End of Workshop	

Abstracts

Time (CET)	Title / Abstracts	Authors / affiliations
Morning sessions: Chairpersons – (Larissa Collins & Annette Folkedal Schjøll)		
09h30	Keynote 1: **IPM strategies against wireworms in Europe: What can be implemented immediately and knowledge gaps** The principles of Integrated Pest Management (IPM) have been compulsory in Europe since 2014 after the introduction of regulation 2009/128/CE. In both Europe and beyond, however, the instinctive traditional method of pest-presence/insecticide-use and a prophylactic approach towards wireworm control still largely prevail. This is despite the main IPM knowledge and strategies for wireworms being made widely available in the past few decades. Current knowledge makes it possible to devise holistic IPM packages, with no or reduced application of synthetic chemical insecticides, that predict and manage wireworm damage risk to susceptible crops. As agricultural ecosystems are a combination of continuously interacting abiotic and biotic factors, IPM may be reliably implemented only by using a holistic approach that considers their complexity. A holistic approach comprises continuous low-cost monitoring of population levels with tried-and-tested traps and the implementation of the prevention principle to reduce wireworm populations with: 1) agronomic strategies, e.g. altering rotation, choosing tolerant varieties and seed/plant density, timing tillage and irrigation according to the life-cycle of genus *Agriotes*; and 2) increased soil biodiversity, including the addition of entomopathogens/antagonists and the planting of bioactive cover crops. This presentation therefore intends to demonstrate that: 1. After the ban on the main persistent, environmentally impactful insecticides for prophylactic purposes, the non-implementation of IPM principles in holistic packages along with absurd commercial quality standards for potatoes have led to wireworms becoming a major pest; 2. Implementation of IPM packages is feasible and part of a sustainable agronomic strategy; 3. Future research goals should be geared towards upscaling the methods that improve the effectiveness and efficiency of IPM strategies. **Keywords:** agricultural ecosystems, holistic packages, agronomic prevention, soil biodiversity, bioactive cover crops, monitoring, life-cycle, *Agriotes*	***Lorenzo Furlan***[1@] [1]Veneto Agricoltura, viale dell'Università 14, 35020/Legnaro, Italy [@]Correspondence of presenting author: lorenzo.furlan@venetoagricoltura.org

10h15

Keynote 2: **Implementing IPM for wireworm management in potatoes, recent experience in the U.K.**

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Wireworms, the larvae of click beetles (Coleoptera: Elateridae), are an increasing problem in UK arable crops, particularly potatoes, with cereals and vegetables also affected. The loss of key insecticides such as ethoprophos (Mocap) and limited availability of alternatives like lambda-cyhalothrin and tefluthrin has left early-harvested potato crops without effective chemical options. Our current emphasis is on IPM strategies including risk assessment, varietal susceptibility, and cultural controls, the combination of early harvest and variety choice has been shown to reduce damage levels by 75% compared with standards.

Recent work has shown significant variation in potato variety susceptibility, which is not linked to glycoalkaloids, reducing sugars, or TGA, though a weak negative correlation with sucrose was observed. Tuber population and size also influence susceptibility assessment, highlighting the need for improved damage measurement protocols.

UK wireworm species remain poorly documented since the last major survey (1939–42), though *Agriotes* spp., especially *A. obscurus*, *A. lineatus*, and *A. sputator*, remain dominant. Species such as *Adrastus pallens* are abundant but non-damaging, emphasizing the importance of species-level identification to prevent unnecessary treatments.

Ongoing trials by TPP and CUPGRA show no insecticide has yet achieved useful control. Companion cropping (mustard, buckwheat) and entomopathogenic fungi have been ineffective, but nematodes show promise and are being trialled this year. Autumn stubble management studies were limited by extreme weather but suggest better larval detection methods are needed. Flame weeding may have unexpectedly increased wireworm numbers in this trial on an organic site.

Risk assessment remains vital. Damage has occurred even in the absence of known risk factors, though cereal or short-term grass phases appear to influence population build-up. In several trials or crop observations, *Agriotes* species alone were responsible for crop damage despite mixed species in traps.

This research informs IPM strategies by refining variety screening, improving detection, and aligning control measures more closely with species-specific risks.

Keywords: Wireworms, *Agriotes spp*, Risk assessment, Bait trapping, IPM, Glycoalkaloids.

11h00	Coffee break (20 minutes)	
11h20	Session1: **A multidisciplinary collaborative industry project to improve wireworm IPM** **Objectives** This project had several objectives through which we aimed to fill gaps our knowledge, working closely with our industry partners to ensure that the outcomes were practically applicable. o Produce DNA barcodes for species identification. o DNA metabarcoding from soil samples for identification of multiple species. o DNA metabarcoding of wireworm gut contents. o Survey wireworm species in agriculture and collect field metadata to improve risk assessments. o Assess cover crops with *Agriotes* species under controlled conditions. o Assess responses of different species to different temperatures. o Climate modelling distribution of species now and at predicted 2040's temperatures. **Results** DNA barcodes produced for 16 species. DNA metabarcoding methods produced and tested. Different species responded differently to increasing temperatures with respect to larval development times and oviposition behaviour. One cover crop reduced damage in potatoes by 50% (not buckwheat). Climate maps produced for 5 species using current and projected 2040's temperatures. Larval development times modelled and mapped. Results of the monitoring and collection of field meta data via a questionnaire modified from Furlan *et al.* (2017)[1] , showed differing risk factors between *Agriotes* species. **Conclusions** The wireworm problem in the UK is going to get worse. However, we have improved our ability to monitor wireworms, increased our knowledge of their life history responses to current and increasing temperatures, improved our ability to risk assess fields before planting and, we know that there is at least one cover crop which reduces damage in a following potato crop. **Keywords:** Integrated Pest Management (IPM), DNA barcode, monitoring, climate model, cover crop. *This project was funded by* an alliance between Elveden Estate, G's Fresh, inov3PT, Pearce Seeds and Syngenta (United Kingdom), and Fera Science Ltd. **References:** [1]Furlan et al., 2017. Environ Sci Pollut Res 24:236–251	***Larissa Collins*[1@]**, *Ian Adams*[1], *Martyn Cox*[2], *Andrew Crowe*[1], *Damian De Marzo*[1], *Rachel Down*[1], *Jacqueline Dunn*[1], *Hannah Fenton*[1], *Rowan Howe*[1], *Eleanor Jones*[1], *Roy Macarthur*[1], *Valeria Orlando*[1] [1]Fera Science Limited, York Biotech Campus, Sand Hutton, York, YO60 7NE, UK [2] Blackthorn Arable, Downham Market, UK [@]Correspondence of presenting author: larissa.collins@fera.co.uk

11h40

Session 1: **Epi- and endosymbionts in different Agriotes species and biocontrol implications**

***Adrian Wolfgang*[1@]**, *Nora Temme*[2], *Ralf Tilcher*[2], *Mario Schumann*[2], *Gabriele Berg*[1,3,4]

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Objectives: Biocontrol approaches in wireworms using entomopathogenic fungi (EPF) often display variable field efficacy. Soil microbes could both inhibit or favor the insecticidal activity of EPF. We hypothesized that wireworm-associated microbes derived from soil contribute to inconsistencies in control efficacy. If different wireworm species associate with different microbes in soil, this could further explain species-dependent control efficacies in wireworms.

Methods used: We investigated bacterial and fungal microbial communities in four different *Agriotes* spp., using an amplicon sequencing approach. We analyzed temporal dynamics and spatial differences in wireworm microbiomes compared to the surrounding soil microbiome.

Results: Similar epi- and endosymbiotic taxa colonize *Agriotes* species, but there were significant differences in microbial diversity and community composition. Furthermore, bacterial communities in *Agriotes* differed according to wireworm species. Soil microbiota significantly affected microbial communities in wireworms. Fungal communities had a shallow diversity and were comparably stable in composition across time, except for spontaneously diseased specimens. EPF were observed frequently but in low abundances in epi- and endosymbiont communities. Subsequent lab experiments indicated that immune priming with sublethal concentrations of EPFs could lead to physiological adaptations, mediating increased disease tolerance under high exposure to EPFs.

Conclusions: We hereby provide a baseline survey on wireworm microbiomes, disentangle key components of wireworm microbiomes, identify new targets to improve their biocontrol, and increase our mechanistic understanding of microbial dynamics between microbial communities in soil and in wireworms.

Keywords: Microbiome, microbial community dynamics, *Agriotes* spp., immune priming

12h10

Session 3: **TaupiFAST2 project – A French national action plan to combat wireworms in crop production**

***Bruno Ngala*[1@]**

Project leader: inov3PT[1]

Project partners: *ARVALIS*[2], *UniLaSalle*[3], *INRAE-IGEPP*[4], *Metatoul-Agromix*[5], *CNRS-UPPA*[6], *CTIFL*[7], *SILEBAN*[8], *ACPEL*[9], *Terre d'Essais*[10], *CEFEL*[11].

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Numerous crops, especially potatoes, carrots, melons, corn and some vegetables, are attacked by wireworm larvae every year. On potatoes, carrots and melons, crop damage occurs via bites or holes burrowed in the belowgrown edible parts, leading to increased number of downgrades, batch refusals and complaints within France and in export markets, with serious economic repercussions. Despite intensification of research work over the last decade [Poggi et al., 2021][1], knowledge of the biology and ecology of the pest species remains fragmentary and limited to a few of the *Agriotes* species. A paradigm shift is necessary and the acquisition of knowledge on the biology and population dynamics of wireworms pest species, the improvement of risk assessment methods for infestation and damage as well as the development of sustainable protection strategies constitute urgent scientific, technical and economic challenges to be met. Through a large, multi-sector consortium within France, the objective of TaupiFAST2 project will be to build, evaluate and deploy economically viable solutions at the scale of the crop production systems with the aim of reducing the risks of wireworm damage to an acceptable level for the most sensitive crops. There will be particular attention on risk factors and the implementation of combinations of practices that are undesired by wireworms at the scale of the rotation, and not just during the suceptible crop cycle. TaupiFAST2 project (2025-2029) has received a grant of €6.12 million from the French government as part of the Strategic Action Plan for Anticipating the Potential Withdrawal of Active Substances in Europe and the Development of Alternative Techniques for Crop Protection (PARSADA).

Keywords: Wireworm damage, Risk assessment, Cropping systems, Combination of levers, Rotation

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References:

[1] Poggi, Sylvain, Ronan Le Cointe, Jörn Lehmhus, Manuel Plantegenest, and Lorenzo Furlan (2021). « Alternative Strategies for Controlling Wireworms in Field Crops: A Review ». *Agriculture* 11 (5). https://doi.org/10.3390/agriculture11050436

12h30

Session 4: **Potato varietal resistance to wireworm: Behavioural and chemical insights for biocontrol**

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Wireworms (*Agriotes spp.*) are among the most persistent and destructive soil pests in European agriculture, posing a particular threat to potato crops. Following the withdrawal of neonicotinoid insecticides, there is a pressing need for sustainable, integrated control strategies placing varietal resistance and pest behaviour at the heart of biocontrol research. In this study, we investigated both the varietal preferences of wireworms and the chemical cues underlying their host selection. Three widely cultivated potato varieties were tested, known to differ in field susceptibility: Monalisa (high), Spunta (moderate), and Charlotte (low). Laboratory bioassays showed that wireworms fed more actively and developed faster on Monalisa tubers than on Charlotte. Interestingly, olfactory choice tests revealed that Spunta was the most attractive variety, despite not suffering the most damage. Gas chromatography identified 63 volatile organic compounds (VOCs) released by tubers across varieties and developmental stages. While VOC profiles varied with tuber age, no significant differences were detected between varieties, suggesting that other cues, such as CO_2 or root-associated secondary metabolites, may play a key role in driving the intense feeding behavior observed on Monalisa. These findings point to a crucial insight for wireworm biocontrol: damage severity may hinge more on post-attraction factors influencing feeding and development than on initial attraction alone. Our work offers new avenues for breeding potato varieties that are less conducive to wireworm success.

Keywords: *Agriotes*; attractivity; semiochemicals; host preference; plant-insect interactions

12h50	Luch break (60 minutes)	
Afternoon session: Chairpersons - (Martyn Cox & Willem Desmedt)		
13h50	Session 2: **RNA interference on wireworm species from Northern Italy** In recent years, potato cultivation has suffered an increase in damage from wireworms due to various factors including climate change and the ineffectiveness and/or withdrawal of the few synthetic pesticides. Significant damage to potatoes, with a consequent sharp decline in their commercial value, has been recorded in many European and Italian areas where this tuber is grown. In Northern Italy (especially in Emilia-Romagna) lower production yields are being observed due to the damage caused by various species such as *A. sordidus*, *A. litigiosus* and *A. brevis*. Recent evidence suggest that the RNA interference mechanism can also be used against plant pests to induce specific post transcriptional gene silencing. This endogenous process is triggered by double stranded RNA molecules (dsRNAs) complementary to a target gene active in the pest. Its silencing blocks the synthesis of the corresponding protein with lethal consequences for the insect. Here we present some preliminary results on the specific gene silencing triggered by the topical application of dsRNAs to wireworm larvae. Starting from some bioinformatic analysis of the transcriptomes of the *Agriotes* species present in Italian potato fields, we identified some candidate genes to be targeted by dsRNAs. In vitro synthesized dsRNA, upon microencapsulation, was delivered to wireworms and the gene expression levels were analysed by quantitative PCR. The results obtained would suggest that dsRNA-mediated gene silencing can be obtained on *A. sordidus* and *A. litigiosus* larvae by topical application therefore suggesting a possible role for RNAi in the control of these potato insect pests. **Keywords:** Agriotes, dsRNAs, gene silencing, quantitative PCR. *Funding information: Project "Strategie innovative biotecnologiche per contrastare la presenza ed il danno da elateridi su patata. Reg. (UE) 2021/2115 and (UE) 2022/126 "Programma operativo pluriennale 2023/2027 del settore patate": Op Patfrut, Op Apofruit Italia, Orogel Soc. Coop. Agricola, Op Alpropat and Consorzio italiano patata italiana di qualità.*	***Giovanni Bernacchia***[1@], *Riccardo Osti*[1], *Lorenzo Benetti*[1], *Davide Boscolo*[2], *Stefano Civolani*[2] [1] University of Ferrara, Dept Life Sciences and Biotechnology, Via Borsari 46, 44121 Ferrara, Italy [2] University of Ferrara, Dept Chemical, Pharmacological and Agricultural Sciences, Via Borsari 46, 44121 Ferrara, Italy [@]Correspondence of presenting author: bhg@unife.it

14h10

Session 2: **Using bioproducts of entomopathogenic bacteria to control wireworms: ovicidal, larvicidal and behaviour effect.**

***Andrea Chacon-Hurtado*[1@]**, *Fanny Ruhland[1], Andres Pascagaza[1] Raquel Campos-Herrera[2], François J. Verheggen[1]*

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Entomopathogenic nematodes from the families Heterorhabditidae and Steinernematidae are effective biological control agents against several crop pests. Their free-living juvenile stages infect and kill insect hosts in symbiosis with enteric bacteria of the genera *Photorhabdus* spp. and *Xenorhabdus* spp., respectively [Boemare, 1993][1]. These bacteria produce toxins that induce rapid insect death within 48 to 72 hours, while also providing a favorable environment for nematode growth and reproduction. In addition, they secrete antimicrobial, antifungal, and nematicidal metabolites that inhibit competitors and repel scavengers [Blanco-Pérez, 2019][2].

Recent studies have demonstrated that these bacterial metabolites can have an effect in insects' mortality [Ulug, 2024][3]. The objective of this study was to evaluate ovicidal and larvicidal effects of metabolites produced by the entomopathogenic bacteria *Photorhabdus antumapuensis* on three *Agriotes* species: *A. lineatus*, *A. obscurus*, and *A. sputator*. In addition, we aimed to investigate the volatile organic compounds potentially responsible for the observed repellent effect on larvae.

Ovicidal bioassays were conducted using multi-well plates with 0.4 g of vermiculite and 2 mL of bacterial metabolites. Five eggs from each *Agriotes* species were exposed to treatments and monitored every seven days for 30 days to evaluate hatching rates. Similarly, L10-stage wireworms were exposed to metabolites for 15 days. Our results showed a significant reduction in the hatching rate of *A. obscurus* and a repellent effect on larvae. This repellent behavior was confirmed using dual-choice tests.

Odors emitted by bacterial metabolites were identified by GC-MS, revealing over 80 compounds, with alcohol and sulfur molecules being the most abundant. These findings suggest new perspectives for the use of symbiotic bacteria and their bioactive products in the integrated management of wireworms.

Keywords: *Heterorhabditis atacamensis***,** Insect pathogens, Biocontrol, Volatile Organic Compounds, Chemical Ecology.

Andrea Chacon-Hurtado was awarded a FRIA grant (Fund for research training in industry and agriculture, FRIA/FC-2576 FC46977).

References:

[1] Boemare, N *et al.*, 1993. Int. J. Syst. Bacteriol, 43, 249-255

[2] Blanco-Pérez R. *et al.*, 2019. J. Invertebr. Pathol, 164, 5–15.

[3] Ulug, D. *et al.*, 2024. J. Invertebr. Pathol, 205, 108-126.

14h30

Session 2: **Biofumigation with sorghum and brown mustard against wireworm damage in potato. First results and perspectives from Switzerland.**

Geoffrey Darbon[1,2@] *Gaétan Riot*[1] *and Brice Dupuis*[1]

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Wireworm damage to potato and other crops are increasingly reported. In Switzerland, the withdrawal of the insecticide Fipronil has left the farmers with no direct means of wireworm control since 2014. In a preliminary field trial seeking to address this issue, biofumigation with sorghum and brown mustard was implemented the year preceding potato cultivation. Because of its positive effect on wireworm populations, untouched meadow was left until two weeks before potato planting, as a negative control. In addition, rapeseed and maize were used as control for the biofumigation effect. Before the trial, wireworms were trapped using halved potatoes buried into the soil. After capture, species were determined. During the trial, biomass, developmental stages and glucosinolate or dhurrin content of biofumigant crops were monitored. After potato harvest, number of wireworm feeding holes was recorded along with tuber defects like silver scurf-associated symptoms, common scab, or *R. solani* symptoms. Potato grown after sorghum showed a significant decrease in tubers with wireworm damage (14.5%) in comparison with meadow. However, this value for rapeseed and maize was of 20.9% and 11%, respectively, suggesting that cultivation and burrowing of plant material had lowered the wireworm populations and resulting damage. The number of wireworm larvae per trap moderately correlated with resulting damage (PCC = 0.154). Highest correlations were found between dry-core and *R. solani* sclerotia (PCC = 0.485) and between wireworm damage and dry-core (PCC = 0.217). Glucosinolate and dhurrin content were both higher 7 weeks after sowing (WAS), and the higher biomass at 10 WAS did not compensate the difference in absolute quantity of these biofumigant molecules. This trial allowed to determine the right developmental stage of sorghum and brown mustard for biofumigation, but also highlighted the effect of crop cultivation and burrowing on wireworm populations. As part of a field trial conducted from 2025 to 2027, this improved biofumigation approach is being combined with the testing of two different cultivars and the inoculation of *Pseudomonas chlororaphis*, a bacterium with insecticidal properties.

Keywords: biofumigation – potato – wireworm – biocontrol

14h50

Session 2: **Experiments to increase the efficacy of biological wireworm control**

Giselher Grabenweger[1@]

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The biological control of wireworms with entomopathogenic fungi, mainly of the genus *Metarhizium*, has made some progress in recent years [Reinbacher et al., 2023[1]; Brunner et al., 2024[2]], and even led to the development of a new product on the market [Beitzen-Heineke, 2024][3]. Among other reasons, wireworms' complex behaviour, their multiannual development, and their low population densities in soils impair the success of biocontrol measures with entomopathogenic fungi.

In recent greenhouse and field experiments, we combined different strains of entomopathogenic fungi, and the application of fungi with sowing of different cover crops to detect any synergistic effects between biocontrol agents and plants.
Our results of the last two years show that interactions between different fungal strains, as well as between fungi and plants, are much more complex than anticipated. More research is necessary to find out if combined application of different fungal strains exhibit at least an additive effect on their hosts, or if cover crops with detrimental effects on wireworm development foster efficiency of fungi.

Keywords: [*Agriotes*, *Metarhizium*, biological control]

References:

[1] Reinbacher L., Praprotnik E., Razinger J., Bacher S., and Grabenweger G., 2023. Influence of wireworm diet on its susceptibility to and control with the entomopathogenic fungus *Metarhizium brunneum* (Hypocreales: Clavicipitaceae) in laboratory and field settings. J Econ Entomol, https://doi.org/10.1093/jee/toac198

[2] Brunner M., Zeisler C., Neu D., Rotondo C., Rubbmark O.R., Reinbacher L., Grabenweger G., and Traugott M., 2024. Trap crops enhance the control efficacy of Metarhizium brunneum against a soil-dwelling pest. J Pest Sci, https://doi.org/10.1007/s10340-023-01726-1

[3] Beitzen-Heineke E., 2024. Evaluation and optimization of the effectiveness of Attracap® and its environmental influences: A biological soil insecticide to control wireworms. Dissertation at Goettingen University, http://dx.doi.org/10.53846/goediss-10949

15h10	Session 2: **Evaluating the efficacy of bioinsecticides against wireworms in controlled conditions** To combat insect pests, such as wireworms, agricultural production still depends on widespread use of chemical pesticides, even tough pesticide use is associated with negative impacts on the environment and human health. In the EU project SAGROPIA, we explore the efficacy of biological, low-risk solutions based on plant- and microbial extracts and microorganisms in reducing chemical insecticides. For wireworms (*Agriotes* spp.), two bioinsecticides, i.e. plant-based AZATIN (active ingredient Azadirachtin), and microbial BotaniGard (entomopathogenic fungus *Beauvaria bassiana*) were evaluated for their efficacy to control wireworms on two target crops: potato and sugar beet. Two populations of wireworms were collected from fields in the Netherlands and reared in lab conditions. First an assay was developed to test the survival of different densities of wireworms under controlled conditions without bio-insecticides. Over 92% wireworms survived after 9 weeks. Next, to test the effect of the bioinsecticides, wireworms were placed in 5 L pots and seeds or potato tubers were added. Pots were treated with the solutions twice. After 4 (for sugar beet) or 7 weeks (potato assay), destructive assessments were done to measure plant emergence, weight, and damage, and wireworm mortality and weight. A slight effect on the growth of the wireworms was seen in the pots treated with Azatin. Plant emergence and weight were not affected by the treatments. Further experiments are required to validate the efficacy of more (combinations of) solutions or other pest management strategies to control wireworms. **Keywords:** Azatin, Botanigard, potato, sugar beet, greenhouse assay *This research was funded by EU Horizon Europe project SAGROPIA "Sustainable agriculture through novel pesticides using an integrated approach", with grant number 101136677, under the HORIZON-CL6-2023-FARM2FORK-01 call. Project information available at its web page: https://sagropia.eu.*	***Lotte Caarls***[1@], *Annelies J. E. Beniers*[2] *and Misghina Goitom Teklu*[2] [1]Plant Breeding, Wageningen University and Research, Wageningen, The Netherlands [2]Agrosystems Research, Wageningen University and Research, Wageningen, The Netherlands [@]Correspondence of presenting author: lotte.caarls@wur.nl
15h30	**Coffee break (20 minutes)**	
General Assembly Meeting: Chairpersons - Martyn Cox & Annette Folkedal Schjøll		
15h50	Agenda (to be disclosed during the meeting)	All
18h00	Closing remarks and End of Workshop	