

Platform presentations – 08 April, Afternoon

8 April

Room: Netherland III (70 people)

14:15-15:55 **A1. Harmonization and advances in the detection and characterisation of plastic pollution in the agrifood chain**

Abstract ID		Chairs: <i>Nicolas Beriot (Wageningen University), Bert Van Bavel (NIVA)</i>
14:15		Brief section intro
14:18		Keynote: Harmonization and quality control are key to improve the analysis of micro plastic pollution in the agrifood chain. Bert Van Bavel (NIVA)
14:37	77	A multi-technique approach to detect microplastics in soil <i>Pierofrancesco Cerruti (Institute of Polymers, Composites and Biomaterials, National Research Council of Italy)</i>
14:50	50	Microplastics Analysis and the Infrared Spectrum: Is Spectral Range Selection Critical? <i>Wesam Alwan (Agilent Technologies, Inc.)</i>
15:03	74	Fluorescent Labelling of Polystyrene Microplastics for in Situ Detection in Soil <i>Shen Sesselle (Ghent University)</i>
15:16	73	Portable devices for the detection of plastic particles below 15 µm: application of Raman spectroscopy and optical/acoustical tweezers <i>Silvie Bernatova (Institute for chemical and physical processes (IPCF), National Research Council of Italy)</i>
15:29	33	Ensuring representative sample volume predictions in microplastic monitoring <i>Richard Cross (UK Centre for Ecology and Hydrology)</i>
15:42		Minipanel

15:55 - 16:25 Poster time with coffee

16:25-18:20 **B1. Addressing sustainability of plastic in the agrifood sector**

		Chairs: <i>Valentina Tartiu (NIVA) + Ildiko Heim (FiBL) + Giulia Carcasci (FAO)</i>
16:25		Brief section intro
16:28		Keynote: Regulatory frameworks for sustainable plastics use in agrifood systems, and the role of FAO. Giulia Carcasci (FAO)
16:47	94	Holistic and circular approaches for plastic management in agriculture <i>Noora Räsänen (MTK-Pohjois-Savo)</i>
17:00	82	Circular economy pathways to address agriculture plastic waste in 7 countries – A research protocol <i>Ravinder Kumar (Natural Resources Institute, University of Greenwich, UK)</i>
17:13	44	Assessing the ecological and socio-economic impacts of Microplastics at field and farm level: Development of a holistic questionnaire and analysis of survey results in MINAGRIS project <i>Ildiko Heim (FiBL Austria)</i>
17:26	53	Mapping of Agricultural Plastics Pollution in Soil: case study of Italy, France and Norway <i>Ali Hachem (University of Bari Aldo Moro)</i>
17:39	84	Why biodegradable plastic polymers are not a nice to have but a must for certain applications <i>Christian Lott (HYDRA Marine Sciences GmbH)</i>
17:52	18	Safe and sustainable by design polyesters: integrating structural modeling, ecotoxicity and biodegradation studies for fast screening <i>Raffaele Bruschi (Università degli Studi di Trieste)</i>
18:05	95	Circular use of biobased plastics in agri- and horticulture <i>Maarten van der Zee (Wageningen Food & Biobased Research)</i>

18:20 End of day

8 April

Belgium I-II (140 people)

14:15-15:55 **A2. Plastics and plastic additives in food: a One Health perspectives over plastic pollution**

Abstract ID		Chairs: <i>Lev Neretin (FAO), France Collard (NIVA)</i>
14:15		Brief section intro
14:18	3	Keynote: Exposure of U.S. Adults to Microplastics from Commonly-Consumed Proteins Hannah De Frond (Ocean Conservancy)
14:37	6	Occurrence of microplastics and bisphenols in shellfish on the Croatian Adriatic coast (PLASTICSHELL project) <i>Sandra Petričević (Croatian Veterinary Institute)</i>
14:50	59	Human exposure to microplastic through cod consumption: a focus on Norway <i>France Collard (Norwegian institute for Water Research - NIVA)</i>
15:03	91	Characterizing microplastic contamination in milk and cheese <i>Elena Visentin (University of Padova)</i>
15:16	86	Impact of Microplastics on Honey Bees and Honey Products <i>Parisa Gazerani (Oslo Metropolitan University)</i>
15:29	76	Migration of micro- and nanoparticles from reusable food contact material <i>Karla Parga (McGill University)</i>
15:42		Minipanel

15:55 - 16:25 Poster time with coffee

16:25-18:20 **B2. Understanding the impact of plastics and associated contaminants in soil environments**

		Chairs: <i>Lisa Joos (Ghent University), Melanie Braun (University of Bonn)</i>
16:25		Brief section intro
16:28		Keynote: Unravelling the Microplastics and Microbiomes Nexus in Agrifood Systems Edoardo Puglisi (Università Cattolica)
16:47	4	Conventional and biodegradable microplastics affect soil properties and microbial functions across a European pedoclimatic gradient <i>Klara Smidova (RECETOX, Masaryk University)</i>
17:00	21	Effects of microplastic contamination on soil respiration and carbon sequestration <i>Xiaomei Yang (Wageningen University)</i>
17:13	14	Effects of Conventional and Biobased Mulch Film Microplastics on Soil Bulk Density, Hydraulic Conductivity, and Water Retention in Two Soil Types Under Wetting-Drying Cycles <i>Špela Železnikar (University of Ljubljana)</i>
17:26	47	Interactions of microplastics with pesticides and veterinary drugs drive effects on ammonia oxidizers and nitrification in agricultural soils <i>Eleni Rafaila Lamprou (University of Thessaly)</i>
17:39	70	Biological Evaluation of Binding of Toxins to Microplastics <i>Elien Alderweireldt (Ghent University)</i>
17:52	57	Plastic legacy of a pandemic: the lingering impacts of personal protective equipment waste on agroecosystems <i>Gábor Feigl (Department of Plant Biology, University of Szeged)</i>
18:05		Minipanel

18:20 End of day

Platform presentations – 09 April, Morning

9 April

Room: Netherland III (70 people)

09:00-10:30 Abstract ID C1a. Sources, distribution, fate and behaviour of plastics and associated chemical in soils

		Chairs: Rachel Hurley (Norwegian Institute for Water Research - NIVA), Christian Laforsch (Bayreuth University)
09:00		Brief section intro
09:03		Keynote: Agriplastics: Blessing or Curse? Violette Geissen (Wageningen University)
09:22	20	The MiCoS project: Monitoring of micro- and macroplastics in 240 arable fields in the Benelux <i>Lisa Joos (Ghent University)</i>
09:35	54	Microplastic contamination in agricultural soils: uFTIR method assessment and European survey of 220 fields <i>Nicolas Beriot (Wageningen University)</i>
09:48	32	Macro- and micro-plastic accumulation in soils under different intensive farming systems: A case study in Quzhou county, the North China Plain <i>Hanyue Zhang (Wageningen University)</i>
10:01	49	Long-term urban compost application leads to coarse microplastics accumulation in agricultural soils <i>Gabin Colombini (IEES-Paris, Sorbonne University)</i>
10:14	68	The Distribution of Pristine and Aged Microplastics in Soil Aggregate Fractions <i>Patria Novita Kusumawardani (Ghent University)</i>

10:30-10:45 Coffee break

10:45-12:35 C1b. Sources, distribution, fate and behaviour of plastics and associated chemical in soils

		Chairs: Rachel Hurley (NIVA), Christian Laforsch (Bayreuth University)
10:45		Keynote: Tracking the fate of microplastics derived from agricultural mulching films Rachel Hurley (NIVA)
11:04	69	Mobility and fate of biodegradable microplastics in agricultural soils <i>Cynthia Rieckhof Rivas (IMDEA Water Institute)</i>
11:17	34	Microplastic incorporation into soil aggregates: Insights from two-year field experiments in European agricultural topsoils <i>Max Groß (Institute of Crop Science and Resource Conservation - Soil Science, University of Bonn)</i>
11:30	35	First experimental evidence of fast leaching of small (1.7 µm) microplastics added to soil in field conditions <i>Nick Krekelbergh (Ghent University)</i>
11:43	78	Rainfall-induced transport of microplastics in soils depends on soil pore structure <i>Jeongyeon Yun (Swedish University of Agricultural Sciences)</i>
11:56	56	Plastic additive fate in soil, earthworms and barley: A 2-year field study <i>Aristeidis Tsagkaris (University of Chemistry and Technology, Prague)</i>
12:09	16	Microplastic transport in soil by nematodes <i>Yin Liu (Ghent University)</i>
12:22		Mini panel

12:35-14:15 Lunch break & Poster time

9 April

Belgium I-II (140 people)

09:00-10:30 Abstract ID C2a. Effects of plastic residues on plants

		Chairs: Luca Nizzetto (Norwegian Institute for Water Research - NIVA), Sannakajsa Velmala (Natural Resources Institute Finland - Luke)
09:00		Brief section Intro
09:03		Keynote: Plastic and Plants: What We've Learned and What's Next Thijs Bosker and Laura Zantis (Leiden University)
09:22	22	Biodegradable microplastics induce changes in lettuce defence mechanisms and soil microbial activities <i>Sannakajsa Velmala (Natural Resources Institute Finland - Luke)</i>
09:35	23	Short-term impact of plastic and biodegradable mulches on soil health in blueberry plantation in Southern Portugal <i>Corina Carranca (INIAV)</i>
09:48	27	Effects of biodegradable plastics on the uptake of N by plants <i>Sara Guerrini (University of Bologna and NOVAMONT)</i>
10:01	38	Response of maize (Zea mays) growth to soil contaminated with microplastics under field conditions <i>Bin Guo (Wageningen University)</i>
10:14		Minipanel

10:30-10:45 Coffee break

10:45-12:35 C2b. Effects of plastic residues on plants

		Chairs: Luca Nizzetto (Norwegian Institute for Water Research - NIVA), Sannakajsa Velmala (Natural Resources Institute Finland - Luke)
10:45	2	Wood distillate enhances plant defences and yields in bioplastic-contaminated soils, while reducing reliance on chemical solutions <i>Silvia Celletti (University of Turin, Department of Agricultural, Forest and Food Sciences - DISAFA)</i>
10:58	26	Comparative Impacts of Leached Chemicals from Conventional and Biodegradable Plastics on Crop Growth and Development <i>Laura Zantis (Leiden University)</i>
11:11	28	Transcriptomic analysis of durum wheat responses to polystyrene nanoplastics <i>Giuliana Bruno (University of Tuscia)</i>
11:24	29	Short-time exposure to microplastics: case study with potted blueberry plants <i>Ana Mafalda Tendeiro (ITQB NOVA)</i>
11:37	42	Polystyrene nanoplastics drive metabolic shifts in pasta wheat towards high sugar accumulation through osmotic stress mechanisms, posing risks to crop yield and food security <i>Benedetta Pizziconi (Università Campus Bio-Medico di Roma)</i>
11:50	88	Impact of Polyethylene Nanoplastics on Plant-Rhizosphere Interactions in Lettuce (cv. Canasta) and tomato (cv. Microtom): A Multi-Omics Approach <i>Lellei Zhang (Università Cattolica del Sacro Cuore)</i>
12:03		Minipanel
12:16		

12:35-14:15 Lunch break & Poster Time

Platform presentations – 09 April, Afternoon

9 April

Room: Netherland III (70 people)

14:15-16:00 Abstract ID **D1a. Behaviour and transformations of plastic and associated chemical pollution in soils**

Time	Abstract ID	Chair(s)	Topic
14:15		Chairs: Raffaella Meffe & María de las Virtudes Martínez Hernández (IMDEA Water Institute)	Brief intro
14:18	61	Keynote: The fate of chemical additives released in agricultural soil from biodegradable mulching films. Demetres Briassoulis (Agricultural University of Athens)	
14:37	40	Co-occurrence of multiple contaminants: unentangling adsorption behaviour in agricultural soils Gaowei Tan (Wageningen University)	
14:50	96	Microplastic transport in agricultural soils - from a field to a burrow scale Wiebke Mareile Heinze (Swedish University of Agriculture)	
15:03	9	Investigating the Degradation of Biodegradable Mulch Films in Agricultural Soil: A Molecular Approach Giuseppe Proietto Salantri (IPCB-CNR ss Catania & University of Bologna)	
15:16	60	Comparative disintegration/biodegradation of biodegradable in soil mulching films under field conditions in South and North Europe Christina Pyromali (Agricultural University of Athens)	
15:29	37	The MiCoS project: Determining the biofilm formation over time on macro-plastics in a soil environment Jozefien Demeulenaere (Ghent University)	
15:42			Minipanel

15:55-16:30 Poster time with coffee

16:30-17:45 **D1b. Integrating data and knowledge from plastic pollution monitoring**

Time	Abstract ID	Chair(s)	Topic
		Chairs: Caroline de Tender (Ghent University) and Violette Geissen (Wageningen University)	
16:30			Brief Intro
16:33		Keynote: Plastic pollution across environments – a monitoring framework to study (micro-plastic behaviour Caroline De Tender (Ghent University)	
16:52	5	The Global AgriPlastics project: Assessing the societal benefits and risks of plastic film mulch use Dave Chadwick (Bangor University)	
17:05	12	Characterizing Microplastics emissions impacts in Life Cycle Assessment of agricultural production Anne-Marie Boulay (CIRAIG Polytechnique Montreal)	
17:18	72	Advancing Microplastic Fate Assessment: Incorporating Size Analysis and Abiotic Degradation in Regulatory Testing Philipp Dalkmann (Bayer AG - Crop Science Division)	
17:31			Minipanel

17:45 End of conference

9 April

Belgium I-II (140 people)

14:15-16:00 Abstract ID **D2a. Unravelling plastic impacts in agrifood systems and beyond**

Time	Abstract ID	Chair(s)	Topic
14:15		Chairs: Salla Sellonen (SYKE), Kees Van Gestel (Vrije Universiteit Amsterdam)	Brief section intro
14:18		Keynote: Microplastic impact in agrifood systems and beyond. Invertebrates and vertebrates as indicators. Esperanza Huerta Lwanga (Wageningen University)	
14:37	17	The effects of mulching film-derived microplastics on plants, soil organisms and microbial communities in a mesocosm study Sam van Loon (Vrije Universiteit Amsterdam)	
14:50	55	A Systematic Approach for a Holistic Ecotoxicological Assessment Strategy of Polymers Marie Winter (Fraunhofer Institute for Molecular Biology and Applied Ecology IME)	
15:03	36	Human Health effect factor for Micro- and nano-plastic exposure via ingestion in LCA Anne-Marie Boulay (CIRAIG Polytechnique Montreal)	
15:16	31	Adverse effects of nanoplastics in bovine granulosa cells that accumulate 100 nm and 250 nm polystyrene particles in vitro Anja Baufeld (Research Institute for Farm Animal Biology - FBN)	
15:29			Minipanel
15:42			

15:55-16:30 Poster time with coffee

16:30-17:45 **D2b. Unravelling plastic impacts in agrifood systems and beyond**

Time	Abstract ID	Chair(s)	Topic
		Chairs: Sam Van Loon (Vrije University Amsterdam), Esperanza Huerta Lwanga (Wageningen University)	
			Brief Intro
16:33	11	Keynote: Effects of microplastics from mulching films on soil invertebrate communities in agricultural field plots from three different geographical regions Kees van Gestel (Vrije Universiteit Amsterdam)	
16:52	46	Effects of conventional and biodegradable microplastics on earthworm Eisenia andrei in two generations VIII Saartama (Finnish environment institute - SYKE)	
17:05	62	Role of biodegradable and non-biodegradable microplastic in modulating the toxicological effects of organic pollutants in the soil organism Folsomia candida Ilaria Negri (Università Cattolica del Sacro Cuore)	
17:18	66	Reproductive and behavioural responses of four soil invertebrate species to two types of polypropylene microplastics originating from agricultural plastics Salla Selonen (Finnish Environment Institute - SYKE)	
17:31			Minipanel

17:45 End of conference

Poster presentations – 08 April

8 April

Poster slot num.	Abstract ID	Session	Title
P1	41	A1	Optimizing methods for quantification of microplastics in agricultural soils <i>Joana Antunes (INIAV)</i>
P2	43	A1	Application of Raman microspectroscopy for the characterization of microplastics in clam <i>Chamelea gallina</i> <i>Rosaria Aloia (Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise, Via Campo Boario, Italy)</i>
P3	71	A1	The InPlasTwin project: Increasing expertise in micro- and nanoplastics analysis through twinning action <i>Xiaoyu Zhang (Flemish Institute for Technological Research)</i>
P4	51	A1	Method development for analysis of nanoplastics in drinking water and milk using transmission electron microscopy (TEM) <i>Charlotte Wouters (Trace Elements and Nanomaterials, Sciensano)</i>
P5	81	B1	Microplastic persistence & environmental impact of non- vs. biodegradable polymers in a conceptual model as a tool combining desired material properties & reduction of accumulation in the environment <i>Miriam Weber (HYDRA Marine Sciences GmbH)</i>
P6	93	B1	Microplastics in agricultural soils – awareness, knowledge and biodegradable product alternatives <i>Claudia Preininger (AIT Austrian Institute of Technology)</i>
P7	103	B1	Hydrophobization of Cellulose Nanocrystals and Rice Husk Surface by Infrared Thermal Activation <i>Lucia Gardossi (University of Trieste)</i>
P8	104	B1	Introducing the MAGNO project <i>Ana Crespo-Cortés (Centro Tecnológico Del Calzado y Del Plástico De La Región De Murcia)</i>
P9	105	B2	PHAntastic. PHA- based innovative agricultural solutions to deliver bio-based fertilizers and plant protection products <i>Ana Crespo-Cortés (Centro Tecnológico Del Calzado y Del Plástico De La Región De Murcia)</i>
P10	48	B2	Exploring the role of Plastisphere as a hotspot of Microbial Evolution for New Catabolic and Antibiotic Resistance Traits <i>Eustathios (Stathis) Lagos (Department of Biochemistry and Biotechnology, University of Thessaly, Larissa, Greece)</i>
P11	101	B2	Microplastics in soil: Long-term persistence, Transfer Risks, and Implications for Agroecosystems and Food Safety <i>Parisa Gazerani (Oslo Metropolitan University)</i>
P12			
P13	Sponsored		European Atlas of agricultural plastics <i>Evelia Schettini (UNIBA)</i>
P14	Sponsored		Development of Mass Spectrometry Search Algorithm for Mixed Microplastics by Py-GC/MS in the presence of inorganic diluents <i>Michael Soll (Frontier Lab)</i>
P15	Sponsored		Introducing "Microplastics" a new MDPI journal <i>MDPI</i>

Poster presentations – 09 April

9 April

Poster Slot num.	Abstract ID	Session	Title
P1	39	C1	Microplastic vertical migration in Antarctic soils under successive freezing-thawing cycles <i>Esperanza Huerta Lwanga (Wageningen University)</i>
P2	67	C1	Trophic transfer of microplastics from soil via earthworms (<i>Eisenia fetida</i>) to ground beetles (<i>Poecilus cupreus</i>) <i>Sarmite Kernchen (University of Bayreuth)</i>
P3	102	C1	Response of the ant species <i>Lasius niger</i> to soil contamination with mulch film fragments at the micro- and nanoscale <i>Sarmite Kernchen (University of Bayreuth)</i>
P4	92	C1	Microplastic background levels in German soils <i>Zacharias Steinmetz (RPTU Kaiserslautern-Landau, IES Landau)</i>
P5	1	C2	Effects of microplastics on wheat performance in sewage sludge-amended soils <i>Anna Charatzidou (University of Sheffield)</i>
P6	10	C2	Microplastics from disposable plastic bags induce changes in soil properties and drought-like stress in sunflower <i>Anita Jemec Kokalj (University of Ljubljana, Biotechnical faculty)</i>
P7	15	D1	Biodegradability of microplastics from mulching films: Conventional vs. biodegradable materials in the open environment <i>Gabriela Kalčíková (University of Ljubljana, Faculty of Chemistry and Chemical Technology)</i>
P8	87	D1	Fragmentation of soil-biodegradable mulch film: The difference between fragments released from certified soil-biodegradable products and persistent microplastics <i>Patrizia Pfohl (BASF SE)</i>
P9	90	D1	Agricultural practices as major contributors to microplastic contamination in soil <i>Natasa Stojic (University Educons)</i>
P10	65	D2	Harnessing multi-omics insights to investigate environmental microplastic effects in marine polychaetes <i>Filippo Vaccari (Università Cattolica del Sacro Cuore)</i>
P11	79	D2	The effect of pollution on the electrophysiology of epithelium – insights from Caco-2 cell model <i>Gabriela Węglińska (Department of Physics and Biophysics, Institute of Biology, Warsaw University of Life Sciences)</i>
P12	89	D2	Differential toxicological and microbial interactions of compostable and conventional microplastics in zebrafish <i>Omayma Missawi (University of Namur, Belgium)</i>
P13	Sponsored		European Atlas of agricultural plastics <i>Evelia Schettini (UNIBA)</i>
P14	Sponsored		Development of Mass Spectrometry Search Algorithm for Mixed Microplastics by Py-GC/MS in the presence of inorganic diluents <i>Michael Soll (Frontier Lab)</i>
P15	Sponsored		Introducing "Microplastics" a new MDPI journal <i>MDPI</i>