



## Tuesday 12<sup>th</sup> September

Parallel session 1 – *Nutrient Utilisation* (Chair – Dr Hannah Rigby, Defra)

Corn Exchange Auditorium

Time	Presentation name	Presented by
11:30–11:45	Re-evaluating the nitrogen use efficiency of selected mineral and organic fertiliser categories based on the analysis of long-term field experiments under Swiss pedoclimatic conditions	Caroline Epper
11:45–12:00	Higher than expected: Nitrogen use efficiencies over 35 years of organic and conventional cropping	Astrid Oberson
12:00–12:15	Integrated dairy manure management increases nitrogen and phosphorus use efficiencies after soil application	Jihane EL Mahdi
12:15–12:30	Nitrogen Fertilizer Replacement Values of organic amendments should be calculated at equal N uptake and correlate with their chemical properties	Dorien Westerik
12:30–12:45	Nitrogen fertiliser value of digestates and untreated cattle slurry differs by organic and conventional crop management	Marie Reimer
12:45–13:00	Slurry injection to reduce nitrogen losses and enhance nutrient use efficiency in maize cropping	Hans-Werner Olf

Parallel session 1 – *Policy and Regulation* (Chair – Dr Nick Hutchings, Aarhus University)

Guildhall Committee Rooms

Time	Presentation name	Presented by
11:30–11:45	Exploring future scenarios for a circular Dutch food system	Ben Van Selm
11:45–12:00	Changing regulatory context for organics recycling in Europe	Chris Thornton
12:00–12:15	Evaluating a model implementation for an improved nitrogen management regulation in Switzerland	Frank Liebisch

12:15–12:30	Predicting methane emission from liquid manure and exploring mitigation options with integrated farm-scale modelling using the ABM model	Frederik Dalby
12:30–12:45	Relocate 10 billion livestock to reduce harmful nitrogen pollution exposure for 90% of China's population	Xuan Wang (on behalf of Zhaohai Bai)
12:45–13:00	Scenarios for nutrient recovery from urban organic matter	Tanguy Fardet

Parallel session 1 – *Soil Quality (Chair – Dr Kate Smith, ADAS)*

Guildhall Council Chambers

Time	Presentation name	Presented by
11:30–11:45	Has applying organic matter to land in Scotland increased the microplastic content of soils?	Caroline Stevenson
11:45–12:00	Effects of manure land application on soil health indicators	Lim Teng
12:00–12:15	The Manure and Organic Replacement Experiment (MORE) – effects on soil properties and crop production efficiency from different soil amendments	David Clarke
12:15–12:30	Impact of trace metal excess in cow diets on the agro-ecosystem: a preliminary study	Isabelle Royer
12:30–12:45	Soil phosphorus after a long-term and high-dose application of different organic wastes	Mario Alvarez Salas
12:45–13:00	Impacts of different management practices and site conditions on soil acidification rates in long-term experiments	Xingjuan Zhu

Parallel session 2 – *Air and Water Quality (Chair – Dr Rachel Thorman, ADAS)*

Corn Exchange Auditorium

Time	Presentation name	Presented by
14:00–14:15	Ammonia emissions and nitrogen use efficiency of untreated and plasma treated digestate	Alison Rollett
14:15–14:30	Greenhouse gas fluxes from winter wheat fertilised with treated and untreated pig slurry	Isobel Lloyd
14:30–14:45	Does acidification of livestock slurry at land spreading increase greenhouse gas emissions?	James Dowers

14:45–15:00	Mitigating ammonia emission from slurry digestate applied to winter wheat crops: effect of digestate composition, digestate treatment, and application technique	Johanna Pedersen
15:00–15:15	Mitigation of ammonia and global warming potential with slurry treatments during slurry storage and after land spreading in a North-Western Atlantic climate	Maxwell Y. Owusu-Twum
15:15–15:30	Greenhouse gas fluxes from organic fertilisers in cereal production and their residual effects	Susanne Eich-Greatorex

Parallel session 2 – *FertiCycle Project (Chair – Prof Lars Stoumann, University of Copenhagen)*

Guildhall Committee Rooms

Time	Presentation name	Presented by
14:00-14:10	Intro to FertiCycle - A Marie S. Curie Innovative Training Network	Lars Stoumann Jensen
14:10-14:22	Disclosing the P dynamics in soil treated with pH modified animal slurry; A rhizobox study	Stamatis Chysanthopolous
14:22-14:34	Biowaste materials as possible peat replacement in organo-mineral fertilizers	Tomas Sitzmann
14:34-14:46	Phosphorus and heavy metal release from (pre-treated) biochars and ashes in a rye grass experiment and 12-month incubation	Clara Kopp
14:46-14:58	Application of Fourier Transform Infrared Photoacoustic Spectroscopy as rapid tool for Quantification of Nutrient Contents and their Plant Availability in manure and digestate	Khan Wali
14:58-15:10	Increased slurry acidification does not promote S and P bioavailability and uptake in maize	Yusra Zireeni

15:10-15:22	Effect of bio-based fertilisers on cherry tomato productivity and trace element uptake: A greenhouse study	Lelanda Florent Kebalo
15:22-15:30	Final FertiCycle remarks, questions +advert for other FertiCycle talks and posters	Lars Stoumann Jensen

Parallel session 2 – *Treatment and Processing Technologies (Chair – Dr Audrey Litterick, Earthcare Technical Ltd.)*

Guildhall Council Chambers

Time	Presentation name	Presented by
14:00–14:15	Study the behaviour of biodegradable plastic bags in industrial composting	Asma Sikander
14:15–14:30	Study of biodegradable plastics in anaerobic digestion	Paul Derkenne
14:30–14:45	Holistic study about the biochar addition into the manure composting piles for soil health	Keiji Jindo
14:45–15:00	Application of compost extracts as a sustainable practice for the control of airborne fungal pathogens	Raúl Jiménez Rodríguez
15:00–15:15	Reduction of GHG and ammonia emissions from stored pig slurry using a peroxide-based slurry additive, with consequent improvement in biogas potential post-storage	Camilla Thorn
15:15–15:30	Animal slurry sanitization for a safe use in industrial horticulture: a field study using tomato	David Fanguero

**Wednesday 13<sup>th</sup> September**

Parallel session 3 – *Air and Water Quality (Chair – Prof Sven Sommer, Aarhus University)*

Corn Exchange Auditorium

Time	Presentation name	Presented by
10:30–10:45	Effects of feeding tannin-rich diets to dairy cows on ammonia emissions in a naturally ventilated housing	Giovanni Lazzari
10:45–11:00	Dietary supplementation of benzoic acid at 0.5% reduces ammonia emission and improve zootechnical performances of growing fattening pigs	Constance Drique

11:00–11:15	Comparison of ammonia and methane emissions from perforated and solid floors in dairy housings	Sabine Schrade
11:15–11:30	Strategies for greenhouse gas and ammonia emissions mitigation in dairy houses	Martina Friuli
11:30–11:45	Ammonia and odour emissions from fattening pig housings with outdoor yard in Germany	Brigitte Eurich-Menden
11:45–12:00	Particulate matter (PM10) concentrations and emissions at a commercial manure-belt laying hen house	Ji-Qin Ni

Parallel session 3 – *Treatment and Processing Technologies* (Chair – Mrs Anne Tremier, INRAE)

Guildhall Committee Rooms

Time	Presentation name	Presented by
10:30–10:45	Performance evaluation of a large scale two stages agricultural biogas plant, coupling fermentation and anaerobic digestion	Pascal Peu
10:45–11:00	Effects of trace elements supplementation in two-step anaerobic digestion of cattle manure and wheat straw/grass	Hellen Luisa de Castro e Silva
11:00–11:15	Effects of pre-treatment techniques and two-step anaerobic digestion on the nitrogen fertiliser value by injection or surface banding to cereal crops	Jared Onyango Nyang'au
11:15–11:30	Impact of several food waste overloads on the microbial community structure of a pig slurry mesophilic anaerobic digester	Patrick Dabert
11:30–11:45	Impact of post-treatments on the sanitary quality of digestates from three agricultural biogas plants	Anne-Marie Pourcher
11:45–12:00	Acidification of livestock slurry and digestate, the role of their chemical-physical composition to predict the acid required and pH trends over time	Alberto Finzi

Parallel session 3 – *Nutrient Utilisation (Chair – Prof Penny Johnes, University of Bristol)*

Guildhall Council Chambers

Time	Presentation name	Presented by
10:30–10:45	The effects of wastewater recovered struvite on growth and phosphorus acquisition in chickpea and wheat	Manish Sharma
10:45–11:00	Let's improve ammonia emission models for field-applied manure	Sven Sommer
11:00–11:15	Quantifying subregional nutrient flows as a benchmark for more circular food systems	Durk Tamsma
11:15–11:30	The transition to sustainable fertilisers for achieving nutrient autonomy and sustainable food production: Investigating recycled materials and phosphorus use efficient traits in crops	Michael Walsh
11:30–11:45	Comparing the performance of P Olsen and P saturation degree in predicting crop yields and P leaching risks using long-term P fertilization experiments	Yu Gu
11:45 – 12:00	Soil health improvement, nitrogen loss and use efficiency through combined application of organic and inorganic fertilizers in paddy cultivation	Md. Mizanur Rahman

Parallel session 4 – *Air and Water Quality (Chair – Dr Andreas Pacholski, Thünen Institute)*

Corn Exchange Auditorium

Time	Presentation name	Presented by
14:00–14:15	Contrasting high-frequency open path spectroscopy with Integrated Horizontal Flux ammonia (NH <sub>3</sub> ) measurements to compare the efficacy of low emission slurry spreading on cool temperate grasslands	Phoebe Morton
14:15–14:30	Novel system to measure emission rates of NH <sub>3</sub> and CH <sub>4</sub> from open farm-scale agricultural sources	Yolanda Maria Lemes
14:30–14:45	Comparison of methods for measuring ammonia volatilization from field-applied slurry	Jesper Nørlem Kamp
14:45–15:00	A wireless sensor network for low-cost monitoring of emissions	David Janke

15:00–15:15	Experimental set-up to derive reductions of ammonia losses from field-applied manures and fertilisers	Jan Huijsmans
15:15–15:30	In situ quantification of methane leaks from 15 biogas facilities in France using an Optical Gas Imaging camera and a “flow-estimator” model	Nicolas Auvinet

Parallel session 4 – *Policy and Regulation (Chair – Dr Gerard Velthof, Wageningen Environmental Research)*

Guildhall Committee Rooms

Time	Presentation name	Presented by
14:00–14:15	The use of public data to target additional spatialized measures to reduce nitrate pollution of surface water: the case of Brittany (France)	Laurence Loyon
14:15–14:30	Improving process and regulation: sustainable application of organic materials to land in Scotland	Alan Cundill
14:30–14:45	Future nutrient pollution and coastal eutrophication in Europe under global change	Aslıhan Ural-Janssen
14:45–15:00	Exploring the adoption path of bio-based fertilisers: A combined approach of theory of planned behavior and Van Westendorp price sensitivity meter among farmers in the EU	Egor Moshkin
15:00–15:15	Opportunities and challenges organo-mineral fertilisers can play in tackling food security – a perspective	Ruben Sakrabani
15:15–15:30	Manure management under the industrial emission directive: Impact on ammonia emissions	Katrin Kaltenegger

Parallel session 4 – *Treatment and Processing Technologies (Chair – Prof Laura Zavattaro, University of Turin)*

Guildhall Council Chambers

Time	Presentation name	Presented by
14:00–14:15	Co-recovery of phosphorus and proteins from swine manure using fruit wastes	Matias Vanotti
14:15–14:30	Phosphorous removal and recovery from cattle slurry using electrocoagulation	Marie Kirby

14:30–14:45	A pilot plant for nitrogen recovery from animal slurries by a simplified ammonia stripping process	Giorgio Provolo
14:45–15:00	An advanced treatment system for nutrient recovery from digested slurry	Elio Dinuccio
15:00–15:15	Biochar action on nitrogen cycle along composting: a key to reduce nitrogen emissions	Anne Tremier
15:15–15:30	Changes in the concentrations of macroelements in the soil during fertilization with granular organic and organic mineral fertilizers	Romas Mazeika

Parallel session 5 – *Air and Water Quality (Chair – Dr Paul Newell Price, ADAS)*

Corn Exchange Auditorium

Time	Presentation name	Presented by
16:00–16:15	Dissolved organic matter produced in livestock excreta is an overlooked nutrient source driving eutrophication impacts in fresh waters	Penny Johnes
16:15–16:30	Regionalized modelling of the fate of recycled fertiliser P in agricultural fields: Development of the life cycle inventory model PLCI 2.0.	Maja Rydgard
16:30–16:45	Higher nitrate leaching under cattle slurry than under mineral fertiliser, but soil N as major source of leached nitrate	Hanna Frick
16:45–17:00	Effects of manure and mineral fertiliser nitrogen supply on crop nitrogen utilisation and nitrate leaching on cut grassland	Wim van Dijk

Parallel session 5 – *Treatment and Processing Technologies (Chair – Dr Brigitte Eurich-Menden, KTBL)*

Guildhall Committee Rooms

Time	Presentation name	Presented by
16:00–16:15	The importance of utilization of swine manure resources for the sustainability of livestock production	Airton Kunz
16:15–16:30	Characterization and valorisation of biogas digestate and derived organic fertilizer products from separation processes	Henrik B Moller



16:30–16:45	Ammonia conversion and/or recovery from wastewater containing nitrate and/ammonia using Integrated electrochemical membrane flow reactor	Wen Zhang
16:45–17:00	Fruit and vegetable waste can be upcycled using different technologies to produce building blocks for bio-based fertilisers blends: upscaling from lab to field	Fien Amery

Parallel session 5 – *Nutrient Utilisation (Chair – Dr Prysor Williams, Bangor University)*

Guildhall Council Chambers

Time	Presentation name	Presented by
16:00–16:15	Estimating co-product management effects on productivity and environment in European farming systems	Wytse Vonk
16:15–16:30	Cost benefit analysis and environmental impact Assessment of compost use from food and organic waste in Australia	Mary Addae
16:30–16:45	Can digestate application improve nitrogen use efficiency, reduce nitrate leaching and greenhouse gas emissions in organic cropping?	Jochen Mayer
16:45–17:00	French excretions of nitrogen and phosphorus: current losses in the sanitation system and (non) circularity in agriculture	Thomas Starck

**Thursday 14<sup>th</sup> September**

Parallel session 6 – *Promoting Best Practice (Chair – Dr William Burchill, University College Cork)*

Corn Exchange Auditorium

Time	Presentation name	Presented by
09:30–09:45	Using advice to make a difference – the story of Catchment Sensitive Farming, so far	Nigel Simpson
09:45–10:00	20 Measures: methods to minimise diffuse pollution and increase nutrient use efficiency from biosolids recycling	Matt Taylor
10:00–10:15	Farm specific N and P fertilisation budgeting in Dutch Dairy Farms	Colin Dekker

10:15–10:30	Developing an integrated approach to enhance soil fertility and favour recarbonization of Mediterranean agricultural soils: a case study from Valencian Region	Raul Moral
10:30–10:45	Manure and organic amendment test database development in the US	Nancy Bohl Bormann
10:45–11:00	Dirty matters: The soil game	Christina van Midden

Parallel session 6 – *Air and Water Quality (Chair – Dr Johanna Pedersen, Aarhus University)*

Guildhall Committee Rooms

Time	Presentation name	Presented by
09:30–09:45	Progress in estimation of ammonia loss from field-applied slurry: ALFAM2 model developments	Sasha Hafner
09:45–10:00	DATAMAN: analysis of a global database on greenhouse gas emission factors for manure management	Tony Van der Weerden
10:00–10:15	Mitigation potential of greenhouse gas and nitrogen emissions in key European dairy farming systems	Federico Dragoni
10:15–10:30	A simple spreadsheet model for estimation of methane emission from pig and dairy cow barns and external storage of manure	Anders Peter Adamsen
10:30–10:45	Effects of pig diets with low nitrogen content on nitrogen excretion, manure characteristics and gas emissions	Francine De Quelen
10:45–11:00	NH <sub>3</sub> and GHG emissions from maize cultivation for silage on a sandy-loam soil fertilized with three different slurries	Flavia Dela Pierre

Parallel session 6 – *Nutrient Utilisation (Chair – Prof Ruben Sakrabani)*

Guildhall Council Chambers

Time	Presentation name	Presented by
09:30–09:45	FERTIMANURE: Producing and testing high-added value fertilisers from animal manure	Ana A. Robles Aguilar
09:45–10:00	The assessment of organo-mineral fertilisers as a viable commercial product in the UK	Emma Burak

10:00–10:15	Bottom ash from combustion of chicken manure as a fertiliser material	Maria Pilar Bernal
10:15–10:30	Reduction of mineral fertiliser use without sacrificing yields while contributing to a circular economy with RENURE ammonium nitrate	Bert Everaert
10:30–10:45	Effect of soil tillage on agronomic efficiency of two novel biobased fertilising products	Andrea Bauerle
10:45–11:00	Testing and evaluation of laboratory methods for the assessment of mineralizable nitrogen from bio-based fertilizers	Lucilla Agostini