



The 6th Agriculture Green Development Online Symposium

Sino-Dutch AGD project semi-annual meeting

**第六届农业绿色发展国际研讨会
暨中荷 AGD 交叉创新型人才培养项目季度会议**

Location: Online/Teams (地点: 线上)

29th June-1st July 2022 (2022 年 6 月 29 -7 月 1 号)

Organizers (主办方) : China Agricultural University (中国农业大学)

Wageningen University & Research (瓦赫宁根大学)

Hainan University (海南大学)

Academic support: Frontiers of Agricultural Science and Engineering

学术支持: 中国工程院《农业科学与工程前沿》



Day 1 29 June 2022, Chair: Prof. Carolien Kroeze		
8:00-8:10 (Dutch) 14:00-14:10 (China)	Opening	Prof. Carolien Kroeze
8:10-8:20 (Dutch) 14:10-14:20 (China)	General AGD introduction	Prof. Yong Hou
Theme 1 Green Plant Production Chair: Prof. Wenfeng Cong		
8:20-9:30 (Dutch) 14:20-15:30 (China)	Project presentations Theme 1 Each 10 minutes	7 Grade-2019 PhD candidates Theme 1
9:30-10:00 (Dutch) 15:30-16:00 (China)	Keynote 1 “Europe's soybean self-sufficiency in the context of climate change”	Prof. David Makowski (INRA)
Break		
10:20-12:00 (Dutch) 16:20-18:00 (China)	Project pitches Theme 1 Each 10 minutes	10 Grade-2020 PhD candidates Theme 1
Day 2 30 June 2022		
Theme 2 Green Animal Production Chair: Prof. Yong Hou		
8:00-8:30 (Dutch) 14:00-14:30 (China)	Keynote 2 “Food systems and value chain in sustainability research of livestock production”	Prof. Simon Oosting (WUR)
8:30-9:40 (Dutch) 14:30-15:40 (China)	Project presentations Theme 2 Each 10 minutes	7 Grade-2019 PhD candidates Theme 2
Break		
10:00-11:10 (Dutch) 16:00-17:10 (China)	Project pitches Theme 2 Each 10 minutes	7 Grade-2020 PhD candidates Theme 2
Theme 3 Green governance Chair: Prof. Nico Heerink		
11:10-11:40 (Dutch) 17:10-17:40 (China)	Keynote 3 “Reform of groundwater irrigation management and policies in China”	Prof. Jinxia Wang (Peking University)

11:40-12:30 (Dutch) 17:40-18:30 (China)	Project presentations Theme 3 Each 10 minutes	5 Grade-2019 PhD candidates Theme 3
Day 3 1 July 2022 Chair: Prof. Carolien Kroeze		
8:00-9:20 (Dutch) 14:00-15:20 (China)	Project pitches Theme 3 Each 10 minutes	8 Grade-2020 PhD candidates Theme 3
Theme 4 Green environment Chair: Prof. Carolien Kroeze		
9:20-9:50 (Dutch) 15:20-15:50 (China)	Keynote 4 "The Dutch nitrogen crisis: causes, impacts and possible solutions"	Prof. Wim de Vries (WUR)
9:50-10:00 (Dutch) 15:50-16:00 (China)	Invited presentation "Long-term impacts of fertilizer inputs on nitrogen use efficiency for different cropping systems and site conditions in China"	Xingjuan Zhu (CAAS PhD candidate)
10:00-10:50 (Dutch) 16:00-16:50 (China)	Project presentations Theme 4 Each 10 minutes	5 Grade-2019 PhD candidates Theme 4
Break		
11:10-12:00 (Dutch) 17:10-18:00 (China)	Project presentations Theme 4 Each 10 minutes	5 Grade-2019 PhD candidates Theme 4
12:00-12:40 (Dutch) 18:00-18:40 (China)	Project pitches Theme 4 Each 10 minutes	4 Grade-2020 PhD candidates Theme 4
12:40-12:50 (Dutch) 18:40-18:50 (China)	Closing	Prof. Carolien Kroeze Prof. Yong Hou

Appendix 1: Project presentations by Grade-2019 PhD students

Date	Reporters	Title
29 June	Theme 1 Green Plant Production	
8:20-9:30 (Dutch)	Zhan Xu	Using positive deviance to improve sustainability of crop production farms in the North China Plain.
14:20-15:30 (China)	Zhengyuan Liang	Can diversified crop rotations with conventional crop management enhance farming sustainability in the North China Plain?

	Jiali Cheng	Farmers' perceptions on agroecosystem services supply in Quzhou, North China Plain: patterns, trends, and relationships
	Jie Lu	Understand impact of phenotypic plasticity on nitrogen use efficiency through plant to plant interactions
	Lu Liu	Closing nutrition gap through optimizing crop production and nutrients management in North China Plain
	Mengshuai Liu	Understanding the roles of negative plant-soil feedback and main soil-borne pathogens in North China Plain agriculture
	Yujie Yang	Optimizing genotype-environment-management interactions for maize cultivars to adapt to climate change in different zones in China
30 June	Theme 2 Green Animal Production	
8:30-9:40 (Dutch) 14:30-15:40 (China)	Hanlu Zhang	Fermentation characteristics of different protein sources and their effects on the large intestine of growing pigs
	Hao Ye	Effects of protein levels and kinetics in lactating sow diet on sow performance, litter characteristics and environments
	Shiyi Zhang	Protein and starch digestion kinetics and effect of fibres on protein digestion in pigs
	Tao Zhang	Redistributing the manure in and between counties at lowest costs
	Guichao Dai	Boosting domestic feed production with less environmental cost through optimized crop distribution
	Zhenyu Wang	Microbiota-mediated detrimental effect of dietary fiber deprivation in pigs and evaluation of dietary fiber components
	Yaowen Zhang	Fermentation kinetics of resistant starch and its interaction with protein in large intestine of growing pigs
30 June	Theme 3 Green governance	
11:40-12:30 (Dutch) 17:40-18:30 (China)	Jinghan Li	The Science and Technology Backyard as a local level innovation intermediary in rural China
	Zhiwei Yu	The supporting system: address the market failure in technology innovation
	Mingzhao Han	Evaluating the potential of aqueous oleosome extraction to produce resource-efficient oil-in-water emulsions from capsicum seeds
	Hongyi Cai	Achieving healthy, low-cost, and environmentally sustainable diets in China
	Taian Deng	Promoting Vegetable Consumption in rural China for Healthy and Sustainable Diets
1 July	Theme 4 Green environment	
10:00-10:50 (Dutch) 16:00-16:50 (China)	Yanan Li	Plastic pollution in Chinese river from human waste and agriculture
	Qi Zhang	Modelling flows of antibiotics from land inputs to the water

	Fanlei Meng	Nitrogen losses from food production in Quzhou and its environmental targets
	Zhibiao Wei	From waste to resource - Quzhou as a case towards circular nitrogen use in the agri-food system
	Muying Duan	Changing policy mixes towards sustainable groundwater use in China, 1981-2021
Break		
11:10-12:00 (Dutch) 17:10-18:00 (China)	Yu Gu	Combined field and model based approaches for large scale sustainable phosphorus management
	Hongyu Mu	Ecological risk assessment of pesticides on soil biota: from field observation to hazard ranking model
	DongFang Zheng	Optimizing P management strategies based on soil P adsorption-desorption and rhizosphere processes
	Luncheng You	Impacts of nutrient, crop and soil management on nitrogen use efficiency
	Zhilong He	The effects of NH ₃ mitigation measures on GHGs emission in crop-layer hen production system — a case study in Quzhou county

Appendix 2: Project pitches by Grade-2020 PhD students

Date	Reporters	Title
29 June	Theme 1 Green Plant Production	
10:20-12:00 (Dutch) 16:20-18:00 (China)	Bowen Ma	Reducing greenhouse gas emissions through maize-soybean intercropping and optimized N management in the North China Plain
	Yanjie Chen	Quantifying and promoting farmland ecosystem services for agricultural green development
	Yalin Liu	Intercrops with C ₄ -cereals increase efficiency of land and nitrogen fertilizer use; a meta-analysis
	Laiquan Luo	Digital twin driven design and control for a safe and versatile soft robotic gripper
	Yuxiang Wang	Assess the potential effects of illumination on UAV RGB-derived VIs in different planting systems and get consistent representation of them under different illumination
	Zhaoqi Bin	Learning from Nature: Manipulation of plant functional trait-driven plant-soil feedback towards agricultural systems optimization
	Yizan Li	Building a Hospital for Soil Health Diagnosis and Treatment: a Modelling Approach

	Bo Wang	Reduce water productivity gap by optimizing irrigation regime for winter wheat-summer maize system in North China Plain using SWAP model
	Jiyu Jia	The mechanism and process of soil microbiomes driving ecosystem multifunctionality
	Ruotong Zhao	Mechanisms of mycorrhizal fungi-denitrifiers interaction to reduce N ₂ O emissions
30 June	Theme 2 Green Animal Production	
10:00-11:10 (Dutch) 16:00-17:10 (China)	Dongdong Lu	Consumption of dietary fiber with different physicochemical properties during late pregnancy alters the gut microbiota and improves constipation in sow
	Zhenpeng Hu	Pig toilet as a solution for sustainable welfare-friendly pig production
	Rui Shi	A bio-economic model for a typical dairy farm in North China
	Yujuan He	Influence of mixed ratio and phosphorus on the Legacy effect of mixed grassland and its biological mechanism
	Fei Xie	Self-training pig toilet system based on automatic recognition of pig elimination behavior.
	Hao Liu	Forage quality in intercropping
	Weitong Long	An environmental-economic framework for analysing impacts of greenhouse gas mitigation options
1 July	Theme 3 Green governance	
8:00-9:20 (Dutch) 14:00-15:20 (China)	Junhan Zhang	Network Design of Perishable Fresh Food in Developing Countries
	Yujun Wei	Valorising fruit and vegetable surplus and sidestreams: technologies, markets, and sustainability
	Xiaodan Li	Smallholder farmers' sustainability practices in the North China Plain—insights from China's Science and Technology Backyards
	Xiaoxia Guo	Optimization and realization of green planting technology system for main crops based on multi-objective coordination
	Zhiyao Chang	Disparities of diet-related health risks caused by geographic and socio-demographic diversity: A comparison of five Chinese regions
	Chenqiang Qin	Exploring the application of oleosomes in emulsified sausage
	Ruijin Luo	Environmental performance of the Green Navel Orange Supply Chain —Take Gannan as an example
	Yi Zhang	Green Food carbon sink capacity and sustainable potential
1 July	Theme 4 Green environment	

12:00-12:40 (Dutch)	Donghao Xu	Assessing long-term optimal management strategies to mitigate soil acidification and minimize nutrient losses
	Sijie Feng	Three decades of variation and sources attribution of atmospheric nitrogen deposition over China's 33 sub-basins
18:00-18:40 (China)	Haoran Li	The decision of sense and sensibility: Consumer acceptance towards the names of cultured meat
	Juhui Chen	Labels, Retailer Recommendations and Pesticide use decision: Alternative or complementary?