



The 4th Agriculture Green Development Online Symposium

Sino-Dutch AGD project semi-annual meeting

**第四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)

12th-14th July 2021 (2021 年 7 月 12-14 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 12 July 2021, Chair: Prof. Carolien Kroeze		
8:00-8:10 (Dutch) 14:00-14:10 (China)	Opening	Prof. Carolien Kroeze Prof. Fusuo Zhang
8:10-8:20 (Dutch) 14:10-14:20 (China)	General AGD introduction	Prof. Yong Hou
Theme 1 Green Plant Production		
8:20-10:20 (Dutch) 14:20-16:20 (China)	Project presentations Theme 1 Each 15 minutes	8 Grade-2019 PhD candidates Theme 1
Break		
10:40-11:10 (Dutch) 16:40-17:10 (China)	Keynote “Doing something new for AGD using meta-analysis”	Prof. Wopke van der Werf
11:10-11:50 (Dutch) 17:10-17:50 (China)	Project pitches Theme 1 10x 3 mins pitches & 10 mins discussion	10 Grade-2020 PhD candidates Theme 1
Day 2 13 July 2021 Chair: Prof. Wenfeng Cong		
Theme 2 Green Animal Production		
8:00-8:30 (Dutch) 14:00-14:30 (China)	Keynote “Feeding fibre-rich by-products to pigs”	Prof. Walter Gerrits
8:30-10:15 (Dutch) 14:30-16:15 (China)	Project presentations Theme 2 Each 15 minutes	7 Grade-2019 PhD candidates Theme 2
Break		
10:30-11:00 (Dutch) 16:30-17:00 (China)	Project pitches Theme 2 7x 3 mins pitches & 10 mins discussion	7 Grade-2020 PhD candidates Theme 2
Theme 3 Green governance		
11:00-11:25 (Dutch) 17:00-17:25 (China)	Keynote “Rural Household Behaviour and Agriculture Green Development”	Prof. Nico Heerink

11:25-12:25 (Dutch) 17:25-18:25 (China)	Project presentations Theme 3 Each 15 minutes	4 Grade-2019 PhD candidates Theme 3
Day 3 14 July 2021 Chair: Prof. Carolien Kroeze		
8:00-8:35 (Dutch) 14:00-14:35 (China)	Project pitches Theme 3 8x 3 mins pitches & 10 mins discussion	8 Grade-2020 PhD candidates Theme 3
Theme 4 Green environment		
8:35-9:00 (Dutch) 14:35-15:00 (China)	Keynote “Towards more sustainable groundwater use”	Prof. Petra Hellegers
9:00-10:00 (Dutch) 15:00-16:00 (China)	Project presentations Theme 4 Each 15 minutes	4 Grade-2019 PhD candidates Theme 4
Break		
10:15-11:30 (Dutch) 16:15-17:30 (China)	Project presentations Theme 4 Each 15 minutes	5 Grade-2019 PhD candidates Theme 4
11:30-11:55 (Dutch) 17:30-17:55 (China)	Specialising and integrating forces in agricultural firms	Prof. Hans-Peter Weikard
11:55-12:15 (Dutch) 17:55-18:15 (China)	Project pitches Theme 4 4x 3 mins pitches & 5 mins discussion	4 Grade-2020 PhD candidates Theme 4
12:15-12:30 (Dutch) 18:15-18:30 (China)	Closing	Prof. Carolien Kroeze, Prof. Yong Hou

Appendix 1: Project presentations by Grade-2019 PhD students

Date	Reporters	Title
12 July	Theme 1 Green Plant Production	
8:20-10:20 (Dutch)	Zhan Xu	Village typology and challenges of agricultural sustainability in relation to the diversity of crop production in Quzhou county, China
14:20-16:20 (China)	Zhengyuan Liang	Multi-aspect sustainability assessment of cropping systems in Quzhou county

	Jiali Cheng	Designing diversified agricultural landscape to enhance ecosystem services in Quzhou, North China Plain
	Muying Duan	Transition towards more sustainable agriculture groundwater use in the North China Plain
	Jie Lu	Exploring maize shoot and root interactions in relation to nitrogen availability: A 3D modeling approach
	Lu Liu	Closing nutrition gap through optimizing crop production and nutrients management in North China Plain
	Mengshuai Liu	How negative plant-soil feedbacks and soil-borne diseases affect cropping systems in Quzhou and North China Plain
	Yujie Yang	Integrate models to investigate G×E×M to identify high-NUE and high-yield maize germplasm in China
13 July	Theme 2 Green Animal Production	
8:30-10:15 (Dutch) 14:30-16:15 (China)	Hanlu Zhang	Protein fermentation characteristics of different protein sources in hindgut of growing pigs
	Hao Ye	Effects of dietary protein degradation kinetics on sow and litter characteristics at lactation
	Shiyi Zhang	Protein digestion kinetics and effect of fibres on protein digestion on pigs
	Tao Zhang	Farmers' preferences for livestock manure recycling incentives: a choice experiment study in China
	Guichao Dai	China can produce more feed at low resources cost and high farmers income through feed crop redistribution
	Zhenyu Wang	Microbiota-mediated detrimental effect of dietary fiber deprivation in pigs and its implication for pig production and AGD
	Yaowen Zhang	Fermentation kinetics of resistant starch and its interaction with protein in large intestine of growing pigs
13 July	Theme 3 Green governance	
11:25-12:25 (Dutch) 17:25-18:25 (China)	Jinghan Li	Promoting farmers' sustainable production behavior by systematic innovation
	Zhiwei Yu	The Impact of the Cooperatives on the AGD Behavior of Small Householders
	Hongyi Cai	Achieving healthy, low-cost, and environmentally sustainable diets in China
	Taian Deng	Promoting Fruit and Vegetable Consumption in China for Healthy and Sustainable Diets
14 July	Theme 4 Green environment	
9:00-10:00 (Dutch) 15:00-16:00 (China)	Yanan Li	Multipollutant assessment of water quality and food production for agricultural green development in China: an integrated, multi-scale modelling approach
	Qi Zhang	Agricultural Green Development pathways for food and clean water in China

	Fanlei Meng	Integrated nitrogen management for the green agriculture-environment system in North China Plain
	Zhibiao Wei	From waste to crop: closing N, C and water cycles in Quzhou County (Hebei province, China)
Break		
10:15-11:30 (Dutch) 16:15-17:30 (China)	Yu Gu	Combined field and model-based approaches for large scale sustainable phosphorous management
	Hongyu Mu	Pesticide usage practices and the onsite exposure risks: A case study in the North China Plain
	DongFang Zheng	Optimizing P management strategies based on soil P sorption-desorption and rhizosphere processes
	Luncheng You	Nitrogen cycle and regulation approach in regional farmland
	Zhilong He	Improving potential of nitrogen footprint in eggs production system -a LCA study in North China Plain

Appendix 2: Project pitches by Grade-2020 PhD students

Date	Reporters	Title
12 July	Theme 1 Green Plant Production	
11:10-11:50 (Dutch) 17:10-17:50 (China)	Bowen Ma	Evaluation and simulation of soil ecosystem services of diversified cropping systems in the North China Plain
	Yanjie Chen	Quantifying and promoting farmland ecosystem service for agriculture green development
	Yalin Liu	Meta-analysis on nitrogen use efficiency and biological nitrogen fixation in intercropping system
	Zhaoqi Bin	A meta-analysis between plant functional trait and plant-soil feedback effect: methods and preliminary result
	Laiquan Luo	A safe, versatile Soft Robotic harvester for Autonomous Intercropping
	Yuxiang Wang	Monitoring of the growth of individual crops in the intercropping fields based on UAV images
	Yizan Li	Building a Hospital for Soil Health Diagnosis and Treatment: A Modelling Approach
	Bo Wang	Suitable water planting based on SWAP model under climate changing in North China Plain
	Jiyu Jia	The mechanisms of soil microbiomes driving ecosystem multifunctionality
Ruotong Zhao	Mechanisms of mycorrhizal fungi-denitrifiers interaction to reduce N ₂ O emissions	
13 July	Theme 2 Green Animal Production	

10:30-11:00 (Dutch) 16:30-17:00 (China)	Dongdong Lu	Effects of dietary fiber in lactating sow diets on reproductive performance and litter characteristics
	Zhenpeng Hu	Pig toilet as a solution for sustainable pig production: from a behavioural perspective
	Rui Shi	A possible approach to quantify nitrogen use efficiency of individual cow
	Yujuan He	Legacy effects of mixed grassland on follow-on crops under Phosphorus fertilization
	Fei Xie	The pig toilet as solution for animal welfare and environmental-friendly pig production
	Hao Liu	Maize-alfalfa intercrop silage: an innovative roughage source for Chinese dairy farm
	Weitong Long	Integrating crop and livestock systems in China: A social welfare analysis
14 July	Theme 3 Green governance	
8:00-8:35 (Dutch) 14:00-14:35 (China)	Junhan Zhang	The Chinese fresh fruit supply chain network: A case study on Gannan (south-Jiangxi) navel orange industry
	Yujun Wei	The general framework for evaluating food waste valorization strategy
	Xiaodan Li	Knowledge exchange and spillover effects——insights from science and technology backyard
	Xiaoxia Guo	Optimization and realization of green planting technology system for main crops based on multi-objective coordination
	Zhiyao Chang	Descriptive analysis of sustainable diets in China
	Chenqiang Qin	Explore green transformation of plant extract industry: extract oil body from capsicum seeds (by-product in CCGB)
	Ruijin Luo	The status of the green navel orange supply chain networks: several cases in Gannan
	Yi Zhang	A review of the work about key foreign and domestic enterprises in the sustainability of agricultural production
14 July	Theme 4 Green environment	
11:55-12:15 (Dutch) 17:55-18:15 (China)	Donghao Xu	Large scale impacts of management approaches on soil acidification and cadmium mobilization of croplands in China
	Sijie Feng	Solutions for Air and Water Pollution for Agriculture Green Development in China
	Haoran Li	Labelling for sustainability: consumer choice and inner mechanism
	Juhui Chen	The impact of pesticide labels on pesticide use