会议日程　Program

会议地点：西北农林科技大学交流中心 104 会议室

Location：Conference Room 104 in Communication Centre, NWAFU

Oct 9, 2024			
时间 Time	**报告人 Speaker**	**内容 Activities**	**主持人 Chair**
8:30-8:40	**作物抗病论坛开幕式 Opening Speech** ● 副校长罗军致辞 Address by Prof. Jun LUO, Vice President，NWAFU ● 农学院院长李学军致辞 Address by Prof. Xuejun LI, Dean of College of Agronomy, NWAFU ● 单卫星教授致辞 Address by Prof. Weixing SHAN, NWAFU		单卫星 教授 Prof. Weixing SHAN
8:40-8:50	**合影 Group Photo**		
8:50-9:30	王锡民 教授 新加坡国立大学 Prof. Sek Man WONG National University of Singapore， Singapore	Identification of putative binding interface of lipid PI(3,5)P2 on rice black-streaked dwarf virus (RBSDV) P10 protein	张猛教授 Prof. Meng ZHANG
9:30-10:00	詹家绥 教授 瑞典农业大学 Prof. Jiasui ZHAN Swedish Agricultural University, Sweden	Quantitative plant resistance promotes pathogen adaptation to ecological stress	
10:00-10:30	王燕 教授 南京农业大学 Prof. Yan WANG Nanjing Agricultural University, China	Plant receptor-like protein activation by a microbial glycoside hydrolase confers broad spectrum disease resistance	
茶歇 Tea & Coffee 10:30-10:40			
10:40-11:10	姚楠 教授 中山大学 Prof. Nan YAO Sun Yat-sen University, China	Recent progress in understanding the role of sphingolipids during plant stress responses	王文明教授 Prof. Wenming WANG
11:10-11:40	程旭 研究员 中国农业科学院深圳农业基因组研究所 Prof. Xu CHENG	The impacts of rhizosphere microbiome on potato	

	Agricultural Genomics Institute at Shenzhen, Chinese Academy of Agricultural Sciences, China		
11:40-11:55	魏玉树 西北农林科技大学 Mr. Yushu WEI Northwest A&F University, China	A reference *Nicotiana glutinosa* genome enables genetic dissection of cell death pathway triggered by *Phytophthora* effectors	
12:00-14:00 **午餐 用餐地点：外专公寓西餐厅** **Lunch Location：Western restaurant，Guest House**			
14:00-14:30	张猛 教授 西北农林科技大学 Prof. Meng ZHANG Northwest A&F University, China	Bioengineering camelina for oil with extra high ω3 fatty acid	姚楠教授 Prof. Nan YAO
14: 30-15: 00	张美祥 教授 陕西师范大学 Prof. Meixiang ZHANG Shaanxi Normal University, China	A robust high-throughput functional screening assay for plant pathogen effectors using the TMV-GFP vector	
15: 00-15: 30	朱旺升 教授 中国农业大学 Prof. Wangsheng ZHU China Agricultural University, China	Natural variation and functiona alysis of disease resistance genes in maize	
15: 30-15:45	赵艳 西北农林科技大学 Ms. Yan ZHAO Northwest A&F University, China	Transcription factor *ERF019* negatively regulates plant disease resistance by directly repressing *PR1* and activating *DISC1*	
茶歇 Tea & Coffee **15: 45-16: 00**			
16:00-16:30	王文明 教授 四川农业大学 Prof. Wenming WANG Sichuan Agricultural University, China	Identification of immune regulators that coordinate disease resistance with yield traits in rice	程旭 教授 Prof. Xu CHENG
16: 30-17: 00	孙广宇 教授 西北农林科技大学 Prof. Guangyu SUN Northwest A&F University, China	Mechanism of potassium nutrition promoting anti-rot disease in apple trees	
17: 00-17: 30	张森磊 副教授 西北农林科技大学 Associate Prof. Senlei ZHANG Northwest A&F University, China	Symbiotic nitrogen fixation and its application in soybean breeding	
17: 30-17: 45	董婧雯 西北农林科技大学 Ms. Jingwen DONG Northwest A&F University, China	The cysteine protease RTP6 negatively regulates plant disease resistance by modulating stability of copper chaperone ATX1	
19:00 **晚餐 用餐地点：外专公寓中餐厅** **Dinner Location：Chinese restaurant，Guest House**			

Oct 10, 2024			
时间 Time	**报告人 Speaker**	**内容 Activities**	**主持人 Chair**
8:30-9:10	康振生 院士 西北农林科技大学 Prof. Zhensheng KANG, Northwest A&F University, China	Wheat stripe rust and food security	单卫星 教授 Prof. Weixing SHAN
9:10-9:40	瓦迪斯·恩图卡基斯 教授 英国华威大学 Prof. Vardis NTOUKAKIS University of Warwick, UK	The role of MYST histone acetyltransferases in plant immunity	
9:40-10:00	黄淑华 副研究员 陕西省杂交油菜研究中心 Associate Prof. Shuhua HUANG Hybrid Rapeseed Research Center of Shaanxi province, China	The Brassinosteroid Receptor StBRI1 Promotes Tuber Development by Enhancing Plasma Membrane H^+-ATPase Activity in Potato	
茶歇 Tea & Coffee 10:00-10:15			
10:15-10:45	帕特里克·谢弗 教授 德国吉森大学 Prof . Patrick SCHÄFER Justus Liebig University, Germany	RNA interference and priming in crop protection	王国栋 教授 Prof. Guodong WANG
10:45-11:15	王钢 教授 福建农林大学 Prof. Gang WANG Fujian Agriculture and Forestry University, China	Release of a ubiquitin brake activates OsCERK1-triggered immunity in rice	
11:15-11:45	陈延辉 博士 先正达集团 Dr. Yanhui CHEN Syngenta Group, China	Editing Susceptible Genes to Confer Tobamovirus Resistance in Tomato	
11:45-14:00 午餐 用餐地点：外专公寓西餐厅 Lunch Location：Western restaurant，Guest House			

时间 Time	报告人 Speaker	内容 Activities	主持人 Chair
14:00-14:30	赵天永 教授 西北农林科技大学 Prof. Tianyong ZHAO Northwest A&F University, China	Regulation of maize plant abiotic stress tolerance through manipulation of raffinose biosynthetic pathway	袁黎教授 Prof. Li YUAN
14:30-15:00	张勇 教授 西南大学 Prof. Yong ZHANG Southwest University, China	Diversified CRISPR-Cas Technologies for Plant Genome Editing and Germplasm Innovation	
15:00-15:30	贾津布 教授 华南农业大学 Prof. Jinbu JIA South China Agricultural University, China	Co-transcriptional and post-transcriptional splicing mechanism revealing by FLEP-seq	
15:30-15:45	刘泽文 硕士生 西北农林科技大学 Mr. Zewen LIU Northwest A&F University, China	Recognition of late blight effector PiAvr3a by potato disease resistance protein R3a is mediated by its host target StCAD7	
茶歇 Tea & Coffee **15: 45-16: 00**			
16:00-16:30	王国栋 教授 陕西师范大学 Prof. Guodong WANG Shaanxi Normal University, China	Signaling peptides as environmental mediators	朱旺升 教授 Prof. Wangsheng ZHU
16:30-17:00	袁黎 教授 西北农林科技大学 Prof. Li YUAN Northwest A&F University, China	Unlocking Diploid Seedless Watermelons through Disruption of Essential Reproductive Genes	
17:00-17:15	王亚鹏 博士 西北农林科技大学 Dr. Yapeng WANG Northwest A&F University, China	Inactivation of a Lysine-Histidine Transporter gene confers southern leaf blight resistance in maize	
17:15-17:55	默里·格兰特 教授 英国华威大学 Prof. Murray GRANT University of Warwick, UK	Pathogen manipulation of plant disease resistance signalling by metabolomic mimicry	
17:55-18:00	**论坛总结** **Conclusion remarks**		单卫星 教授 Prof. Weixing SHAN
19:00 **晚餐 用餐地点：外专公寓西餐厅** **Dinner Location：Western restaurant，Guest House**			

------- Biography of Speakers -------

Professor Zhensheng KANG

Dr. Zhensheng KANG, is a professor from the college of plant protection of Northwest A&F University. Prof. KANG currently serves as the chief scientist of the State Key Laboratory for Crop Stress Resistance and High-Efficiency Production and the vice president of both Chinese Society for Plant Biology and Plant Protection of China. He is a world-class plant pathologist for his studies on wheat diseases and integrated technologies for sustainable control of wheat diseases. For over four decades, KANG has been focusing on the epidemics of wheat fungal disease, virulence variation of pathogens, molecular mechanisms of wheat-fungi interactions, genetics of wheat resistance and resistant germplasm development, and integrated management of wheat fungal diseases. He has published over 300 scientific papers on top journals such as Cell, Nature Communications, Molecular Plant. He has made remarkable and original achievements in theoretical and applied research on wheat fungal diseases and he is one of the highly cited plant scientists in China. In 2017, he was elected to the Chinese Academy of Engineering for his outstanding contributions in plant protection.

Professor Murray GRANT

Murray GRANT holds the Elizabeth Creak Chair in Food Security at the University of Warwick. His lab uses multidisciplinary approaches to study plant immunity deploying genetics, molecular biology, metabolomics (small molecule profiling), imaging (whole plant and subcellular), gene editing/genetic manipulation and bioelectrical signalling approaches for new discovery.

This integrated approach examines overlap between pathogen associated molecular pattern (PAMP) and effector triggered immunity (PTI and ETI respectively), systemic acquired resistance (systemic immunity) and pathogen effector triggered suppression of immunity (ETS). Within this research programme they are focussing on the emergent field of chloroplast immunity and “metabolic immunity”.

While the research predominately focuses on bacterial phytopathogens and the model plant *Arabidopsis thaliana,* they also study diseases of banana, false banana and ash dieback, a fungal disease which is devastating UK’s landscape.

MG also heads the newly established Elizabeth Creak Horticulture Technology Centre whose goals are to improve UK vegetable crops (primarily leafy brassica’s) using precision breeding (gene editing) techniques.

Professor Sek Man WONG

Sek-Man WONG is an Emeritus Professor of Department of Biological Sciences, National University of Singapore (NUS). He received his PhD degree from Cornell University, USA in 1987, majoring in Plant Pathology and minoring in Horticulture. His research mainly focused on molecular biology of plant viruses, discovery of new viruses, virus detection, replication and translation and synergism in virus-virus and virus-host interactions for management of plant viral diseases. Later, he ventured into research in rice viruses. He has served on the International Committee on Taxonomy of Viruses for >20 years and has been invited to speak in many international symposia and plant pathology conferences. He has received several Faculty teaching excellent awards and an outstanding researcher award from NUS. He is the founding President of the Plant Protection Society (Singapore), established in 2004. He has published over 100 original papers in plant virology, mainly covering viruses infecting orchids and hibiscus. He also served as President of the Asian Societies of Plant Pathology from 2005 to 2007. In 2013, the Singapore President has awarded him The Public Administration Medal (Bronze) and the Long Service Medal (20 years). In 2023, he was elected a Fellow of the International Society for Plant Pathology (ISPP).

Professor Jiasui ZHAN

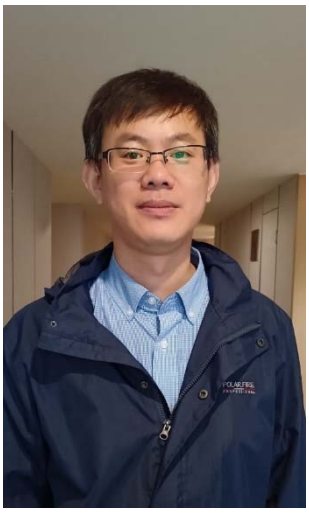
Jiasui ZHAN received his PhD in Genetics from Texas A&M University, College Station in 1998 and his MS in Plant Breeding from the University of the Philippines, Los Banos in 1993. After working for many years as a lecturer at ETH Zurich in Switzerland, a senior reseach scientist at the James Hutton Institute in the UK and a professor at Fujian Agriculture and Forestry University in China, he started serving as the professor (chair) of plant disease epidemiology at Swedish University of Agricultural Sciences, Uppsala in 2018. He mainly studies microorganisms that cause plant diseases, especially important crop diseases such as potato late blight caused by *Phytophthora infestans* and wheat leaf blotch caused by *Zymoseptoria tritici*. His research focuses on the population genetics and evolutionary ecology of plant pathogens. An important goal of his research is to understand how evolutionary forces influence the molecular and functional characteristics of plant pathogens and how interactions between host plants and pathogens during coevolution are affected by climate change using experimental evolution approach. He also attempts to use the resulting knowledge to develop environmentally, ecologically and economically sustainable plant disease management strategies within the principles of diversification, integration and dynamics

Dr. Yanhui CHEN

Yanhui CHEN, PhD, Senior scientist and Agronomic trait team lead in Syngenta Beijing Innovation Center, T4 expert in SinoChem. An accomplished industrial R&D professional with over 15-years working experience in multinational seed company. As Science lead and program leadership, responsible for developing global research strategy for Agronomic traits and supervise research projects execution. Focus on gene discovery and validation of key agronomic traits for corn, soy and other crops with good understanding in biotech R&D pipeline. Excellent track records in successfully leading scientific projects for plant abiotic stress tolerance, yield improvement, flowering time regulation, lodging resistance, disease resistance, plant stature traits, published several peer-reviewed papers and field high value patents.

Professor Xu CHENG

Prof. Xu CHENG, as a researcher, doctoral supervisor, works at Agricultural Genomics Institute at Shenzhen, Chinese Academy of Agricultural Sciences. He graduated from Wageningen University and his research interests include soil and root microbiome, the mechanism of beneficial root microorganisms to protect plant health, promote plant growth, construct complex microbial flora and improve plant salt tolerance etc. At present, he has published more than 20 SCI papers in international academic journals such as The ISME Journal, Environmental Microbiology, New Phytologist and Nature Plants, and has obtained 5 authorized national patents. He was awarded as Shenzhen "overseas high-level talent", member of Chinese Society of Microbiology, member of National Microbial Seed Industry Technology Innovation Strategic Alliance etc.



Associate Professor Shuhua HUAN

Shuhua HUANG: Doctor of Agriculture, postdoctoral fellow of Biology, external Master's supervisor of Northwest A&F University, Associate researcher of Hybrid rapeseed research center of Shaanxi province. Selected in 2022 Yangling Demonstration Zone Youth Breeding Expert Cultivation and Support Plan. Mainly engaged in excellent germplasm and gene resources mining and new varieties breeding of potato and rapeseed. He has successively presided over the General Program of China Postdoctoral Science Foundation, National Natural Science Foundation of China for Youth Program, General Program of National Natural Science Foundation of China. He has been granted 2 national invention patents. In recent years, he has published more than 20 papers in journals such as The Plant Cell, Plant Physiology and Biochemistry, Scientia Horticulturae, Gene, and Frontiers in plant science. Participated in the selection and breeding of new rapeseed varieties Qinyou 2096 and Yingxing 66.

Professor Jinbu JIA

Jinbu JIA is a professor at the College of Agriculture, South China Agricultural University. He earned his Ph.D. in 2017 under the supervision of Professor Weixing SHAN at Northwest A&F University and completed his postdoctoral research under Professor Jixian ZHAI at Southern University of Science and Technology from 2017 to 2019. His research focuses on the mechanisms of plant RNA processing and their roles in regulating growth, development, and responses to environmental changes. His work has been published in leading journals such as Nature Plants, The Plant Cell, Nature Protocols, and Genome Biology.

Professor Vardis NTOUKAKIS

Professor Vardis NTOUKAKIS studied Plant Sciences at the Aristotle University of Thessaloniki and received his PhD degree in Plant Biochemistry from the University of California Riverside. His career has spanned prestigious UK institutions, including research fellowships at the Sainsbury Laboratory and the John Innes Centre, followed by a professorship at the University of Warwick. Professor NTOUKAKIS is widely recognized for his groundbreaking contributions to plant-microbe interactions, biochemistry, and proteomics, with numerous publications in high-impact journals. His research has earned him several prestigious accolades, including a Royal Society University Research Fellowship, and key leadership roles such as theme leader at the Warwick Centre for Integrative Synthetic Biology (WISB) and Director of the Midlands Integrative Biosciences Training Partnership (MIBTP). In his laboratory, Professor NTOUKAKIS laboratory addresses fundamental questions on how plant cells translate receptor activation into downstream signalling, allowing them to express specific genes and mount appropriate responses to pathogen infections. His team also take advantage of strategies employed by plant pathogenic microbes to create tools for synthetic biology.

Professor Patrick SCHÄFER

After studying agricultural sciences, Dr. Patrick SCHÄFER focused on plant-microbe interactions during his PhD and graduated at the Justus Liebig University (Giessen, Germany) in 2003. He obtained further education in genetics and biotechnology in Diter von Wettsteins lab at Washington State University (2004-2005) before he established his own independent research group at the Justus Liebig University with a focus on beneficial and pathogenic plant-microbe interactions. From 2012 – 2020 he held a position as Associate Professor at the University of Warwick (UK) before he was appointed as Professor in Molecular Botany at Ulm University (Germany). Since 2022, he is Professor and head of the Department of Phytopathology at Justus Liebig University Giessen (Germany).

Professor Guangyu SUN

Prof. Guangyu SUN, Plant pathologist and mycologist, specialized in research on several apple diseases: apple Valsa canker, sooty blotch and flyspeck of apple, bitter rot and Glomerella leaf spot, mold core and core rot. The scope of research ranged from pathogen detection to sustainable disease management tactics, fungal molecular phylogenetics, pathogen genetics, interaction of pathogen and host.

Professor Gang WANG

Gang WANG, a professor at Fujian Agriculture and Forestry University (FAFU) and a former postdoctoral fellow at the Center of Excellence for Molecular Plant Sciences (CEMPS), focuses his research on the chitin-mediated basal disease resistance pathway in rice, a key microbe-associated molecular pattern (MAMP) response. His contributions include demonstrating the critical role of cytoplasmic receptor-like kinases in linking cell membrane receptor recognition with MAPK cascades (Molecular Plant, 2017), and more recently, elucidating how plants regulate the activity of the pattern recognition receptor kinase OsCERK1 via ubiquitination and phosphorylation (Nature, 2024)

Professor Guodong WANG

Guodong WANG is a professor in the College of Life Sciences at the Shaanxi Normal University. Using the model plant Arabidopsis, his research is dedicated to unraveling the cellular and genetic intricacies behind how sessile plants sense environmental stimuli to coordinate growth and development, with particular interests on the peptide-mediated plant stem cell homeostasis, organ initiation, and pattern formation. Beyond model systems, his group developed molecular tools for optimizing and breeding crops for better yield.

Professor Wenming WANG

Wen-Ming WANG obtained his PhD degree in 1997 from Sichuan Agricultural University and has postdoc expertise in Rutgers University, University of Arizona, and University of Maryland in U.S.A. Now he is a Professor of Plant Pathology at State Key Laboratory of Crop Gene Exploitation and Utilization in Southwest China, Sichuan Agricultural University. He is also the President of Sichuan Society of Plant Pathology, Associate editor of Phytopathology Research, Handling editor of the Journal of Experimental Botany. His lab works on miRNA-mediated coordination of growth and development with immunity against the blast fungus *Magnaporthe oryzae*, and on resistance mechanisms of rice false smut and Arabidopsis powdery mildew.

Professor Yan WANG

Yan WANG is the Professor of Nanjing Agricultural University in China. She obtained the PhD degree in the department of Plant Pathology in Wageningen University in 2014 and joined the Nanjing Agricultural University afterwards. She works on the plant-*Phytophthora* interaction in the apoplast, with particular interests in the virulence function of *Phytophthora* apoplastic effectors, and recognition of apoplastic effectors by plant cell surface receptors and plant immune signal transduction pathways. She has published over 20 articles as first or corresponding author in the journals including Nature, Nature Review Microbiology, Nature Communications and Plant Cell.

Professor Nan YAO

Nan YAO received her B.A. from Beijing Agriculture University (China) in 1988, and studied at Kobe University, Japan (M.S. and Ph.D.) in plant pathology under the mentorship of Dr. Shigeyuki MAYAMA. While a graduate student, she characterized morphological features of apoptotic cell death in an oat-victorin system. She began her research on mechanisms of plant programmed cell death while a post-doctoral fellow with Dr. Jean GREENBERG at University of Chicago in 2002. There, she contributed to the understanding of cell death related proteins using Arabidopsis as a model system. Dr. YAO joined the faculty of School of Life Science, Sun Yat-sen University in Guangzhou, China, at the end of year of 2005. YAO's laboratory focuses on metabolism and roles of plant sphingolipids important for programmed cell death and abiotic and biotic stresses.

Professor Li YUAN

Dr. Li YUAN is a professor at the College of Horticulture, Northwest A&F University. His research focuses on genetic transformation, gene editing technology, reproductive development, and biotechnological applications in watermelons. Today, he will be presenting on the development of diploid seedless watermelons.

Professor Meixiang ZHANG

Doctor Meixiang ZHANG is a professor and Deputy Dean at the College of Life Sciences, Shaanxi Normal University. His research primarily focuses on the intricate interactions between plants and microbes, with specific emphasis on the mechanisms underlying plant disease resistance. His significant contributions to these fields have led to the publication of numerous articles in high-impact international journals, including Cell Host & Microbe, Molecular Plant, Plant Physiology and Plant Journal. Beyond his research, Prof. ZHANG plays an active role in the academic community. He serves as an editorial board member for BMC Plant Biology and as a young editorial board member for multiple journals, such as New Crops and Crop Health. Today, Prof. ZHANG will present a talk titled “A robust high-throughput functional screening assay for plant pathogen effectors using the TMV-GFP vector”

Professor Meng ZHANG

Dr. Meng ZHANG is mainly involved in research on plant lipid metabolism and bioengineering of oil crops. He has conducted scientific research at the Shaanxi Province Agricultural Reclamation Science and Education Centre, Northwest Agriculture University, the Volcani Centre of the Agricultural Research Organisation, Israel, the National Research Council of Canada, and Michigan State University, USA. After returning to China in 2010, he has been engaged in teaching and scientific research at the College of Agriculture, Northwest Agriculture and Forestry University. He has taught a number of courses at the undergraduate and postgraduate levels, including “Biotechnology”, “Genetics”, “Crop Breeding”, “Molecular Biology”, “AgriBiotechnology”, and “Advances in Crop Science Research”. His research has been supported by the National Natural Science Foundation of China, the Natural Foundation of Shaanxi Province, the Key Project of International Cooperation of Shaanxi Province, the Cyrus Tang Foundation, and the frontier and interdisciplinary research projects of the university. As the first author or corresponding author, his research has been published in leading international journals, such as The Plant Cell, Plant Physiology, The Plant Journal and Journal of Experimental Botany.

Associate Professor Senlei ZHANG

Senlei obtained his PhD from the Biological Research Centre of the Hungarian Academy of Sciences and joined Northwest A&F University in July of last year. Since his master's studies, Senlei has committed his career to investigating the symbiotic relationship between legumes and rhizobia. Utilizing *Medicago* and soybean as model organisms, his research emphasizes the function and regulatory mechanisms of bacteroid differentiation. His findings, published in Nature Plants, suggest that despite the diversity of symbiotic interactions, a highly conserved transcriptional regulatory network may underlie these processes. This discovery holds potential for the incorporation of key symbiotic genes in future crop molecular breeding strategies. His research aims at the improvement of symbiotic nitrogen fixation efficiency and enhancement of the resistance of soybean to environmental stresses.

Professor Yong ZHANG

Professor, College of Life Sciences, Southwest University / School of Life Science and Technology, University of Electronic Science and Technology of China

Dr. Yong ZHANG's research focuses on plant genome editing and synthetic biology. His lab is at the forefront of developing innovative genome engineering tools based on platforms such as TALE, CRISPR-Cas9, Cas12a, and other CRISPR-Cas-related nucleases. These tools, distributed globally through Addgene, enable precise genome editing and transcriptome reprogramming in a wide range of plants, including rice, maize, wheat, Arabidopsis, soybean, cucumber, tomato, and poplar, advancing both basic and applied research to promote food security and safety. He has authored over 130 peer-reviewed articles in prestigious journals such as *Nature Plants*, *Molecular Plant*, and *Nature Communications*. His work has garnered over 11,000 citations on Google Scholar, earning him recognition as a Clarivate Highly Cited Researcher in Plant and Animal Science for 2022 and 2023.

Professor Tianyong ZHAO

Dr. Tianyong ZHAO, Professor, received his B.S. degree in Pomology from Hebei AgriculturalUniversity in Baoding，Hebei Province， China, in 1990, and got his Ph.D. degree in Crop Genetics and Breeding from China Agricultural University in Beijing, China, in 1998. After his Ph.D. studies, Dr. ZHAO went to U.C. Berkeley and the University of Kentucky for postdoc training and then worked as a research scientist at the University of Kentucky. His journey led him to the faculty at Northwest A&F University in 2011. Dr. ZHAO's current research interest focuses on the functional analysis and expression regulation of essential enzyme genes involved in the maize raffinose metabolism pathway, a field with profound implications for plant biology and biotechnology. His research goal is to increase plant abiotic stress tolerance in maize by regulating the maize raffinose metabolism pathway using classic and biotechnology approaches. He has published his research results in peer-reviewed journals, such as Molecular Plant, The Plant Journal, JBC, etc

Professor Wangsheng ZHU

Wangsheng ZHU is a Professor at China Agricultural University and the head of the Plant Biosafety Department. He obtained his PhD at Monash University, Australia (2010-2014), followed by Postdoctoral training at Max Plant Institute for Biology, Germany (2014-2019). Wangsheng is an adjunct professor at Airlangga University, Indonesia, the deputy secretary-general of the Chinese Society for Plant Pathology, Early-Career Editorial Board of Acta Phytopathologica Sinica, and the reviewing editor of the Journal of Integrative Plant Biology. His group is interested in the genetic basis of disease resistance in maize, and also the molecular mechanism of plant-pathogen interaction. The research from Wangsheng's group was recently published in Cell Host & Microbe, Molecular Cell, Molecular Plant, Plant Biotechnology Journal, Genome Biology, and PLoS Genetics.

Ms. Jingwen DONG

Jingwen DONG is a PhD student in Crop Genetics and Breeding in the College of Agronomy. She graduated from Northwest A&F University and received a Bachelor of Agronomy degree in 2018. Since then, she joined Professor Weixing SHAN's lab as a PhD student, focusing on cysteine proteases regulation mechanisms of plant immunity.

Mr. Zewen LIU

Zewen LIU is a third-year Master's student in the Department of Crop Genetics and Breeding in the College of Agronomy. He obtained his bachelor's degree in Science from the College of Plant Protection at Hunan Agricultural University in 2022. He joined Prof. Weixing SHAN’s lab in 2022, focusing on the mechanism of late blight effector PiAvr3a recognized by Potato disease resistance protein R3a

Dr. Yapeng WANG

Yapeng WANG graduated from Northwest A&F University in 2023 with a PhD in Agriculture, then, entered the postdoctoral research institute on biology in Northwest A&F University. He mainly focuses on the molecular mechanism analysis of maize southern leaf blight resistance. The research results were published in Frontiers in Plant Science and BMC Genomic Data.

Mr. Yushu WEI

Yushu WEI is a Ph.D student in the College of Agriculture at Northwest A&F University. He joined Prof. Weixing SHAN's lab in 2018, focusing on the molecular mechanism analysis of plant disease resistance via forward genetics and genomics.

Ms. Yan ZHAO

Yan ZHAO is a PhD student in Crop Genetics and Breeding in the College of Agronomy. She graduated from Northwest A&F University and obtained her bachelor's degree in Agronomy from the College of Agronomy at Northwest A&F University in 2018. She joined Prof Weixing SHAN's lab focusing on the molecular mechanism analysis of negative regulators in plant immunity.

College of Agronomy

Being one of the oldest colleges in the Northwest A&F University (NWAFU), the College of Agronomy started undergraduate training in 1936, and graduate programs in 1960.

The College of Agronomy offers three undergraduate programs, in Agronomy, Plant Science and Technology, and Seed Science and Technology. The Crop Science graduate program offers PhD and postdoctoral training in Crop Genetics and Breeding, and Crop Cultivation and Farming System.

The College of Agronomy has been focused on the national food security, regional and agricultural development in arid areas. Our Crop Science is an internationally leading program in grain production and dryland farming, crop genetics and breeding, and germplasm creation, particularly in breeding and production of wheat, maize, rapeseed, minor cereals and beans.

The wheat genetics and breeding program in the College is particularly a world leader, in distant hybridization, chromosome engineering and breeding, male sterility and heterosis utilization. According to the statistics released by the Library Information Research Center

of China Agricultural University, the College led the number of top-10% JCR wheat research papers published in 2014-2015. Wheat breeding has been the national leader, and the released wheat variety Xinong 979 is currently one of three dominant varieties in China.

The dryland farming in the College is highly ranked in the nation. We have contributed significantly to the principle and practice of dryland farming, by our pioneered research on crop yield potential in rain-fed areas. Our developed technologies, notably the stable planting system in arid areas, autumn-mulching and spring-sowing in dryland, rainwater harvesting cultivation in dryland, have been widely used in northern China in recent years, leading to the development of technology-based modern dryland farming system and significant contribution to regional development. The long-term research and practice led to the development of a course module Dryland Farming and the establishment of Arid Agricultural Research Center.

The Crop Science program consists of five research areas, crop genetic improvement and germplasm innovation, crop heterosis, crop molecular biology, efficient farming system and crop cultivation technology in arid areas, agricultural regional development and recycling agriculture.

The College has 15 national, and ministerial or provincial research platforms/centers, including the State Key Laboratory of Crop Stress Biology for Arid Areas (co-founded), National Breeding & Agro- biotechnology Center Yangling Division, Yangling Branch of China Wheat Improvement Center, Yangling Branch of China Maize Improvement Center, Wheat Breeding Engineering Research Center in Ministry of Education, Key Laboratory of Crop Eco-physiology and Farming System in Northwest Loess Plateau (Ministry of Agriculture), Key Laboratory of Wheat Biology, Genetics and Breeding in Northwest Areas (Ministry of Agriculture), Key Laboratory of Maize Biology, Genetics and Breeding in Northwest Arid Areas (Ministry of Agriculture), Shaanxi Scientific Observation and Experiment Station for Crop Genetic Resources and Germplasm Innovation (Ministry of Agriculture), etc.

Currently, the College has 211 staff and faculty, 170 of them have some teaching duties, including 52 professors or equivalent, 95 associate professors or equivalent. Up to 111 staff and faculty hold a doctorate degree, 39 supervisors for doctoral students and 95 for master's degree students. We have a number of faculty and staff being honored with prestigious national and provincial awards, including one faculty honored with National Outstanding Youth Fund from National Natural Science Foundation of China, two faculty with Ministry of Education Changjiang Scholars Professorship, one winner of Shaanxi Provincial Outstanding Teachers, two faculty with Shaanxi Provincial San Qin Scholars Professorship, four faculty with Ministry of Education New Century Excellent Talents Program, eight with Shaanxi Provincial Three-Five Talent Project, and four with Provincial or Ministerial Experts with Outstanding Contribution.

The College of Agronomy currently hosts2,022 students, including 880 undergraduate students, 987 master's students, and 155 doctoral students. The college has trained 143,939 degree students, including Hongzhang ZHAO, renowned wheat breeder and academician of the Chinese Academy of Sciences, Shuxun YU, academician of the Chinese Academy of Engineering, Yuqing SHENG, founder of agricultural regionalization in China, Ming LU, former Vice Minister of Agriculture, Jingzhi ZHU, deputy director of the People's Congress of Shaanxi Province, Hui WANG, winner of the Highest Achievement Award in Science and Technology in Shaanxi Province, Lihui LI, an Outstanding Talent of Crop Science in the Chinese Academy of Agricultural Sciences, Zengji LIANG, well-known dryland wheat breeder, Weigang XU, a National Outstanding Professional and Technical Personnel, and

Yaoxiang CHEN, winner of the National May 1st Labor Medal, etc.

The College of Agronomy has contributed significantly to national agricultural production and regional development. Among the most important six leading wheat varieties in in the main wheat belt for several decades, the college contributed four. In 1950s, the wheat variety Bima 1 developed by our faculty academician Hongzhang ZHAO made the record in the production acreage in China, up to 6 million hectare per year. In 1980's, Xiaoyan -based series wheat varieties, developed by academician Zhensheng LI, were grown for accumulative acreage of 27 million hectares, which led to the prestigious prize of the National Technology Invention (first class). In 1990s, wheat variety Shaannong 7859, developed by Professor Kun NING, led to the prestigious prize of the State Sci-technological Progress (first class). Professor Jizhou LIN, a pioneer in using single hybrids in maize breeding, led the maize production in Shaanxi by having developed over 20 maize hybrid varieties. Researcher Professor Qibao YU founded the disease nursery-based breeding strategy for cotton, which had an important impact on cotton breeding disease resistance. Our faculty and staff have also made significant progress in recent years in the field of hybrid wheat research, distant hybridization and chromosome engineering.

The College is active in integrating teaching, cutting-edge research, and regional agricultural production. One of our focuses is therefore the promotion of our released crop varieties and our developed agricultural technologies. A notable example is that the wheat variety Xinong 979, developed by Professor Hui WANG, has planted in Henan Province alone over 667 thousand hectares per year, being ranked one of the top three dominant wheat varieties in China.

The College will continue our successful experience in integrating teaching, cutting-edge research, agricultural production, and regional development. We are confident in developing a leading crop science program for agricultural production and regional development in arid areas, by enhancing cross-disciplinary research activities involving crop genetics, biotechnology, information technology, and agricultural engineering.