

# Collaborating For a Better, Greener Future

## Exchanging U.S. and Chinese Agricultural Knowledge and Practices in the Era of Climate Change



## A Report from the 4th Annual U.S. – China Agricultural Roundtable & Education Delegation in China, June 2024



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# Executive Director's Remarks

It is with immense pride and a deep sense of accomplishment that I present this report on the 2024 Agriculture Education Delegation to China—a program that marks a significant milestone in the history of our organization, that we hope will help pave the way for future opportunities for U.S. – China Ag education cooperation.

Organizing the 4th Annual U.S. – China Agriculture Roundtable in China and hosting the attending delegation was a remarkable achievement for USHCA. It exemplifies our unwavering commitment to building bridges and promoting understanding between the United States and China, the #1 agriculture exporter and #1 agriculture importer respectively. We are immensely proud to have played a pivotal role in bringing together such a diverse and influential group of stakeholders to engage in critical conversations that will shape the future of global agriculture.

It is our sincere hope that the relationships forged, the ideas exchanged, and the commitments made during this Roundtable and delegation will yield lasting benefits for both our countries and the world.

*– Min Fan,  
Executive Director  
U.S. Heartland China Association*

# Executive Summary

## The 2024 4th Annual U.S. – China Agriculture Roundtable

For the first time since its inception, the 4th Annual U.S.–China Agriculture Roundtable was held in China from June 7th to 12th. Co-organized by the United States Heartland China Association (USHCA) and multiple Chinese partners, this broad-based bilateral agricultural platform drew senior leaders spanning government, trade, business, education, and think tanks from both countries to convene around the theme: Global Food Security and Agricultural Cooperation. Major American agriculture players and producers of soy, rice, corn, sorghum, dairy, and beef from 9 different states were among those who traveled to China to participate.

First launched in 2021, the annual U.S.–China Agriculture Roundtable honors three legendary agriculture scientists who made significant contributions to our world: Norman Borlaug, Yuan Longping, and George Washington Carver. USHCA launched the first U.S.–China Agriculture Roundtable virtually with the belief that U.S.–China cooperation is essential for our planet to successfully deal with the critical global challenges of our time.

# Executive Summary, cont'd

## The 2024 Agriculture Education Delegation to China

USHCA led a historic Agriculture Education Delegation to attend the Roundtable in China. This 17 day comprehensive delegation provided university leaders, educators, and students with a two-week immersive learning experience in China that incorporated meetings with agriculture education institutions, site visits, and cultural excursions. It included student delegates representing eight 1890 land-grant universities as well as eight faculty members, the President of Kentucky State University, and Dean of agriculture at Tuskegee University.

Over the course of the trip, delegates traveled to 7 different cities in China and visited 5 educational institutions in China. Alongside their Chinese counterparts, they explored rural revitalization efforts, climate smart ag, innovative farming techniques, and valuable best practice sharing that will enhance their own agricultural programs and help to address global food security.

A primary goal for the education delegation was learning about China's agricultural universities. Three on-campus visits were built into the itinerary—in order of visitation—Anhui Agricultural University (AAU), China Agricultural University (CAU), and Northwest Agriculture and Forestry University (NWAUFU). Each of these Chinese universities are developing university-based Extension programs similar to the U.S. land-grant university Extension system and Agricultural Experiment Stations. Of particular note is the special visit to Anhui province, touring AAU's Experimental stations and the rural county's approach to supporting agriculture in Meixian. Student members were able to join their Chinese colleagues in broad discussions on agricultural and rural transitions, emphasizing the great benefits of student-to-student friendships.



# Key Learnings from the Trip

*The 2024 Agriculture Education Delegation to China provided several key insights and takeaways from participating university faculty and students, exploring means to collaborate and deepen future people-to-people exchanges.*

## 1. The Need for U.S.-China Cooperation to Address Global Food Security

Over the course of the trip, delegates were repeatedly confronted by the necessity of both the United States and China working together to address the pressing issue of global food security. As two agricultural powerhouses, discussion often revolved around means of collaboration. A promising avenue is third-party cooperation in Africa, where U.S. and Chinese expertise can be combined to help develop sustainable agricultural practices. Faculty delegates appreciated China's proactive approach in working with developing countries, highlighting the effectiveness of Chinese on-the-ground partnerships in encouraging agricultural growth.

## 2. The Shared Mission to Address Common Challenges

Both the U.S. and China face similar challenges, including the impacts of climate change on agriculture and the migration of young people away from rural areas. With fewer young people interested in pursuing careers in agriculture, both nations share a pressing need to revitalize rural economies and make farming more attractive to the next generation. U.S.-China must cooperate to address these issues, such as sharing best practices, comparing rural Extension programs, or co-developing youth agricultural programs such as the Ag Education Delegation to help spark interest amongst the next generation of agricultural leaders.

## 3. The Abundant Export Opportunities for Minority Producers

For smaller U.S. producers, particularly those from minority backgrounds, the Chinese market offers untapped export opportunities. Multinational corporations could play a key role in bridging this gap by providing access to new markets like China. With the right international partnerships and market access strategies, minority producers in the U.S. could reach global consumers.

## 4. The Goal of Exposing Students to Global Agricultural Practices

Building partnerships with Chinese institutions allows U.S. students to expand their worldview, and learn from different agricultural models. These experiences can inspire the next generation of agricultural leaders and promote the development of solutions

for global challenges. The delegation allowed students to gain unique insights into China's rural development and agricultural systems. They observed how China's top-down governance structure, long-term planning (via Five-Year Plans), and adaptive agricultural strategies have enabled the country to effectively address food security, poverty alleviation, and rural modernization.

## 5. The Connections between 1890 Land-Grant Universities and Chinese Institutions

The delegation underscored the unique opportunity for 1890 land-grant universities to engage with Chinese agricultural universities. Building strong, people-to-people relationships between these institutions can lead to academic collaborations, joint research projects, and the sharing of innovative agricultural techniques. By expanding these newly formed connections, U.S. universities could not only enhance their capacity to serve their communities but also foster long-term cultural and educational exchange between both countries.

*"There is no more important educational and research collaboration that has occurred between China and the U.S. over the past century than that of Sino-U.S. higher education. The benefits for both China and the U.S. are countless and the impacts evident in the progress of both nations...The Ag Education Delegation was intentionally inclusive of 1890 US land-grant universities. These historically black higher education institutions and Chinese agricultural universities are well matched in collaborating on the great global issues associated with rural poverty, climate change, rapid technological changes among many others."*

*Dr. Lou Swanson – Professor Emeritus of Sociology, Colorado State University,  
Special Advisor USHCA Ag Education Delegation to China*



## Outcomes from the Trip

The 2024 Ag Education Delegation showcased a broad range of opportunities for U.S.-China agricultural collaboration, from addressing global food security and supporting small farmers to empowering the next generation of agricultural professionals. The potential for meaningful partnerships between universities, businesses, and governments could pave the way for solutions to shared challenges and bolster both nations' agricultural sectors.

Both sides are eager to continue the dialogue. Over the course of the trip, several International Memorandums of Understanding were presented; 1) between Anhui Agriculture University and Kentucky State University; 2) between Shandong Agriculture University in partnership with the 1890s University Foundation, Tuskegee University, Kentucky State University; 3) between Shanghai Academy of Agriculture Sciences and Tennessee State University; 4) between Qingdao Agricultural University and Tennessee State University.

Additionally, participating faculty from the delegation are exploring funding and grant opportunities to support future endeavors. As of the time of this report's publication, Dr. Suping Zhou has successfully secured funding from Tennessee State University through the Global Faculty Fellows Program Cohort II.

# A Brief History of 1890s Universities and China

The American Civil War (1861–1865) and the post-Civil War decades was a time of national struggle to address slavery and civil rights for African Americans, which ultimately failed to address the many injustices facing African Americans.

In 1862, President Lincoln signed the Land Grant University Act for all U.S. states and territories, providing land to states to finance the establishment of colleges for agriculture. However, in the years following, Southern and border states introduced laws to deny access of African Americans to their 1862 LGUs. In 1890 the second Land Grant Act was established—creating new LGUs to provide higher education for African Americans. These 1890 Universities emerged as a response to the need for agricultural, liberal arts, and technical education in the Southern states, primarily for African Americans. These institutions today are prominent U.S. LGUs.

The 1890 Universities Foundation mobilizes and manages resources to facilitate broad-based programs, initiatives, and approaches across the 1890 Universities system. Over the years, the 1890 Universities have evolved into globally recognized institutions of higher learning, offering diverse academic programs and engaging in cutting-edge research across various agriscience disciplines.

Through strategic partnerships and collaborations with international universities and organizations, these institutions have expanded their reach beyond national boundaries, namely in Africa, but also more recently in partnership with China. They are hubs of innovation, cultural exchange, and knowledge dissemination, attracting students, scholars, and researchers from around the world. The impact of 1890 Universities extends far beyond their initial mission, contributing significantly to the advancement of education, science, and society on a global scale.

The U.S. China Agriculture Roundtable, provides a mechanism for the universities to respond to new and emerging issues and challenges in the 21st century. As we foster critical collaborative projects across the 1890 Universities, our objective is to discover practical and meaningful solutions to the compelling economic, social, and environmental challenges faced by our communities today.

# The 2024 Agriculture Education Delegation

June 1st – 3rd Shanghai

*As China's largest port city, Shanghai plays a vital role in global agriculture as a key hub for trade, innovation, and market access. It facilitates the import and export of agricultural products, while also being home to research and development centers focused on agricultural technology and innovation.*

## June 1st – Welcome to China

The Agriculture Education Delegation began as delegates departed from the U.S. to arrive in Shanghai, China on June 1st. For many of the student delegates, this was the first time they had left their home country, several sharing that prior to this trip they had never had need of a passport. For all of the students, this was their very first time visiting China.

Converging at the airport from their separate gates, many of the students, faculty members, and USHCA staff met in-person for the first time after long introductory calls over Zoom. The delegates began the trip thoroughly jet-lagged, exhausted, and nevertheless thrilled for the next two weeks. The group departed the airport for their first stop at the historic Jinjiang Hotel in Shanghai where the Sino-U.S. Joint Communiqué was signed in 1972.



*Pictured: the first batch of arrivals for the Agriculture Education Delegation stand in front of the historic Jinjiang Hotel in Shanghai*





That evening the first batch of students to arrive enjoyed a traditional Chinese round-table dinner. During the meal, the students introduced themselves and their research interests, which fostered a strong sense of group solidarity.

*Pictured above: students visit the famous Jing'an temple, their first cultural excursion of the trip.*



*Pictured above: Student delegates attend their first meal in China.*

## June 2nd – Getting to Know China

On their first full day in China, the delegation ventured to explore the local community, eager to better understand Chinese culture. The students gained valuable insights into the culture of a Chinese city through its culinary offerings and touring the local neighborhood.

For dinner, the group met with local business representatives, speaking at length with members of the concurrent Ag & Food Business Mission to China, providing a platform for meaningful exchanges. Many students expressed keen interest in China’s rural-urban development dynamics, labor migration issues, and climate change initiatives involving green technology. Accompanying academic advisors, Dr. Louis Swanson and Dr. Suping Zhou, as well as the USHCA supporting staff shared their extensive knowledge about China, engaging in a productive question and answer session with the students.

## June 3rd – Business in Shanghai

After a day spent acclimating, delegates were ready to meet with the U.S. Consulate General in Shanghai and its senior staff on June 3rd. By meeting with U.S. consulate leadership, the group gained new insights into U.S. – China trade and cooperation on

global issues such as climate change and public health. This also served as a career opportunity for the students who learned about job openings at relevant federal organizations that would benefit from their agricultural backgrounds and specializations. Participants from the 1890s Land Grant Universities were excited to learn that the Deputy Principal Officer at the U.S. Consulate General in Shanghai was himself a graduate of Morehouse College, an HBCU.

That afternoon, the agricultural education group traveled outside the city to the U.S. Soybean Export Council’s In-Pond Raceway Systems (IPRS) Feeding

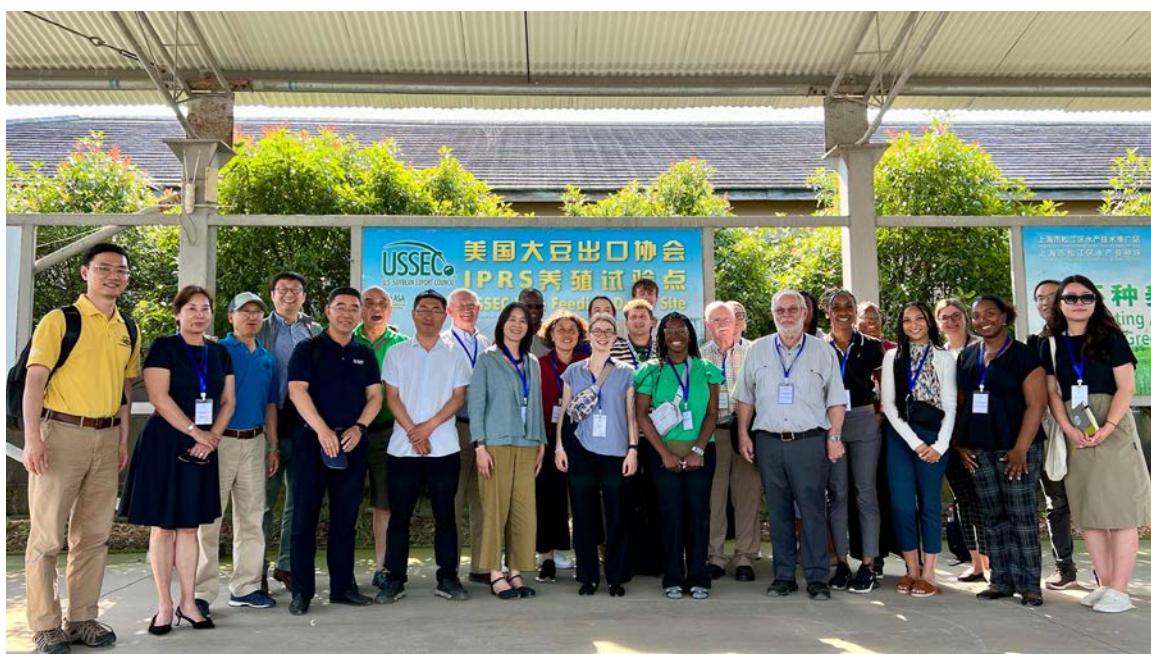


*Pictured: members of the Agriculture Education Delegation pose with U.S. Consulate General Shanghai staff members.*



Demonstration Site in the Songjiang District, to learn about sustainable aquaculture in China.

China's agro-food consumption and diets have become more diversified with increased consumption of vegetables, animal protein derived from soy, often imported from the United States. In this context, the U.S. Soybean Export Council (USSEC) plays a vital role in facilitating U.S.-China soybean trading and providing free technical support to Chinese farmers. As one USSEC staff noted, each year about 10 million tons of U.S. soybeans are imported to China to be used in China's seafood industry.



*Pictured: members of the Agriculture Education Delegation take a group photo at the U.S. Soybean Export Council's IPRS Feeding Demo Site alongside staff*

The aquafarm that the delegates visited was divided into specialized sections with different agricultural functions to maximize nutrition and clean energy usage, whilst reducing carbon emissions and non-point source pollution. This IPRS model is both profitable and is a promising source for rural tourism.

This was a chance for the students to see U.S.-China Ag collaboration in action: USSEC China have been working with Chinese farm owners to create a more environmentally friendly future by providing them with optimized feeding solutions and free advanced technological support. Students were enthusiastic about the visit, one saying:



*"I was amazed to learn about the different components that go into creating and maintaining an aquaculture farm...It was fascinating to see how every part of this system helped another part to be a successful operation. The aquaculture farm was shown to have zero impact on the environment. This process showed the benefits of sustainability through resource efficiency, increased food production, environmental benefits, and water quality improvement. Aquaculture can be a useful tool in meeting global food demand while minimizing environmental impacts."*

*- Dacia Ringo of Tennessee State University*

In the early evening, the students made a quick visit to the beautiful Yu Garden, a Shanghai landmark known for harmoniously integrating traditional Jiangnan scenery with contemporary urban Shanghai. The students experienced local Chinese snacks and shopped for souvenirs, providing an opportunity for cultural exploration.

The day ended with a welcome dinner hosted by the Syngenta Group, a leading transnational seed company focusing on agricultural technology innovation, safe and sustainable pesticides development, as well as providing high-tech agricultural services to agricultural practitioners. The education delegation learned more about the benefits of international collaboration between China and the U.S. as well as with other nations.

## June 4th – 5th Hefei, Anhui Province

*Anhui Province is a significant agricultural region in China, known for its fertile land and favorable climate. Located in central China, the province is also a leading producer of tea, contributing to China's reputation as a global tea exporter.*

## June 4th – Traveling to Hefei

On June 4th, delegates departed from the highly-modernized city of Shanghai to the less developed city of Hefei, in order to learn more about Chinese rural revitalization efforts being undertaken by Anhui Agricultural University (AAU).

AAU has a long history of collaboration with U.S. land-grant universities. AAU was the lead Chinese agricultural university in establishing the Sino-U.S. Alliance on Agricultural University-based Extension.



*Pictured above: members of the Agriculture Education Delegation pose for a photo at Anhui Agriculture University after taking part in a special Tea Ceremony conducted by students of Anhui's unique School of Tea & Food Sciences.*

The delegation was warmly welcomed by AAU representatives. After an introduction to the university, the delegation visited a museum covering the campus history, before taking a tour of the International Joint Laboratory on Tea Chemistry and Health Effects, as well as the School of Tea and Food Science and Technology. This included AAU students conducting a traditional Chinese tea performance.

By visiting the tea lab, delegates were able to learn the history of tea, the significant role that tea plays in Chinese

culture, China's current tea production and consumption pattern, as well as the cutting-edge scientific studies about tea plantation to buffer the impact of climate change. AAU has been working with Provincial tea farmers by providing vocational education and training, plant protection and pest control service, as well as guidance of sustainable tea plantation through the university-based agricultural extension program.

After visiting the tea lab, student delegates showed their interest in pursuing a tea-relevant graduate degree at AAU and shared their wish of studying abroad in China through the university's international exchange programs.

Later at dinner AAU provided opportunities for the delegation's students and faculty to talk with AAU students and faculty.

## June 5th – Visiting Anhui Agriculture University and its Extension Programs

The following day, students and faculty continued their tour of AAU and its programs. In the morning at a formal conference featuring AAU's senior administrators, the delegation developed more detailed information on understanding of the university, including its nationally recognized agricultural extension system.

An AAU Vice President pointed out that their nine Extension and agricultural experimental stations are located throughout Anhui Province, promoting scientific research, social services (poverty-elimination programs), talent training, and farming culture inheritance in rural areas. In detail, the experimental state depends on five interrelated components which serve as a systematic foundation for the whole system: 1) a mechanism for university-county consultative meetings, 2) a university-led integrated service team, 3) the establishment of joint extension center, 4) the development of specialized local leading industry, and 5) the talent training program focusing on both agricultural education and scientific research.



*Pictured above: members of the Student Delegation participate in a discussion with AAU students*

That morning, a lengthy discussion was held between AAU students and the delegation's students. Students exchanged their opinions regarding four main agendas: 1) the way to cultivate young of agriculture, 2) to promote U.S.-China

dialogue between young generations, 3) how public universities can better engage in agricultural and rural development and poverty elimination, and 4) the role higher education institutions play in transforming the agro-food system in both countries. Students from both U.S. and AAU exchanged contact information with each other, a platform of friendship has been established after this seminar.

Concurrently, AAU staff and visiting faculty delegates discussed means of enhancing educational collaboration between their schools. The morning conference ended with the signing of an IMOU between Anhui Agricultural University and Kentucky State University.

That afternoon, delegates toured AAU's Jianghuai Watershed Comprehensive Experimental Station, a type of extension program unique to said university. Touring the grounds, they met with local farmers and discussed the experimental practices students and staff were researching. This experimental station is jointly established by AAU and Dingyuan county People's Government, as a new type of agricultural extension platform to train scientific talents, provide public service and support to rural areas, transfer new scientific research into agricultural fields, as well as conserve traditional farming culture. Students were thrilled by the hands-on learning experience, and highly complementary of the impact the program had on the local community:



*“Anhui has developed a unique system to establish their extension network, called Experimentation Stations. Experimentation stations have four functions: talent training, scientific research, social services, and enterprise incubation. All together this means that students are trained to be experts using scientific experiments. These experiments are specific to the needs of the people being served, and the results are used to provide social services, where rural and small farmers are able to access experts for their knowledge and help with their production. These experts and researchers will go out to the rural areas and villages multiple times a year to provide direct access to these areas and understand the needs of the people. Experimentation stations are made by the university, the local government, or a combination of the two. Local government is very active in this extension method due to the extensive nature and the help it brings the surrounding communities.”*

*– Zuri Hobson-Gladney of Delaware State University*



*“As a recent graduate from an U.S. 1890 land grant university, which was designed to support and educate the surrounding rural farming community, I was very impressed to see the efforts in place to support rural development, provide training opportunities, invest in agricultural technology adoption, alleviate poverty and incentivize farming in China.”*

*– Kayla Grant of Tuskegee University*

*Pictured above: members of the Agriculture Education Delegation pose with a researcher at Jianghuai Watershed Comprehensive Experimental Station*



*Pictured: faculty members of the Agriculture Education Delegation take a commemorative photo at Anhui Agriculture University after signing a Memorandum of Understanding*

The remainder of the day was spent traveling to one of AAU's New Rural Development Institutes—Jianghuai Watershed Comprehensive Experimental Station in Dingyuan county and two additional agricultural community sites nearby.

The Jianghuai Comprehensive Experimental Station was jointly established by AAU and Dingyuan county

People's Government, as a new type of agricultural extension platform to train scientific talents, provide public service, to support local rural community development, to transfer new scientific research to the full spectrum of regional farmers, and importantly to conserve many characteristics of traditional farming culture. This experimental station covers 600 acres with a total investment of 50 million RMB to build new infrastructure and support the development of specialized local agricultural products. As with the other eight New Rural Development Institutes, the county provided a large portion of funding for the buildings and all of the land.

The delegation was able to sample locally grown agricultural products at the Comprehensive Experimental Station with AAU faculty and students. After a dinner in the dormitory cafeteria, the delegation returned to their hotel in Hefei for the evening.

## June 6th – 8th Jinan, Shandong

*Shandong is the number one agricultural province in China, renowned for its production of staple crops. The province's agricultural exports contribute significantly to China's global trade, reinforcing its importance to both national food security and international markets.*

## June 6th – Traveling to Jinan

On June 6th, the Agriculture Education Delegation left Anhui province and traveled via bullet train, arriving in the city of Jinan to participate in the Trade and Business Dialogue, hosted by the Shandong Provincial government. This three-day event aimed to bolster the commitment made between the leaders of the two largest economies in the world



to address pressing global challenges such as food security and sustainable agricultural practices.

The two delegations met with the U.S. Embassy's USDA Chief Dr. Robert Hanson later that afternoon. Dr. Hanson introduced the historical, political-economic significance of Shandong province, highlighting its substantial position in China's agrarian field and the U.S.-China agricultural trading. Dr. Hanson also answered a series of questions asked by both the education and the business group members.



*Pictured: members of the Agriculture Education Delegation pose on stage at the 2024 U.S.-China Agriculture Roundtable Trade and Business Dialogue in Jinan, Shandong.*

## June 7th – Participating in the 4th annual U.S.-China Agriculture Roundtable: Opening Ceremony/Trade & Business Dialogue

The Opening Ceremony on June 7th gave the student delegates a glimpse into the professional world of global agribusiness, hearing from high-level speakers, as well as attending a Signing and Launching Ceremony, two specialized panels, a Business Matching event, and an Exhibition showcasing distinctive agricultural products from Shandong and the U.S.

The Ag Education Delegation received special attention on the day of the Opening Ceremony as the Chinese hosts made every effort to welcome the American students. Several students were invited to come on stage for the signing of the “Launching of



China (Shandong)-U.S. ‘New Farmers’ Exchange Program,” formalizing an agreement between American universities and Shandong agricultural academies to pursue deeper educational and research connections going forward. This program is inspired by President’s Xi’s call for more people-to-people exchanges and an invitation for 50,000 American youth to visit China in the next 5 years.

During the conference break, the delegation students had an opportunity to explore the China (Shandong) - U.S. agriculture exhibitions to learn and taste locally made agricultural products (such as rice, noodle, beef jerky, soap, and other local commodities).



*Pictured: members of the Agriculture Education Delegation meet with the Shandong Academy of Agricultural Sciences*

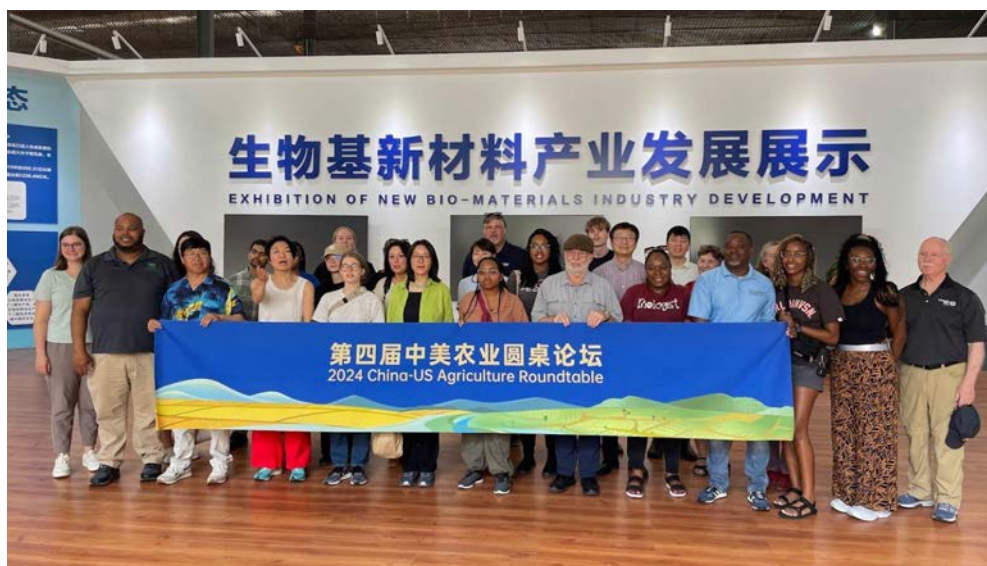
In the afternoon, the delegation group visited Shandong Academy of Agricultural Sciences (SAAS) and its Exhibition Hall, then met with experts and professors from SAAS. In this meeting, SAAS experts introduced two pathways that China has been taking to build its agricultural extension system, through the government-based system and the university-based system. They pointed to the national directive of “adding the wings of science and technology to agriculture” since 2013. SAAS

has been working on sustainable agricultural scientific innovation and rural development to address the challenge resulting from climate change as well as meet the increased consumer’s need for high-quality agro-food products.

Later in the evening, both delegations were invited to the formal Friendship Dinner with Chinese government and business partners. Following the leads from Chinese colleagues, the students performed two songs in front of an audience, who also joined a chorus of Edelweiss with Chinese partners, as a symbol of China- U.S. friendship.

## June 8th – Traveled to Binzhou

For the following two days, American delegates received a private tour of the incredible agricultural technology and specialization to be found in Shandong Province, traveling to the cities of Binzhou and Weifang. From June 8th-9th, delegates went on field visits to local agricultural enterprises where they observed cutting-edge practices in smart and



*Pictured: members of the Agriculture Education Delegation pose at the exhibit hall of Binzhou Zhongyu Food Industry Co., Ltd.*

sustainable agriculture. These visits not only facilitated interactive real-time sharing and learning between the delegates and the Chinese experts but also highlighted successful applications of innovative agricultural technologies.

Both USHCA delegations left Jinan for Binzhou by bus in the morning. They visited Shandong Xiang Chi Group, Sanxing Group, and Shandong Junhui Agriculture and Animal Husbandry Company Limited during the afternoon. Binzhou has established trade relationships with 186 countries and regions' products.

The delegation then visited Shandong Sanxing Group, a leading enterprise in China's grain and oil industry, touring its exhibition hall, and its oil filling workshop. Corn oil is Sanxing's core product, along with many other edible oil products made from rice, olive, peanut, sunflower, etc.

The Shandong Junhui Agricultural and Animal Husbandry Company specializes in beef cattle breeding (Simmental), manure treatment, and sales of bio-organic fertilizer. By adopting the ecological farming model, the company takes methods such as rain and sewage separation, microbial fermentation, and deodorization of manure to reduce environmental pollution and promote sustainability.

## June 9th – Traveling to Weifang and Beijing

The next day, delegates visited Binzhou Zhongyu Food Industry Co, Ltd. in the morning, then traveled by bus to the city of Weifang and the explore the campus of Shandong Shouguang Juneng Golden Corn Co., Ltd.

The agricultural education delegation group visited Zhengde (Shandong) Supply Chain Co., Ltd. and experienced agricultural products live-streaming on site. As one of our students shared, such a fun experience contributes to their comprehension of the new business model for agricultural products marketing and selling in China, in the information era. Zhengde Supply Chain Co., Ltd. was established in 2020 as a live streaming company with the integration of agricultural product supply chain and standardized agricultural production. Since 2024, online sales of agricultural products have reached 60 million RMB (about 8.3 million U.S. dollars).

Shouguang Danhe Demonstration Park for Standardized Production of Greenhouse Vegetables is another site the group enjoyed visiting. This demonstration park is known as “Vegetable Town,” which is equipped with an advanced intelligent management system to provide traceable supervision over the whole vegetable production process, display real-time monitoring of agricultural product price, as well as provide additional agricultural sector planting technology services. By visiting this Vegetable Town, students gain a clearer understanding of China’s 5G “wisdom agriculture” as well as the major role that agricultural and climate-smart technology plays in facilitating sustainable farming.

On the evening of June 9th, the ag education group departed for Beijing via bullet train, arriving late at night to the beautiful Friendship Hotel.

## June 9th – 12th Beijing



*Pictured above: members of the Agriculture Education Delegation and Ag & Food Business Delegation stand at the base of the Juyongguan section of the Great Wall before their climb to the top.*

*Beijing is not only China’s capital and center for politics and culture, it also plays a pivotal role in shaping the country’s agricultural policies and innovations. As the seat of government, it is home to key institutions that formulate national agricultural policies. Beijing also hosts leading agricultural research centers and universities.*

## June 10th – Climbing the Great Wall

As the old Chinese saying says, “he who has never been to the Great Wall is not a true man.” For that



reason, visiting the Great Wall in Beijing was on the top of the to-do list for delegates. Located about 50 kilometers northwest of Beijing, the delegation visited Juyongguan Pass. Visiting such a historic site was immensely valuable to the students, and provided an incredible feeling of group solidarity and friendship as the group collectively climbed the steep incline in the sweltering summer heat. In the afternoon, the delegation visited a jade shop which provided another break for souvenir shopping for their family and friends.

## June 11th – Participating in the Agriculture Education Dialogue



*Pictured above: the Agriculture Education Delegation waves to the camera during the Agriculture Education Dialogue on China Agriculture University's campus in Beijing, China*

The majority of the June 11th was dedicated to the Ag Education Dialogue, a closed conference focused on enhancing educational cooperation between the United States and China in order to elevate agricultural practices and training. This dialogue was hosted in partnership with China Agricultural University (CAU), a leading platform

for agricultural scientific research, intelligent agricultural technology innovation, agricultural policy and rural development research, and talent training.

At CAU, faculty and students from the delegation along with faculty and students from CAU and Renmin University shared their research and knowledge about agriculture, climate-smart technology, youth education, and rural development. Students from the U.S. delegation gave two insightful presentations on



*Pictured: Ag Education Delegation members pose in front of the historic archway on CAU's campus.*

“Rural Development and Extension Practices in the U.S.” and “Sustainable Agriculture and Smart Environmental Practices in the U.S.” in this meeting, drawing from their research, stocks of knowledge, and lived experience.

After an official welcome meeting by senior CAU administrators, students from both the U.S. and China had a chance to learn more from each other during the lunch time. In the afternoon, the delegation visited CAU’s Entomological Museum and the Feed Museum to further explore China’s agricultural and rural development strategies in practice.

That evening, the delegation member had the incredible opportunity to visit with one of China’s most prominent agribusinesses, China Oil Foodstuffs Corporation (COFCO) and joined a meeting with the COFCO leadership. The meeting addressed COFCO’s role in facilitating international agricultural trading and China’s agricultural development, as well as the history of COFCO and its development strategies in recent years.



*Pictured above: members of the Ag & Food Business Delegation pose for a photo after a productive meeting with COFCO representatives*

COFCO was established in 1949 as a leading Chinese corporation focusing on creating the whole industry chain of grain, oil, and agro-food products, as well as providing high-quality, healthy agro-food products using sustainable technology.

The meeting addressed COFCO’s role in facilitating international agricultural trading and China’s agricultural development, as well as the history of COFCO and its development strategies in recent years.

## June 12th – Participating in the Think Tank Dialogue

On June 12th, the Think Tank Dialogue was held in Beijing at the Chinese Academy of Social Sciences (CASS). An assemblage of 30 experts addressed an audience of over 100 agricultural scientists and practitioners to discuss opportunities for the U.S. and China to work together as we jointly face the immense challenges of climate change, food security, and agricultural development. This full-day session underscored the pivotal role of the U.S.–China cooperation in stabilizing the global food supply chain amid rising geopolitical tensions and environmental challenges. This Think Tank Dialogue was co-sponsored by CASS and USHCA and was jointly organized by two sub institutes of CASS –





*Pictured above: members of the Agriculture Education Delegation stand in front of the Chinese Academy of Social Sciences at the 2024 U.S.-China Agriculture Roundtable Think Tank Dialogue in Beijing.*

the Institute of World Economics and Politics (IWEPI) and National Institute for Global Strategy (NIGS).

As Dr. Zhang Yuyan noted in his presentation, according to the statistics released by the World Grain and Oil Administration, in 2023, 282 million world population across 59 countries are struggling with food insecurity as a consequence of Covid-19 pandemic, wars, climate change, unequal exchange and distribution of food resources at the global level. Numerous presenters

highlighted how living in the age of climate change, food insecurity is not only a problem for a single country, but an urgent issue for many human beings which requires high-level international cooperation and technology innovation.

## June 13th – 15th Xi'an, Shaanxi Province

*Shaanxi Province is a critical agricultural region in China, known for its diverse climate and terrain that support the production of a wide range of crops, including wheat, corn, and high-quality fruits like kiwis.*

## June 13th – Traveling to Xi'an

On June 13th, the group took a bullet train across the country to the city of Xi'an in Shaanxi province for the final leg of their journey. On arrival in Xi'an in the late evening, Dr. Bolden-Tiller (Dean of Agriculture at Tuskegee University) and Dr. Bernard (Dean of Agriculture at Kentucky State University) organized a check-in meeting with our students.

## June 14th – Visiting the Northwest Agricultural & Forestry University (NWAUFU) and Rural Meixian County

On the 14th, students and faculty delegates were welcomed by the Northwest Agriculture & Forestry University to learn about the institution's history and tour their extensive campuses. Northwest Agriculture and Forestry is one of the leading agricultural



universities in China. Delegates were guided through the university's state-of-the-art Entomology Museum and sprawling botanical gardens, all while learning about the extensive legacy of Chinese agricultural civilization and its traditional agrarian wisdom. The group then visited Yangling Technology Center and the Syngenta Group China Innovation Center in Yangling to learn more about plant breeding, genetic modification, plant pathology, agronomy, soil science, and other agricultural scientific studies.

That afternoon, delegation members traveled to the rural county of Meixian, to see a local kiwifruit museum, and stopped at a local kiwifruit wine company before enjoying a kiwifruit farm, learning about how this specialized agricultural product fit into the integrated whole industry chain to boost local rural economy.



*Pictured above: members of the Agriculture Education Delegation pose in front of a Kiwi statue in Meixian*

After the dinner with senior County representatives, the delegation traveled back to Xi'an. Students greatly enjoyed a supper built around the traditional Xi'an local market cuisine such as Biangbiang noodles and many other local foods, the second day in the ancient city.

An additional check-in meeting with our students led by Dr. Bolden-Tiller, Dr. Bernard, Dr. Swanson, and Dr. Zhou was held later in the evening.

## June 15th – Touring Xi'an & Terra Cotta Soldier Museum

On June 15th, delegates spent their last day in Xi'an exploring the beautiful and historic city, walking along the fortification of one of the oldest, largest, and best preserved Chinese city walls, as well as making an excursion to see the famous Terracotta Soldiers.



*Pictured above: members of the Agriculture Education Delegation stand in front of the Xi'an City Wall.*

## June 16th – Saying Goodbye

The trip concluded in Shanghai, where the students, faculty, academic advisors, USHCA team members, and support staff spent the final evening of the delegation taking a walk along the famous Bund waterfront, before returning home on June 16th.

USHCA is immensely proud to have hosted such an incredible group of globally-minded agricultural university faculty members, future agribusiness leaders and young agricultural professionals, and to have helped guide their experience in China.



*Pictured: members of the Agriculture Education Delegation take a final group photo along the stunning Bund waterfront in Shanghai, China*

*"The collaboration between universities and extension services in China serves as a model for strengthening the link between research and practical application. Increasing collaboration between U.S. universities and extension services could enhance the relevance and impact of agricultural research..."*

*"The insights gained from this trip have the potential to inform and improve agricultural practices and extension education in both countries. By learning from each other, both nations can enhance their agricultural productivity and sustainability, ultimately contributing to global food security and rural development."*

*– Jonathan Franklin of University of Maryland Eastern Shore*

*"Visiting and experiencing Chinese agriculture and culture was a once in a lifetime experience that I will be forever grateful for. I would have never thought that I would get the opportunity to go around the impressive country, collaborating with other students and universities, meeting government officials and business owners, and overall become more worldly and cultured in a country so deep with roots. This trip has expanded my range and opened my eyes to a plethora of new opportunities that I did not know about before..."*

*"I have learned so much on this trip. Summed up, China is a beautiful, complex country rich with history and development. The people are kind and curious, the technology is advanced, and the education is top-notch."*

*– Zuri Hobson-Gladney of Delaware State University*

# Appendix

## Anhui Province

Departing from a highly-modernized supercity of Shanghai to one of China's poorest provinces, Anhui Province, students got a chance to learn more about China's urban-rural development dynamic by observing changes of landscape, architecture, and city lay-out along the bullet train trip. Rural development and poverty alleviation are major parts of government work in Anhui province. Anhui Agricultural University (AAU) was founded in 1928, as a leading local agricultural education institution with a long history in agriculture, forestry and biotics studies. Remarkably, AAU as one of first ten Chinese universities approved by China's Ministry of Agriculture and Rural Affairs to construct the "Institute for New Rural Development", has been playing a vital role in promoting rural development and poverty reduction partially through a series of university-based extension projects. In cooperation with Colorado State University, AAU founded "China- U.S. University-Based Agricultural Extension Alliance" which serves not only as an important platform for international consociation (particularly the South-South Cooperation), but also for government-university collaboration in the field of agricultural scientific research.

In 2023, the gross value of Dingyuan county's agriculture-relevant production reached 14.04 billion RMB, as a pillar industry to support the local economy. The experimental station is divided into twelve specialized demonstration sections including pasture acreage, rice-aquaculture industry alliance area, fruit planting region, crop and vegetable plantation, animal breeding (sheep, goat, etc.), sewage treatment station, and agricultural business zone, etc. Researchers and students from AAU conduct on-site scientific study and experiment at Jianghuai Watershed Comprehensive Experimental Station as part of this university-based agricultural extension system.

To get a more sophisticated understanding of how the new type of university-based agricultural extension program works at the local level, the delegation group visited one local fungi factory (Zhongxing Fungi Corporation Limited) and one horticultural botanic garden (Baihui Ecological Science and Technology Park). At the first stop, the delegation group was able to look over the industrialized manufacturing shop and packing workshop inside the edible fungi factory. As the factory manager introduced, this factory was the worldwide leading producer of edible fungi that were certified as a green agricultural product by China's Ministry of Agriculture and Rural Affairs. At the second stop, the manager introduced how they have collaborated with AAU since 2016 to construct the horticultural botanic garden as part of the new rural institute program. This garden covers 400 acres of local land, which not only provides specialized agricultural services including floral breeding, rural tourism, and hot spring industry to boost local economy, but also supports local rural communities by creating new job opportunities and other social services.



## Shandong Province

Shandong Province has a land area of 157,900 square kilometers, a sea area of 159,000 square kilometers, and a coastline of 3,345 kilometers with 102 million population. As a strategic part of China's new development plan and opening-up project, Shandong not only has a strong industrial foundation, but also has the first-ranked agricultural production in China with the annual agricultural output value of 1.2 trillion RMB. From a cultural perspective, Shandong is also well-known for its unique position in traditional Chinese culture, as the birthplace of Confucianism and other branch of Chinese philosophy.

In Shandong Province, the Xiang Chi Group was established in 1989, as one of the co-founders of "China Quality Grain and Oil" national standards, China soybean intensive processing circular economy standard, and China fructose syrup standard, etc. This company is committed to building a new model of the whole industrial chain of soybean and corn as well as providing a healthier, greener, and more sustainable solution to agricultural industrialization. In 2023, Weifang's GDP reached 760.6 billion RMB with agricultural output value over 100 million RMB. Binzhou Zhong Yu is a wheat processing company, focusing on the creation of the integrated whole industry chain using green energy from wheat breeding, plantation, wheat product processing, to consumption. Binzhou Zhong Yu features an annual wheat processing capability of one million tons, meanwhile signing contracts directly with wheat farmers to boost local economy. Shandong Shouguang Juneng Golden Corn Co., Ltd. is a large-scale enterprise specializing in core deep processing (cornstarch and by-products such as modified starch, amino acids, starch sugar and lactic acid, biomass thermoplastic composites, biomass nylon and other bio-based/starch-based new materials). The company annually processes 3.7 million tons of corn.

In the beginning of 2024 with the fortieth-fifth anniversary of China-U.S. diplomacy, the U.S.-China Agricultural Cooperation Agreement was relaunched in Washington, to encourage international cooperation on areas including agricultural technology, climate-smart agriculture, sustainability, and food security. For instance, as Stan Born highlighted, China is the largest importer of world soybeans and the major trading partner of U.S. soybeans. For this reason, international trade plays a key role in maintaining food security at the global level, in the age of climate change. As has been addressed by Susan Thornton, the Vice Chair of USHCA, U.S. students and scholars in the agriculture education delegation group intend to be part of the solutions to climate change and other major global issues in our time with both new opportunities and challenges. Scholars, researchers, non-governmental organization (NGO) and industry representatives engaged in a comprehensive discussion on urging topics include China-U.S. Third-Party agricultural cooperation in Africa, patterns of agricultural and rural development in China and the U.S., China-U.S. Agricultural economic and trade cooperation, climate-smart agriculture and sustainability, and global food security and international governance.

## Shaanxi Province

Northwest Agricultural & Forestry University (NWAUFU). NWAUFU is a leading state research university on the list of 211, 985 projects, under the direct administration of China's Ministry of Education. The university is located in Yangling, the northwest part of Shaanxi province, covering a campus area of 383 hectares. NWAUFU has been committed to its philosophy of "managing state fundamentals, solving civilian livelihood difficulties, and respecting scientific research" and practicing its motto of "sincerity, simplicity, bravery and perseverance" since the first day it was established in 1934. NWAUFU has 28 colleges and graduate schools, with the most comprehensive disciplines in agriculture, forestry, and water science. Students from the U.S. agricultural education delegation group got a chance to communicate with NWAUFU students when visiting NWAUFU museum garden in the afternoon. Students were amazed by China's extensive legacy of agricultural civilization and its traditional agrarian wisdom of farming seasons (insert a photo of students visiting the museum, and a group photo with NWAUFU students). Then, the delegation group together with NWAUFU students visited Yangling Technology Center and the seed lab by Syngenta Group China to learn more about plant breeding, genetic modification, plant pathology, agronomy, soil science, and other agricultural scientific studies.

The earliest written record of kiwifruit appeared 2,600 years ago in Chinese Shijing, an ancient anthology of Chinese poetry. Kiwi has been introduced to England, New Zealand and the rest of the world since 1740. In the 1960s, the kiwifruit industry started to bloom in the U.S., Italy, and France. Two decades afterward, the kiwifruit industry has been extended to Latin America and the Middle East. In the 1990s, the global kiwifruit industry experienced rapid growth with China, Italy, New Zealand, and Chile as the major kiwifruit producers and exporters. Aligning with China's new rural development policy and "One Village One Product" project, Meixian county government recognized kiwifruit as its specialized agricultural product fitting into the integrated whole industry chain to boost local rural economy. In 2014, Meixian county became China's largest kiwifruit production site, with a total area of kiwifruit plantation of 294,000 acres. In 2022, the gross value of Meixian county will reach 19.26 trillion RMB.



## Maps

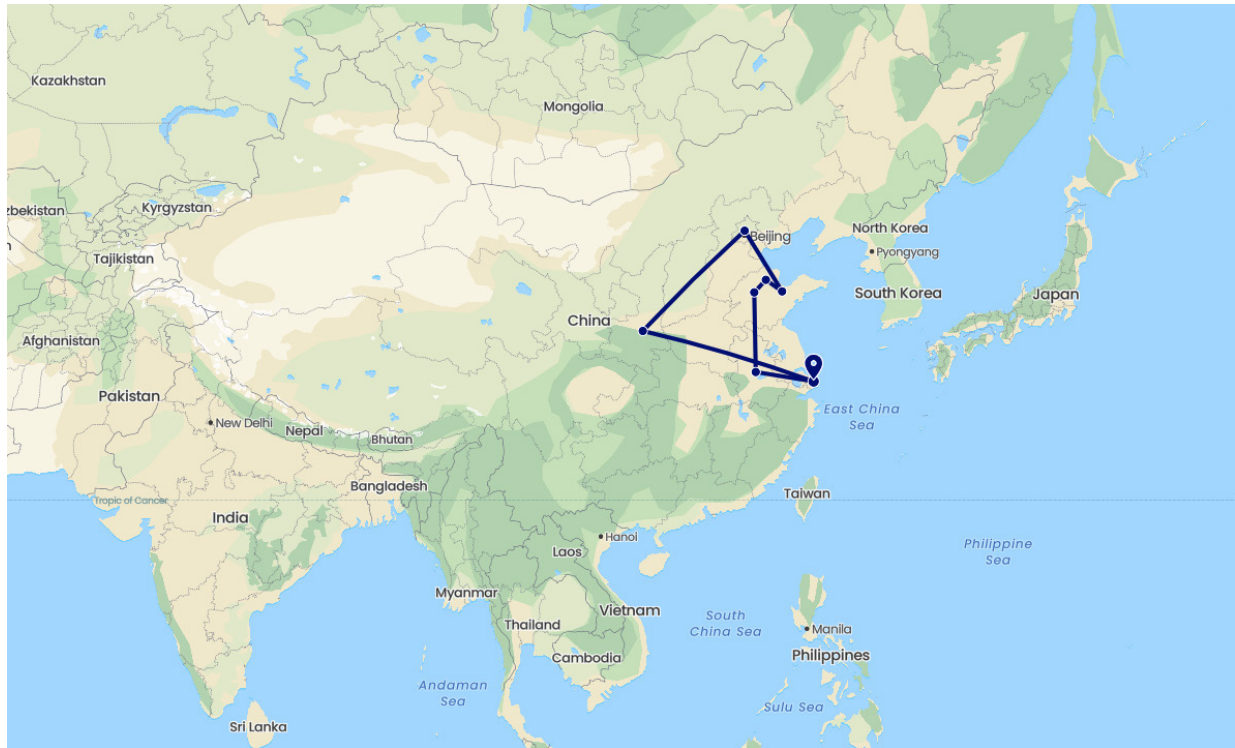


Image 1: Map of delegation route



Image 2: Map of delegation route listing cities

# Acknowledgments

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