



Sino-German Agricultural Centre (DCZ)

中德农业中心



Sino-German Agricultural and Food Update

中德农业与食品通讯

No. 8 November/December 2019



With support from



by decision of the
German Bundestag



Sino-German Agricultural and Food Update

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In this issue

Foreword

Cover Story

- ◇ China's White Paper on Food Security by Aihemaitijiang Rouzi

Good to Know

- ◇ Chinese scientists detect structure of ASF virus
- ◇ China to improve agricultural insurance system
- ◇ ... and more

Sino-German Agricultural Week in Retrospect

Other DCZ Activities

- ◇ Study tour "Rural Land Management" to Germany and Czech Republic
- ◇ ... and more

Activities of other Bilateral Cooperation Projects

- ◇ New website of ChinaRes project online – Sino-German biogas research

Reviews of Publications

- ◇ Current Status and Development Strategy for Community-Supported Agriculture (CSA) in China
- ◇ ... and more

Call for Papers

Upcoming Events 2020

Imprint

Sino-German Agricultural and Food Update

Foreword

Dear partners and friends of the Sino-German Agricultural Centre,

Our Sino-German Agricultural Week is successfully concluded – and as with previous events we received high-level support from both ministries, the German Federal Ministry of Food and Agriculture and the Chinese Ministry of Agriculture and Rural Affairs. Mr. Hans-Joachim Fuchtel, Parliamentary State Secretary of BMEL, and Mr. Zhang Taolin, Vice Minister of MARA, attended the opening session of the “Open Day” on 19 November and delivered welcome addresses. The two main topics of this year’s Agricultural Week: “Climate Change and Agriculture” and “Rural Land System Reform” were addressed in parallel workshop sessions on the day before. Both of them were key areas of DCZ’s work in this year – and will still be followed up in the future. (See also the contributions in the “Sino-German Agricultural and Food Update” No. 7 on “Climate Change and Agriculture” and the report on the study tour on “Rural Land Management” in this issue.)

Although food safety has become an increasingly important subject it should not be forgotten that food security was still a major concern until not too long ago. That China can provide the growing population with sufficient food is now almost taken for granted. Nevertheless, history is still in the mind of many people and decision-makers. The “White Paper on Food Security” is, therefore, an interesting document which not only describes the Chinese achievements in ensuring food security, but also outlines future strategies and policies. A summary of this White Paper by our colleague Aihemaitijiang Rouzi serves as cover story for this reason.

Along with other news on agriculture, we hope that the contributions and reports in this newsletter will be of interest for you.

With our best wishes for the holiday season



Dr. Jürgen Ritter

Managing Director

Sino-German Agricultural Centre (DCZ)

Cover Story

China's White Paper on Food Security

Dr. Aihemaitijiang Rouzi

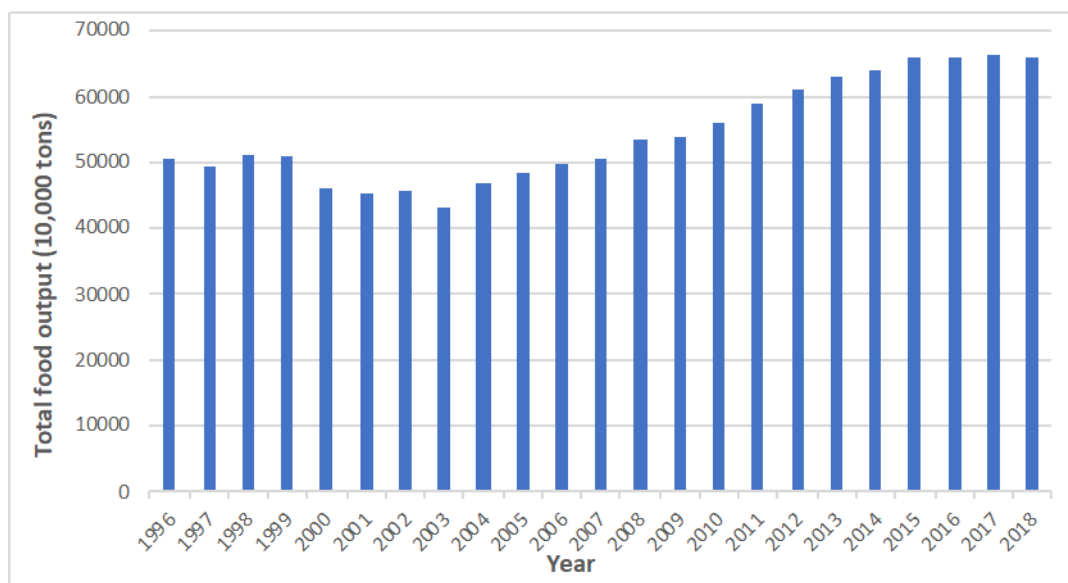
On October 13, 2019 the State Council of the People's Republic of China released a White Paper on "Food Security in China". This paper summarized Chinese achievements in ensuring food security and outlined future strategies and policies. According to the paper China has been actively contributing to global food security governance by not only feeding its own population (one fifth of the world population) but even producing more (one quarter of global food production) than domestic population needs. The White Paper also stresses that China is not only self-reliant on food supply, but compared to previous years the population has a greater variety of foods. With these achievements the most populated country in the world makes an enormous contribution to UN's 2030 Sustainable Development Goals. The White Paper consists of four distinct chapters: *China's Achievements in Ensuring Food Security*; *Food Security in China*; *Opening Up and International Cooperation*; *Prospects and*

Policies.

The first chapter offers detailed background information on the general food security situation in China. Compared to the first White Paper on Food Security published in 1996, China's per capita food output increased from 414 kg to 470 kg per hectare yield for rice in 2018; wheat and corn have seen a rapid increase since 1996. Total food production also increased from 500 million tons in 1996 to 660 million tons in 2015 and has been steadily increasing since then. With an output of 610 million tons of grain produce, China has become self-sufficient in grain production and food supply (Fig. 1).

Food storage and reserve capacity is being further improved, qualified grain warehouses are available for 670 million tons, simple warehouses can accommodate 240 million tons, and the warehouse capacity has grown by 31.9 % since 1996. The population has a greater choice of foods; per capita consumption of oil, meat, aquatic products, milk, vegetable and fruits has increased in each item to satisfy the growing demand of Chinese people. The food shares per capita have greatly improved as well, with especially large

*Figure 1: Total food output of China 1996-2018
(Source: China's Rural Statistical Year Book, 2019)*



Sino-German Agricultural and Food Update

increases in milk (333 %), meat (55 %), aquatic products (72 %), vegetables (104 %) and fruits (176 %), as shown in Table 1.

*Table 1: Per capita of foods in kg/year
(Source: White Paper 2019)*

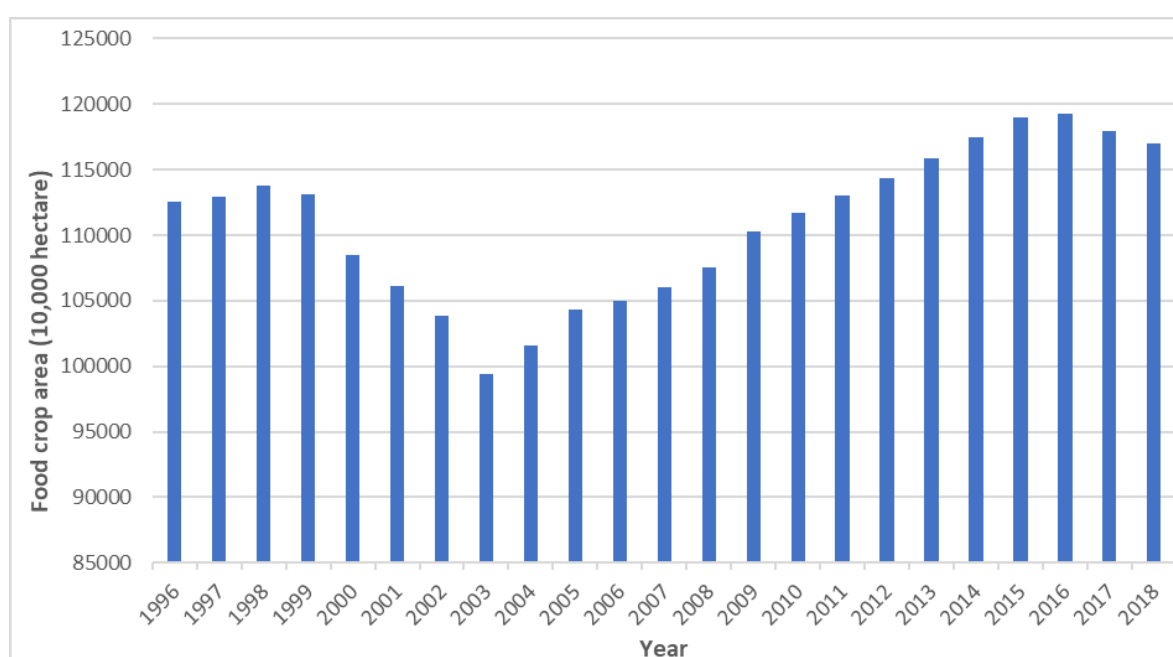
Item	1996	2018
Oil	18.2	24.7
Pork, beef and mutton	30.2	46.8
Aquatic products	26.9	46.4
Milk	5.1	22.1
Vegetables	247.4	505.1
Fruits	66.7	184.4

China reduced the poverty rate from 10.2 % in 2012 to 1.7 % in 2018 and became the first country to achieve the poverty reduction goals of the UN millennium development goals.

The second chapter, *Food Security in China*, covers the steady increase of grain production and quality of arable land. The Chinese gov-

ernment set a red line marking a reserve of at least 120 million hectares of cultivated land. At present, China has 134.88 million hectares of cultivated land which has increased by 4.8 million hectares since 1996 (Fig. 2). North China has become a basis for the large-scale production of wheat, corn and soybeans, the Yangtze River economic belt developed into a double cropping rice and wheat production region, Northwest China established as an emerging potato and corn producing region. China has invested in upgrading irrigation, water conservation and other agricultural infrastructure to speed up the efficient production of grains. In 2006, China abolished all agricultural taxes which had been imposed throughout 2,600 years to fundamentally reduce farmers' burden. At present, there are approximately 600,000 family farms, 2.17 million farmers' cooperatives and 370,000 social services organizations in China. The country also committed to market and institutional reforms in order to achieve an efficient production and allocation of food resources.

*Figure 2: Total food crop area of China 1998-2018
(Source: China's Rural Statistical Year Book, 2019)*



Sino-German Agricultural and Food Update

The third chapter, *Opening Up and International Cooperation*, promotes the development of food governance. Especially since joining the WTO, China has actively reduced tariffs and lowered barriers of food commodities which accelerated the integration of China into international food trade. In 2018, China imported 115.55 million tons of oil crops (including soybeans), feed and other crops and exported 3.66 million tons of food. Imports increased by 945 % and export grew by 175 % compared to 1996. China actively participated in world food governance. Along with the FAO, China implemented more than 20 multi-lateral South-South cooperation programmes and sent more than 1,100 experts to countries in Africa, Asia and Latin America for capacity building. China provided assistance to more than 50 African countries in implementing nearly 500 agriculture-related programmes and projects such as technical support in irrigation technology, food storage, food processing, agricultural machinery and so on. China also participated in various initiatives proposed by the FAO and the World Food Programme and committed to implement the UN 2030 Sustainable Development Goals, while developing its own agenda and releasing a progress report. In view of the complexities of the ongoing trade war with the United States and China's expanding cooperation with Belt and Road countries, China's commitment to an agricultural opening up has become more important than ever before.

Chapter four, *Prospects and Policies*, states that China will set red lines and targets to ensure food security (Table 2).

It is also planned to reform agricultural institutions and enhance technological innovation in grain production as well as to improve emergency grain reserves by upgrading grain monitoring and pre-warning systems. Another goal is to improve grain storage and logistics and build a modern grain circulation system. The South-South cooperation and work with Belt and Road countries to facilitate a free and orderly trade of agricultural products and further engagement in global and regional food governance are on the agenda as well.

In conclusion, the White Paper describes various achievements and progresses in ensuring food security over the past 25 years, sets out clear targets and goals for the upcoming decade and provides a draft for China's national food security policy and its potential global contribution to meet the UN's 2030 Sustainable Development Goals.

References

White Paper on Food Security in China by the State Council Information Office (<https://www.scio.gov.cn/zfbps/ndhf/39911/Document/1666230/1666230.htm>, accessed on November 12, 2019).

China Rural Statistical Year Book, China Statistics Press, Beijing, China, 2019 (<http://cyfd.cnki.com.cn/N2019030220.htm>, accessed on November 12, 2019).

Table 2: Red lines to ensure food security set for 2020 (Source: White Paper 2019)

Cultivated land	124 million ha
Permanent basic farmland	103 million ha
Land for construction	No more than 40.7 million ha
High standard farmland	53.3 million ha
Grain planting area	110 million ha
Grain production	Above 600 million tons

Good to Know

Chinese scientists detect structure of ASF virus

According to Chinese press reports scientists have unraveled the three-dimensional structure of the African swine fever virus, laying a solid foundation for developing effective and safe vaccines against the disease. The research, jointly conducted by scientists at the Institute of Biophysics of the Chinese Academy of Sciences (CAS) and the Harbin Veterinary Research Institute of the Chinese Academy of Agricultural Sciences (CAAS), Shanghai Tech University and other institutes, was published in the latest issue of the academic journal Science. (Xinhua/Jin Liwang)

http://www.xinhuanet.com/english/2019-10/18/c_138482704_2.htm

China to improve agricultural insurance system

China will improve its agricultural insurance system with expanded coverage and functions to allow it to better serve farmers, an official circular has said.

By 2022, the coverage of insurance on the planting of rice, wheat and corn should reach over 70 percent, according to the circular jointly issued by the Ministry of Finance, Ministry of Agriculture and Rural Affairs, China Banking and Insurance Regulatory Commission and the National Forestry and Grassland Administration.

The proportion of agricultural insurance premiums to the value-added output of the agricultural sector should reach 1 percent by then, while every working person in the agricultural sector should on average contribute 500 yuan (about 70 U.S. dollars) in agricultural insurance premiums, according to the circular.

http://www.xinhuanet.com/english/2019-10/14/c_138470307.htm

Revised implementing rules of China's food safety law to take effect

Chinese Premier Li Keqiang has signed a decree to release the revised regulation on the implementation of the Food Safety Law, according to a statement of the State Council.

The regulation, to be effective on Dec. 1, underscored a tougher supervision, requiring governments above county levels to establish a uniform and authoritative supervision mechanism to enhance regulatory capacity building.

The rules comprising 86 articles of 10 chapters also made supplementary regulations on random inspections and other supervisory means. In addition, they put in place a system to blacklist serious perpetrators and a joint punishment system for discredited enterprises.

Under the rules, legal persons, persons in charge, managers who are directly in charge and individuals who are directly responsible will be fined if the entity they worked for was found intentionally committing an illegal act.

(Xinhua, 31-10-2019)

http://www.xinhuanet.com/english/2019-10/31/c_138517991.htm

Countdown starts for China's big mutant crop space mission in race for food security

China plans to launch a recoverable satellite that will carry half a ton of life forms into space to see whether better crops can be produced there, according to scientists involved. The "passengers" on the satellite which could be launched early next year will include more than 240 kg of seeds and plants as well as other forms of life such as bacteria. It forms part of the world's largest single experiment so far in inducing biological mutation with cosmic radiation, according to Chinese government researchers.

Sino-German Agricultural and Food Update

<https://www.scmp.com/news/china/science/article/3035967/countdown-starts-chinas-big-mutant-crop-space-mission-race-food>

MARA: Ensure “food basket” supply during the holiday season

On their meeting of Dec 1, MARA stated that it is critical to ensure “food basket” supply during Chinese New Year of 2020. Especially big cities should shore up their pork supply and develop their poultry, beef and aquatic products during the holiday season. It also stated that pork reserves should play a decisive role in the market, investment to large scale slaughterhouses should be increased, and various market distorting or manipulating behaviours should be strictly controlled and punished. Vice-Prime Minister Hu Chunhua who was also in attendance stressed the importance of “food basket” supply for the well-being of the Chinese people. It also stated cities should rigorously implement the “green tunnel” policy towards the transportation of agriculture products, so the markets are properly supplied during the important holiday season. Especially cities in the north of China should maintain their winter vegetable reserve and prevent price fluctuations.

<http://sannong.cctv.com/2019/12/02/ARTI-eX0uXkVole7xA7x0H5uo191202.shtml?spm=C73274.P52232081160.E85980303862.3>

http://www.moa.gov.cn/xw/zwdt/201912/t20191201_6332626.htm

China issues guideline to keep land contracting ‘practices’ unchanged

The Central Committee of the Communist Party of China (CPC) and the State Council on Tuesday issued a guideline for keeping rural land contracting practices across the country “stable and unchanged” on a long-term basis. It stressed that rural land will continue to be owned collectively by a rural com-

munity, calling for ensuring equal land rights and interests among members of a collective economic organization. The land will not be privatized, according to the guideline. It underscored the importance of adhering to the household land contracting and operating system. No matter how management rights for the contracted land are transferred and how modern agriculture develops, contract rights and interests of the rural household should not be infringed, it said.

The guideline also called for respecting the wishes and choices of rural residents on issues concerning their rights and interests. (CGTN) More:

<https://news.cgtn.com/news/2019-11-26/China-proposes-to-keep-land-contract-relationship-stable-and-unchanged-LWd8lnQbXq/index.html>

China issues guideline on setting limits in territorial spatial planning

China has unveiled a guideline on Nov 1 to promote the coordination and implementation of setting limits in its territorial spatial planning. The document, jointly issued by the General Office of the Communist Party of China Central Committee and the General Office of the State Council, stressed the importance of ecological protection, farmland protection and economical use of land.

(Xinhua)

More: http://english.www.gov.cn/policies/latestreleases/201911/02/content_WS5dbcbe08c6d0bcf8c4c16372.html

China to further strengthen plant diversity conservation

China issued a new plan for plant conservation from 2021 to 2030 to push for plant diversity protection, restoration and sustainable utilization, according to the China Wild Plant Conservation Association (CWPCA). The

Sino-German Agricultural and Food Update

Strategy for Plant Conservation (2021-2030) sets 18 goals, including on-site conservation of at least 85 percent of endangered plant species.

China achieved 75 percent of its major strategic goals ahead of schedule and is striving to achieve the rest by 2020, according to the CWPCA.

According to the new plan, at least 80 percent of "rare and endangered plants" will be protected off-site, and 20 percent of "rare and endangered plants" will be available for ecological restoration. (Xinhua, Nov 18, 2019)

More:

http://english.www.gov.cn/news/topnews/201911/18/content_WS5dd1f816c6d0bcf8c4c174f7.html

Sino-German Agricultural Week in Retrospect

The 5th Sino-German Agricultural Week (DCAW) was held from 18 to 22 November 2019 at Landmark Hotel in Beijing. The event was sponsored by the Chinese Ministry of Agriculture and Rural Affairs (MARA) and the German Federal Ministry of Food and Agriculture (BMEL) and organized by DCZ.

The week started with two parallel conferences – the “Sino-German Workshop on Cli-



*Keynote speech by Dr. Frank Augsten
(Photo: DCZ)*

mate Change and Agriculture” and the “Sino-German Workshop on Rural Land System”. About 160 participants attended these events. At the workshop on Climate Change and Agriculture the Chinese-German expert team assessed the present status of knowledge and best practices in both countries to cope with impacts of climate change and mitigate emissions from agricultural production. After opening remarks by Ulrich Kleinwechter, Head of Division International Projects at BMEL, and Mr. Li Bo, Deputy Director General of Science and Education Department of MARA, keynote speeches were delivered by Dr. Frank Augsten, Head of Department Agricultural Production, Horticulture and Education, Thuringian State Office for Agriculture and Rural Areas, and Mr. Li Jingping, Deputy Division Director, Environment and Resources Division, Science and Education



Photos: DCZ



Sino-German Agricultural and Food Update



Prof. Li Yu'e, CAAS (photo: DCZ)

Department of MARA.

Following an introduction into the project by the German team leader Dr. Rita Merkle presentations were delivered by the Sino-German expert team (Prof. Dong Hongmin, Prof. Barbara Amon, Dr. Daniel Müller, Prof. Li Yu'e, Sophia Lüttringhaus). The panel was concluded by a panel discussion attended by the expert team, Dr. Augsten, Hindri Kuipers (climate expert of the animal breeding project, and Dr. Li Yan (Shandong Academy of Sciences). Through all the sessions the audience had the opportunity to formulate questions and comments by using the interactive online tool Slido. This was actively used, and the most popular questions were discussed during the Q&A sessions and in the final panel session. (For more detailed information about the DCZ subproject on climate change please read the relevant cover story and reports about the study tours in issue no. 7 of the Agricultural and Food Update.)

The second panel on Rural Land System Reform focused on this year's topic of the DCZ Agricultural Policy Dialogue on different land consolidation and management systems. Participants of the study tour to Germany and the Czech Republic actively participated in the planning of this workshop (see report on the study tour in this issue by Karin Tränkner). Following opening speeches delivered by Mr.



Panel discussion (photo: DCZ)

Friedrich Wacker, Deputy Director General of the Department of International Cooperation (BMEL), and Mr. Li Hongtao, Deputy Director General of the Foreign Economic Cooperation Center (FECC) distinguished experts from China and Germany introduced recent experiences in rural revitalization and rural land consolidation.

The morning session started with a speech on the reform of rural collective property rights system in China, given by Mr. Zhao Kun, Deputy Director General, Department of Policy and Reform, MARA. Dr. Ye Xingqing, Director General, Rural Economy Research Department, Development Research Centre of the State Council, emphasized the importance of securing land for China's rural revitalization.



Dr. Ye Xingqing, DRC (photo: DCZ)

Sino-German Agricultural and Food Update

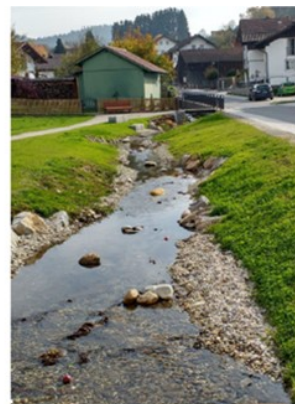
Prof. Dr. Ing. Joachim Thomas informed the audience about the history, experiences and mechanism of rural land consolidation and management in Germany and Eastern European countries. Prof. Meng Guangwen from Tianjin Normal University added his own observations of the development and evolution of rural areas in Germany. In the afternoon session Dr. Peter Lentjes focused on environmental protection issues like water retention and flood prevention, ecological aspects and recreational values of land as well as the impact of the economic efficiency gained by land consolidation.

Prof. Dr. Li Yumei, College of Humanities and Development Studies from China Agricultural University, emphasized the role of China's rural land system reform under the goal of rural revitalization.

After providing insights into aspects of integrated rural development in Germany Dr. Michael Klaus, Chief Representative of the Hanns-Seidel Foundation Office Shandong, further talked about its adaptation to China and experiences made in Shandong province.



2015



2017

Photos: Dr. Peter Lentjes

Lastly, Mr. Yu Zhihong, farmer, entrepreneur and owner of the Gan En family farm in Sichuan Province, introduced his farm and told the success story of the family business but also challenges in China's land management system, namely the duration of land use rights and its impact on investment motivation of farmers.

A panel discussion under the topic: "What are the next steps after land consolidation to build up modern agriculture?" moderated by Dr. Dietrich Guth, Deputy Political Director of DCZ, completed the workshop.



Photo: DCZ

Sino-German Agricultural and Food Update

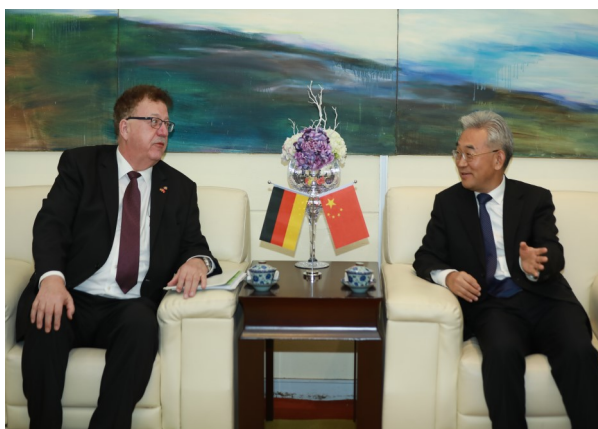


Mr. Sun Bangqun, Deputy Director General, Department of Policy and Reform, MARA, wrapped up the event by summarizing the workshop's value and lessons learned by the Chinese side. In his review Mr. Sun mentioned that the examples from Germany, for example river renaturation and ecological landscape planning, increased attractiveness of rural areas are good references for what the Chinese land reform should be aiming at. He also stressed that the participation of involved stakeholders should have high priority in a successful land consolidation.

On November 19, an audience of about 160 people attended the major event of the

DCAW, the "Open Day", where DCZ and other bilateral projects in the agricultural field presented their activities and invited experts to share their findings on recent trends in agriculture.

Mr. Hans-Joachim Fuchtel, Parliamentary State Secretary of BMEL, and Mr. Zhang Taolin, Vice-Minister of MARA, delivered opening speeches and attended the opening session. The opening was followed by keynotes, work reports from the projects, and presentations by related agri-businesses and a final panel discussion.



Photos: DCZ

Sino-German Agricultural and Food Update



Beijing Dairy Cattle Center (photos: DCZ)

On November 20, participants could choose between two excursions. Excursion 1 included a visit to the Yanqing Dairy Cattle Breeding Farm run by the Beijing Dairy Cattle Center (BDCC), a renowned farm for superior dairy cattle production and related scientific research.

The farm is located in Yanqing county 70 km northwest of the city center and currently accounts for 1,500 head of cattle and 130 ha land. Prof. Jiang from the Beijing Municipal Academy of Animal Sciences explained the farm's lab with climate simulation chambers. In addition, participants visited manure collecting and treatment facilities of the farm. On the way back the group passed Badaling and had the opportunity to visit this famous stretch of the Great Wall.

Excursion 2 included a visit to Beijing International Agricultural Science and Technology



Park in Lucheng town, Tongzhou district, about 30 km east from Beijing city centre. The park is run by Zhongnong Futong, a company affiliated to China Agricultural University. The park is specialized in experimenting with advanced greenhouse technologies and cultivation technologies.

November 21-22 was dedicated to the Sino-German Livestock Project Symposium which had been organized by the Cooperation Project on Animal Breeding and Husbandry in China. About 100 participants attended the two-day event. In the plenary and round-table sessions, project partners and enterprises from Germany and China presented project achievements and discussed cooperation areas and activities for the forthcoming project year. On November 21 a whole session and a panel discussion were devoted to climate change mitigation and emission assessment in livestock operations.



Greenhouses at Beijing International Agriculture S&T Park (Photos: DCZ)

Other DCZ Activities

Study tour “Rural Land Management” to Germany and Czech Republic

Between September 24 and 29, the DCZ Agricultural Policy Dialogue component organized a study tour on Rural Land Management to Germany and the Czech Republic for Chinese government officials and researchers from Chinese universities and think tanks. Gaining insights and understanding institutions, procedures, instruments and mechanisms in land rights management systems and land consolidation measures were the intention of the journey.

Of special interest was the privatization process of former nationalized farmlands and property rights in Germany after the reunification and the political transformation of the Czech Republic after the fall of the “Iron Curtain”. A study of the rural land management systems in these two countries should help to get ideas on how to support the ongoing land rights system reform in China.

Members of the delegation were Mr. Sun Bangqun, Deputy Director-General of the Department of Policy and Reform, Ministry of Agriculture and Rural Affairs (MARA), Mr. Yang Yi, Director-General of the Foreign Economic Cooperation Centre (FECC), Ministry of Agriculture and Rural Affairs (MARA), Mr. Song Xiaochun, Division Director of Management System, Department of Policy and Reform (MARA), Ms. Yang Xia, Deputy Division Director, Collective Assets Division, Department of Policy and Reform, Dr. Liu Xiangqi, Director of Rural Development Research Centre, Tianjin Normal University and Prof. Dr. Li Yumei, Associate Professor of College of Humanities and Development Studies, China Agricultural University, Beijing.

On the German side, the study tour was accompanied by Dr. Dietrich Guth, Deputy Po-

litical Director of DCZ, and partly by Prof. Dr. de Vries, Professor at Technical University of Munich. The tour was coordinated and accompanied by Dr. Zhang Xian, DCZ Project Manager, FECC, Karin Tränkner, Senior Expert of the DCZ Agricultural Policy Dialogue, Paul Miehe, DCZ Junior Expert, and IAK’s DCZ Project Manager Ms. Stanimira Penkova.

The tour started on September 24 in Potsdam with a visit to the Ministry of Rural Development, Environment and Agriculture of the Federal State of Brandenburg where Mr. Tobias gave a presentation on “Land consolidation in Brandenburg according to the “FlurbG/ German land consolidation law” which applies on national level and the “LwAnpG/ Landwirtschaftsanpassungsgesetz” which regulates land allocation after the privatization process in Eastern Germany as a result of the German reunification.

On the same day, the delegation visited the German AgriForest Privatisation Agency (BVVG). Ms. Katja Dells, head of the International Consulting Dept., gave insights into the institutional structure and legal frame of BVVG. Mr. Hans-Egbert von Arnim deepened the understanding of Eastern Germany’s land consolidation context mainly by the topics “Transformation of the Agricultural Sector in East Germany” and the “Institutional Framework for Privatization and Management”.



At Ministry of Rural Development, Brandenburg (photo: DCZ)

Sino-German Agricultural and Food Update



The delegation at ČÚZK, Prague (photo: DCZ)

On Wednesday, September 25, the delegation visited the Czech Office for Surveying, Mapping and Cadastre (ČÚZK) in Prague. Its head, Ms. Martina Hercegová, provided general information about the role and function of the office and how land and property rights are registered into the Czech real estate cadastral system. The office deals with land registration, cadastral and topographic surveys. The legal basis of all operations is the New Civil Code of 2012 (NCC) and the New Cadastral Law of 2013. The NCC returns to the main legal principles of civil law. Since 2015 all documents at the Cadastre have been processed in electronic form.

Mr. Jiří Poláček presented how the Czech Cadastre is providing e-services linked with the Cadastre of Real Estate. He pointed out that their cadastral information system (abbreviated as ISKN) is part of a system of basic public registers including a civil register and a building and address register, among others, which are interconnected.

On Thursday, September 26, the next destination was Tirschenreuth, a small town in Upper

Palatinate, Bavaria, Germany. Mr. Thomas Gollwitzer, Head of the Office for Rural Development (ALE), welcomed the group in a beautiful new building constructed only from renewable sources: wood from regional forests. Mr. Gollwitzer presented the principles and competences of ALE for citizens in the core centre of their work, the practice of subsidiarity, the office as a one-stop-agency and the triad of economy, ecology and social considerations in land management. Participation of the public from the very beginning of measures in land consolidation via community associations ensures a low rate of resistance and contradictions, in Bavaria under 2 %. Especially the principle of subsidiarity as a maximum of self-determination, self-responsibility and the opportunity of self-unfolding is crucial for a successful land consolidation. From 2019-2021, the ALE Upper Palatinate runs 220 measures of land consolidation. Later Mr. Guggenberger gave a presentation about ALE's environment protection programme.

Sino-German Agricultural and Food Update



Visit to ALE, Upper Palatinate, Bavaria (photo: ALE)

On Friday, September 27, the group visited Tagwerk, a farmer-producer cooperative close to Munich. Tagwerk was founded in 1984 by a small group of people who wanted to organize their purchase of daily food in their living region by themselves. Today, Tagwerk has eight hundred members, each of them holding shares of two hundred euros. In total, the cooperative has 3,700 shares. Tagwerk is embedded in a complex trade structure. It acts as a wholesaler, production and processing network and runs many organic shops in a franchise system.

Later the group had the opportunity to visit the farm and market garden with nursery “Obergrashof” which is a producer and member of Tagwerk.

The market garden was founded in 1990 by three families. From the very beginning the agricultural cultivation followed the “Demeter standards”, i. e. bio-dynamic agriculture. Until today, the farm has been growing steadily. Six families are living on the farm of about 150 ha, working together with twenty-five employees. Core crops are vegetables which are distributed mainly in the Munich region.



Visit to Tagwerk (photos: DCZ)

Sino-German Agricultural and Food Update



Visit to the farm of Tagwerk (photos: DCZ)



On Saturday, September 28, the group was invited by Prof. de Vries to the Technical University of Munich (TUM), Department of Civil, Geo and Environmental Engineering. Prof. de Vries' special concerns in research and science are social matters and aspects in land reallocation. According to Prof. de Vries, this topic is not covered systematically and appropriately by land management science in most countries.

At first, Prof. de Vries provided a historical review of the German cadastral system. The roots of the German cadastral systems were established in the early 19th century, mainly for taxation purposes and the establishment of topographic maps. Since 1801 cadastral maps have been created at the scales of 1:5000, 1:2500, 1:1000 for the whole country. By 1900 a land registration system for the whole of Germany was established – the Grundbuch – a register and guarantee of land rights tenure.

The study tour ended on Sunday, September 29, with a visit to the “Bauernmarktmeile” – an annual open-air exhibition for regional farmers and their products organized by the Bavarian Farmers Association (BBV) and the Bavarian State Ministry of Food, Agriculture and Forestry. (Karin Tränkner)

International Conference on Organic Industry and Rural Revitalization

On September 25-26 Eva Sternfeld, DCZ science advisor and Anne Veltes, DCZ intern, attended the “International Conference on Organic Industry and Rural Revitalization”. The conference took place at China Agricultural University (CAU) and was jointly organized by CAU and FiBL Switzerland. Co-organizers were the College of Resources and Environmental Sciences of CAU, the Beijing Key Laboratory of Biodiversity and Organic Farming as well as ECOCERT Certification Center Co., Ltd.

On September 25, the topics of “Sustainable Development and Trends of Global Agriculture” and “Benefits of Organic Agriculture and Rural Revitalization” were covered. The opening session included speeches by representatives from the Ministry of Agriculture and Rural Affairs, the Administration for Market Regulation, Dr. Jian Liu, director of the Science Division at UNEP, Felix Fellmann, head of the International Cooperation Division of the Swiss Embassy in China, and by Dr. Zhou Zejiang, former president of IFOAM Asia. The opening addresses were followed by keynote speeches by well-known domestic and international experts and scholars.

Sino-German Agricultural and Food Update

In his keynote speech Dr. Urs Niggli (Director of FiBL) stressed the importance of organic farming and its contribution to many global challenges such as increased productivity of small-holder farms, reduced poverty of farm families, creating a value addition in food chains, reducing negative environmental externalities and increasing agronomic and ecological resilience. However, organic and agro-ecological practices have been insufficiently funded during the past few years.

Prof. Dr. Fusuo Zhang (CAU) talked about the overuse of fertilizers, especially nitrogen and phosphor, which leads to a number of environmental and food security problems. In order to bring about a change in the use of fertilizers, especially a stronger cooperation with the farmers is needed. He presented successful cases thereof in China.

The speech of Prof. Dr. Raffaele Zanolini (Chairman of the Italian Association of Organic Agricultural Research) focused on the importance of reconnecting consumers and organic farmers. He specifically mentioned policy and market tools to succeed in this task such as organic action plans, labelling and traceability schemes or open farm days, community supported agriculture and educational farms. In the afternoon session Dr. Yan Shi shared her experiences in founding and managing the organic CSA farm Shared Harvest.

On September 26, “Soil Health and Biodiversity Protection and Utilization” as well as “Organic Industry Development and Links between Production and Marketing” were the discussed topics. Prof. Xin Chen (Zhejiang University) introduced the effects and key technologies of rice-fish systems. Her presentation focused on how an increased biodiversity such as including various fish species or crabs in rice paddies, can lead to an increased soil fertility and organic matter content but also to a decreased need for pesticides.

In a lively presentation Prof. Sun Zhenjun (CAU) demonstrated the importance of worms for soil health. Dr. Eva Sternfeld (DCZ) covered the development of the organic food market in Germany. The conference concluded with a “Ceremony of Cooperation Bases on Organic Farming between Colleges and Farms”. Plates were handed over to six organic farms in the suburbs of Beijing. (Anne Veltes)

Lecture for Students at China Agriculture University

On October 13, on invitation of Prof. Qiao Yuhui from the College for Resources and Environmental Sciences of China Agricultural University DCZ Science Advisor Dr. Eva Sternfeld and DCZ intern Anne Veltes participated in a course on organic farming for first year MA students. Eva Sternfeld introduced the DCZ and gave a presentation on the organic food market in Germany. Anne Veltes discussed preliminary findings of her MA research on consumer's trust and Alternative Food Networks (farmers' markets). The course was attended by about 60 students, 30 of them exchange students from seven African countries.

Exchange with ZALF

On November 25, Dr. Chen Cheng, post-doc researcher at the Leibniz Centre for Agricultural Landscape Research (ZALF), together with Dr. Eva Sternfeld visited the Institute for Agricultural Resources and Regional Planning at CAAS. Dr. Chen and Prof. Yin Changbin and his research group of the Department for Agricultural Resources Utilization discussed issues of payment for ecosystem services, ecosystem compensation and research on behavioral economics. Dr. Chen introduced ZALF with its divisions for Landscape Functioning, Land Use and Governance and Landscape Research Synthesis and the Research Platform Data. He

Sino-German Agricultural and Food Update

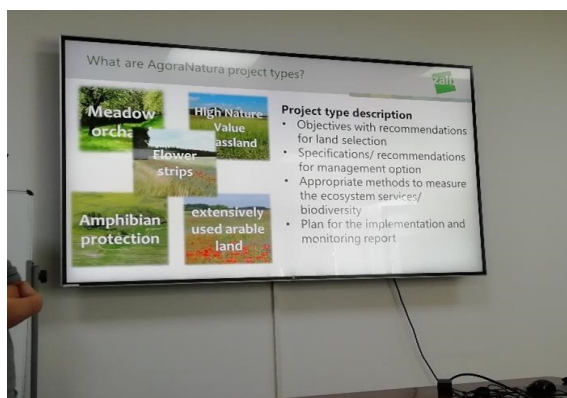


Photos: Eva Sternfeld, DCZ

explained ZALF's philosophy of reshaping landscapes by rethinking agriculture. (<http://www.zalf.de/en/Pages/ZALF.aspx>.) Chen also presented the project PEATWISE where he has been working on “Incentive-based policy instruments guiding towards sustainable use of peatlands in EU”. Finally, Chen introduced AgoraNatura (<https://agora-natura.de/>) – a private online marketplace for biodiversity and ecoservices that is being introduced in Germany.

International Symposium on Organic Food Market and Development

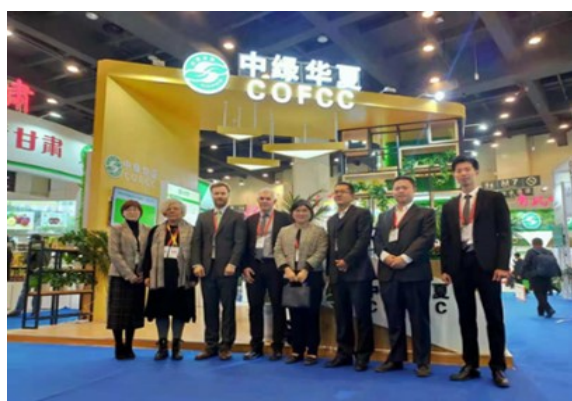
Ms. Karin Tränkner, DCZ expert on Agricultural Policy Dialogue, attended the 14th International Symposium on Organic Food Market and Development and the 13th China International Organic Food Exposition (CIOFE) which were held in Zhengzhou, Henan Province, from November 29 to December 1, and



contributed by a presentation on the “Organic Food Sector alongside the Value Chain in Germany”.

The exposition was organized by the Zhengzhou Municipal Government, the China Green Food Development Centre, the China Organic Food Certification Centre (COFCC) and the China Organic Agriculture Committee (COAC).

Photos: COFCC WeChat public account

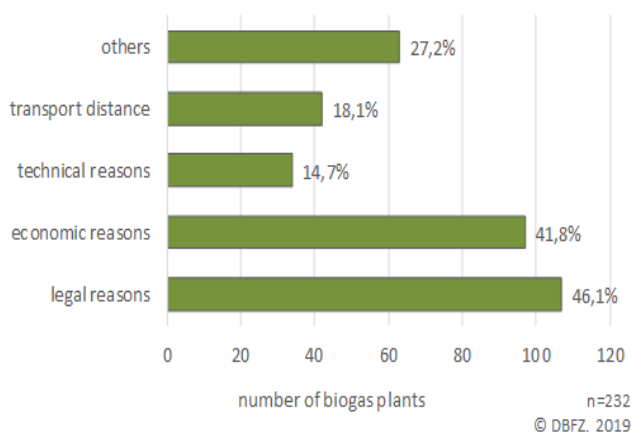


Re-Examining Green Governance

On the invitation of the Heinrich Boell Foundation Beijing Representative Office and the Fujian Normal University Eva Sternfeld participated in a conference titled “Re-examining green governance” from November 30 to December 2. She introduced the DCZ and gave a presentation on “Agriculture and Climate”.

Study tour of CAAS delegation

From December 1 to 7 a delegation of the Chinese Academy of Agricultural Sciences (CAAS) headed by Vice President Prof. Mei Xurong visited German research institutes. The purpose of the tour was to learn about rural infrastructure development. Prof. Mei was accompanied by a group of researchers from the CAAS Institute for Agricultural Economics and Development (IAED) including the Institute’s director Prof. Yuan Longjiang. The group visited the headquarter of Leibniz Association in Berlin, the Leibniz Institute for Agricultural Development in Transition Economies (IAMO) in Halle, the Thünen Institute in Braunschweig, the Academy for Spatial Research and Planning in Hannover, the Leibniz Institute for Ecological Urban and Regional Development and the Saxon State Ministry of the Environment and Agriculture in Dresden. A highlight of the visit was the signing of an MoU between IAMO and IAED on joint research. The tour had been planned and coordinated by the DCZ S&T platform in cooperation with IAMO and IAED.



Activities of other Bilateral Cooperation Projects

New website of ChinaRes project online including Chinese and German biogas research

Within the scope of the Sino-German working group, the ChinaRes project merges knowledge about the energetic utilization of agricultural residues in China and Germany. The project with the full title „Energetic utilization of agricultural residues in China and Germany” is coordinated by Deutsches Biomasseforschungszentrum GmbH (DBFZ) from Germany. The project’s objectives are (i) to identify the barriers for the use of different agricultural residues from animal and plant production, (ii) to develop conceptual proposals for a better design and a coordinated operation of barns and biogas plants, and (iii) to provide the project results to the wider public. To pool all the collected information and results, a project website has been established. The website provides various information about biogas potentials, legal framework conditions of the biogas sector, animal husbandry and biogas technologies, respectively in China and Germany. Also, best-case biogas plants are presented, such as the Deqingyuan Biogas Plant in Beijing, China. The website can be accessed under the following link: <https://www.dbfz.de/en/projects/china-res/project/>

In parallel, a survey among biogas plant operators about the available unused substrate potentials and obstacles for their energetic use in Germany was conducted. One aim was to identify the reasons why available substrates are currently not used or not even envisaged to be used in the near future. Figure 1 shows that the main obstacles have legal or economic reasons.

Figure 1: Reasons not to use available substrates for biogas production, number of biogas plants cited and proportion of total; multiple answers possible; database: DBFZ operator survey 2019

Another aim of the survey was to find out whether plant operators estimate their own plant operation to be exemplary in terms of liquid manure management and emission reduction or not. The wider goal was to identify and assess best-case plants in Germany. Figure 2 shows that a majority of 78 % consider their plant to be exemplary in this sector.

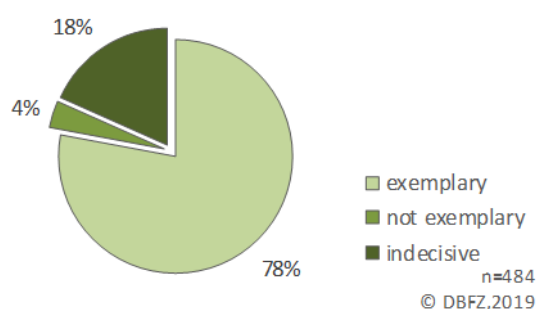


Figure 2: Evaluation of biogas plants with regard to liquid manure management and processes for emission reduction, database: DBFZ operator survey 2019

Further and more detailed results of this survey have been compiled in a short report which will be available for download on the project website. Contact: britt.schumacher@dbfz.de

Reviews of Publications

Current Status and Development Strategy for Community-Supported Agriculture (CSA) in China by Tang Haiying, Liu Ying and Huang Guoqin. Sustainability 2019, 11, 3008, doi: 10.3390/su11113008

The 15-page online paper is based on the literature review of recent publications related to Community-Supported Agriculture (CSA) in China. CSA is introduced as an alternative form of agriculture that developed out of perceived disadvantages of industrialized agricul-

ture. CSA tries to re-create a direct link between farmers and consumers. CSA is a concept that developed first in Japan as early as in 1965 as a response to the Minamata disease which led to an urgent need of safe food. CSA then spread to Europe in the 1970s and finally to the United States in 1985. According to the paper's findings, in China the development of CSA can be attributed to the increase of food safety incidents and a loss of confidence in the industrialized food system. CSA in China first occurred in the city of Hong Kong, from where it spread into other Chinese regions in 2003.

The paper identifies different characteristics and models of CSA in China. Among the characteristics listed are regionality, security and safety, fairness, healthy food, risk sharing, direct and local sales and environmentally friendly production. Additionally, a number of CSA models detected by various scholars are listed in this review. Renting and planting, co-purchasing, crowdfunding, smallholder collectives, production-education-research models and other are named.

There are also different functions of CSA recognized such as organizing community activities, reducing the risk of agricultural products, establishing trust by improving the producer and consumer relationship, achieving a sustainable development, developing the local economy, producing healthy food, which are mentioned among a few others. Overall, the functions can be divided into economic functions, environmental functions and social functions.

The paper also refers to the problems related to China's CSA. These are a shortage of labour force, low comparative benefits of organic agriculture on the market, an imperfect supervision system as well as a shortage of organic farming technology and knowledge and a lack of financing channels. For consumers the main problem is how to ensure that products actually are organic, so the issue of

trust is challenging. Additionally, consumers prefer low-priced and good-looking agricultural products, which hinders the development of CSA. The costs of certifications and lack of government support create further problems for the development of CSA in China.

Finally, some strategies for the future development of CSA are proposed such as increased government planning and guidance, as well as supporting policies and technical support. An online traceability system for food should be developed which could improve trust.

The conclusion stresses the need for research from additional scholarly fields. The main fields of current CSA research are sociology, economy, geography and ecology.

Overall, this article gives an excellent overview of the current developments of CSA in China. Especially the various tables and maps (Fig. 1 and 2) marking the main areas of CSA activities contribute to this. These maps also reveal that CSA networks in China given the size of the country and the huge consumer population with 254 CSA farms and 32 CSA farmers' markets in 2019 are still in their infancy. However, due to its nature the article cannot give a deeper understanding of the different aspects. It mainly lists them, without explaining any details or background. This article can therefore especially be recommended for those that are seeking to gain a first insight into CSA in China. (Anne Veltes)

The Development of Organic Industry and Organic Product Certification in China 2019 (Excerpt), Excerpted, Compiled and Translated by Organic Agricultural Technology Center. Edited by Qiao Yuhui, Chen Encheng

For a number of years the editors have produced an annual report on the status of China's organic food industry. The foreword of

this year's issue stresses the importance of China's rural revitalization strategy and poverty alleviation programme for the development of the organic food industry. The book includes a list of 27 counties and cities which have been designated as "National Organic Product Certification Zones" in recent years by the China National Certification and Accreditation Administration (CNCA) (p. 20-21). These zones played a great role to promote the regional development in the specific zones. According to the report, 63 qualified certification bodies were verified by CNCA until December 2018, which certify organic products according to the National Standard of China for Organic Products (GB/T 19630-2011). 15 international certification bodies are accredited to carry out a certification in China according to foreign standards (including OFDC from Nanjing, Ecocert from France, BCS und CERES from Germany, CCPB from Italy, Jona from Japan, IBD from Brazil, BAC from Italy, NASSA from Australia and ACERT from Greece). Until December 31, 2018 12,226 enterprises all over China had obtained 19,365 organic certificates according to the Chinese standard (p. 27). About 4 million ha are certified organic, with 3.1 million ha being plant production and 975,000 ha wild collection area. Xinjiang (976,000 ha), Heilongjiang (613,000 ha) and Inner Mongolia (423,000 ha), Liaoning (179,000 ha) and Guizhou (128,000) are the leading organic crop production areas. About three quarters of China's certified agricultural land are located in these five provinces. Livestock produced according to organic standards accounted for 3.2 million head of sheep, 880,000 cattle and 240,000 pigs. The total area of organic farmland certified under international organic standards was about one third of the total farmland (1.3 million ha). (Eva Sternfeld)

How socioeconomic and institutional conditions at the household level shape the environmental effectiveness of governmental payments for eco-services program by Cheng Chen, Bettina Matzdorf, Claas Meyer, Hannes J. König, Lin Zhen (2019), *Ecosystems and People*, 15:1, 317-330

Regions on the Rise. Culture and Architecture as for Rural Development (2019, in English and Chinese) ISBN 978-3-944083-06-3

The book includes contributions and insights of an international conference held in Songyang county (Zhejiang province) in November 2018 and organized by AEDES Architecture Forum in cooperation with Songyang county government. The county has become a pioneer in China in sensitive redevelopment of rural areas by implementing ‘architectural acupuncture’. The conference focused on the duality and interrelations between the urban and the rural, exploring how culture and architecture can contribute to rural renewal in interplay with economy, spatial planning, infrastructure and ecology.

In November 2019 Songyang county in cooperation with UN-HABITAT will host an International Forum on Urban-Rural Linkages. (Also see the conference report in the Sino-German Agricultural and Food Update No. 4.)

Call for Papers

IAMO Forum 2020 – Digital transformation – towards sustainable food value chains in Eurasia (24-26 June 2020, Halle (Saale), Germany)

Digital innovations are seen as a major driver behind food economy growth in the future, not only in the EU but all over Eurasia. It is widely expected that the use of digital technologies will fundamentally change the conditions of development and behavioural patterns of economic agents, bring new business models and market structures, restore competitive conditions, and strengthen global agri-food chains.

Against this backdrop, IAMO Forum 2020 is setting up a dialogue among researchers and stakeholders from business, politics, and society to discuss economic, social, environmental, and institutional aspects of the digital transformation of food value chains.

The geographical focus of the conference is on Europe, Central Asia, and China, including comparative studies. Quantitative and qualitative contributions from agricultural and food economics, sociology, geography and related disciplines are welcome. Practitioners are invited as well to share their experiences. Deadline for abstract submissions and proposals for organized sessions is February 10, 2020.

For the full text of Call for Papers: <https://forum2020.iamo.de/call-for-submissions/>

Sino-German Agricultural and Food Update

Upcoming Events 2020

Date	Location	Event	Contact
January			
16-19	Berlin	Global Forum for Food and Agriculture 2020 Food for all! Trade for secure, diverse and sustainable nutrition.	Federal Ministry of Food and Agriculture www.gffa-berlin.de/en/
17-26	Berlin	International Green Week	Berlin Exhibition Grounds https://www.gruenewoche.de/en/AboutIGWBerlin/
February			
20-21	Hong Kong	Automating the Future of Farm Work? Precision and Smart Agriculture Technologies Across East Asia in the Twenty-First Century – International Workshop	Hong Kong University of Science and Technology sachacody@usthk
24-26	Shanghai	The China International Agrochemical & Crop Protection Exhibition	Shanghai New International Expo Center
24-26	Shanghai	China International Fertilizer Show	Shanghai New International Expo Center
May			
13-15	Shanghai	Biofach China together with Natural Expo China	Shanghai World Expo Exhibition & Convention Center www.biofachchina.com/en/home.php
16-18	Beijing	China International Modern Agricultural Exhibition	China International Exhibition Center
June			
3-5	Guangzhou	China (Guangzhou) International Food Exhibition and Import Food Exhibition (IFE China)	Guangzhou Exhibition Center
8-10	Beijing	International Conference on Agriculture & Horticulture	Double Tree by Hilton Hotel Xicheng District, Beijing Guang An Men Wai Avenue No. 168 Zip Code: 100055
16-18	Gut Brockhof, Erwitte Lippstadt (Germany)	DLG-Feldtage Meet the Crop Professionals	www.dlg-feldtage.de
24-26	Halle (Saale) Germany	IAMO Forum 2020 – Digital transformation - towards sustainable food value chains in Eurasia	Deadline for paper proposals: Feb. 20 https://www.iamo.de/en/events/details/iamo-forum-2020/
August			
8-9	Urumqi	China Xinjiang International Agricultural Fair (CXIAF)	Xinjiang International Convention and Exhibition Center
November			
23-27	Beijing	Sino-German Agricultural Week	www.dcz-china.org

Sino-German Agricultural and Food Update

Imprint

This issue was compiled by the international DCZ team. For enquiries and subscription please send an email to info-dcz@iakleipzig.de

Any news about upcoming events and conferences to share? Please send your information to e.sternfeld@iakleipzig.de

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The Sino-German Agricultural Centre (DCZ) (project no.: CHN 18-01) is supported with funds from the Federal Ministry of Food and Agriculture (BMEL) via GFA Consulting Group GmbH and implemented by IAK Agrar Consulting GmbH as leading company in a consortium with Leibniz Institute for Agricultural Development in Transition Economies (IAMO).