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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. 10 April – May 2020



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## Sino-German Agricultural and Food Update

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# Sino-German Agricultural and Food Update

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## Foreword

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

The Corona Virus crisis and its impact on the developments is still overshadowing the situation in many countries. This is, of course, also reflected in the number of publications and news on this subject. It also cannot be avoided in this newsletter.

Nevertheless, besides this, other issues of Sino-German cooperation in the field of agriculture should not be ignored. This edition of the newsletter attempts to provide an update on various topics, developments, and interesting news. A comprehensive cover story, which follows up on two DCZ studies, provides an informative insight into “Current Developments in the Chinese Soybean Value Chain”. The section on other Sino-German agricultural cooperation projects, includes reports from significant activities of the Sino-German Animal Breeding and Husbandry Project and the Sino-German Crop Production and Agrotechnology Demonstration Project (DCALDP), which demonstrate the high level of activity in our projects despite the complicated present situation which makes it necessary to diversify the forms of interaction, planning and implementation. This is also manifested in the variety of DCZ publications which have been published during these challenging times. Summaries are included in this newsletter as well as links to our website where these can be downloaded.

We certainly hope that soon again our exchange with you on these agricultural subjects can be continued in more direct meetings and events than is possible at present.

The Sino-German Agricultural Centre expects to organize the annual Agricultural Week in late November. Since the Sino-German Agribusiness Conference could not be held as usual in June this year, we plan to organize it under the roof of the Agricultural Week. We hope that we can meet again at these flagship events.

In the meantime, we thank you for your continued interest in and support to the Sino-German Agricultural Centre.

With best wishes



Dr. Jürgen Ritter  
Managing Director  
Sino-German Agricultural Centre (DCZ)

## Cover Story

### Current Developments in the Chinese Soybean Value Chain

Lea Siebert (DCZ)

DCZ has recently commissioned studies on the Value Chain of Soybean in China and Germany [1][2]. This article focuses on the current situation and recent developments of Chinese soybean production and trade and provides updated information on the impacts of the US-China Trade War and the COVID-19 crisis. The full previous studies can be downloaded at [www.dcz-china.org/en/dcz-publications.html](http://www.dcz-china.org/en/dcz-publications.html).

### Introduction

China looks back on a long tradition of soybean cultivation and a corresponding large variety of uses. Until now, besides rice, wheat and corn, soybeans belong to the most important grains in China, being used for human consumption as well as animal feedstuff. A shift of consumption patterns among Chinese consumers towards an increasing demand for meat and dairy products, reinforces

the importance of soybeans as a high protein feedstuff. As domestic production cannot meet the demand in China, currently more than 80% of soybeans are imported. Under the objective of achieving food security by ensuring domestic production of staple foods, the Chinese government also aims at reducing the large quantities of imported soybeans by increasing the soybean cultivation area in China.

### Importance of Soybean to China

Soybeans are a traditional staple food in China and hence, annual consumption comprises 13 million tons of soybeans for food use and 16 million tons of soybean oil [3]. Due to their high protein content, soybeans are a popular animal feed and rising meat consumption leads to increasing demand for soybean as a fodder crop. In fact, most of the 103 million tons of soybeans that were consumed in China in 2019 were processed to soybean crush and then soybean meal with the primary purpose of feeding poultry, pigs, cattle and dairy cows [1]. In order to meet the rising demand, in 2019, China imported about 88 million tons of soybeans and supplied 18 million tons with domestic

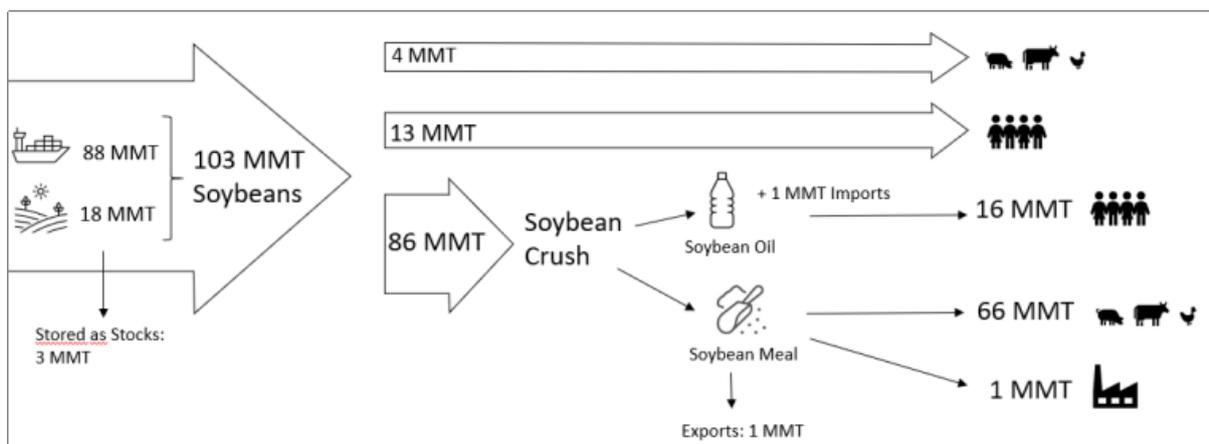


Figure 1: Supply and processing of soybeans in China in 2019/20: total domestic consumption of soybeans in China amounts to 103 million metric tons (MMT), supplied by 88 MMT of imports and 18 MMT from domestic production. Besides uses as direct animal feed (4 MMT) and as food for human consumption (13 MMT), the largest proportion (86 MMT) of soybean crush is processed as soybean meal for animal feed (66 MMT), industrial uses (1 MMT) and exports (1 MMT). In the crushing process also 15 MMT of soybean oil are produced. Supplemented by 1 MMT of soybean oil imports, annual domestic consumption amounts to 16 MMT of soybean oil.

Source: based on data from [3]

production. As displayed in Figure 1, more than 80% of soybeans in China are processed by the soybean crushing industry with an output of 66 million tons of soybean meal for domestic animal feeding. Soybean oil is another product of the soybean crushing process, which is exclusively used in the domestic food sector. The Chinese crushing industry supplies 15 million tons of soybean oil, which are supplemented with 1 million tons of imported soybean oil to meet the annual demand of 16 million tons.

### Current Situation

In order to ensure China's soybean supply, national policies encourage domestic soybean cultivation. Furthermore, China aims for both an enhanced national soybean production and reliable trading partners.

### National Policies for Domestic Soybean Production

In accordance with previous years, the 2020 *Central Document No.1* stresses the importance of agriculture, making food security a top priority. Despite the *White Paper on Food Security in China* [4] announcement of an achieved 95% self-sufficiency rate in staple grains (rice and wheat), similar rates for a domestic soybean production are not on the political agenda. After introducing a new *Soybean Revitalization Plan* (大豆振兴计划) and aiming for a 10-million-mu expansion of the soybean cultivation area in *Central No.1 Document of 2019*, the 2020 *No.1 Document* only mentions soybeans in the context of supporting crop rotation and intercropping of high-yield soybean varieties with maize to improve depleted soils [5][6]. Furthermore, in 2019 government subsidies for soybean cultivation in the main province for soybean production, Heilongjiang, were reduced to 3825 RMB/ha from 4800 RMB/ha in 2018 ([3], based on industry estimates). However,

soybean subsidies still encourage soybean planting over corn cultivation (corn subsidies amounted to 450 RMB/ha in 2019) and according to the *Official Notice on China's 2020 Crop Production*, the government aims for an increase of the total soybean cultivation area in China from a present 8.4 million ha to 9.3 million ha [7].

### Development of Improved Soybean Varieties

Besides political targets for expanding soybean cultivation areas and subsidies, researchers and breeders focus on increasing yields by improving soybean varieties. Genetically modified (GM) plants are illegal to be grown in China – with exception for the commercial production of GM cotton. On the other hand, most imported soybeans in China are genetically modified and are officially only allowed to use for animal feeding. Due to longstanding negative media reports about “GMO imported soybeans” which were even blamed on national television to cause cancer [8], there is a general public opposition to GM foods among Chinese consumers. However, in the last years media rhetoric changed, and some scientists openly demand the legalisation of GM referring to international competition and intellectual property rights to those varieties they have developed [9]. A major step towards commercialisation of GM grains was made in January this year, when China granted biosafety certificates for domestic GM corn and soybean traits – valid until December 2024 [10].

As long as the use of GM seeds is not fully legalised, Chinese researchers work on the development of new soybean varieties with higher yields without using foreign genes. far, the most common soybean variety is Heihe 43, followed by Zhonghuang 13, Suinong 36 and Zhongshan No1 (Figure 2).

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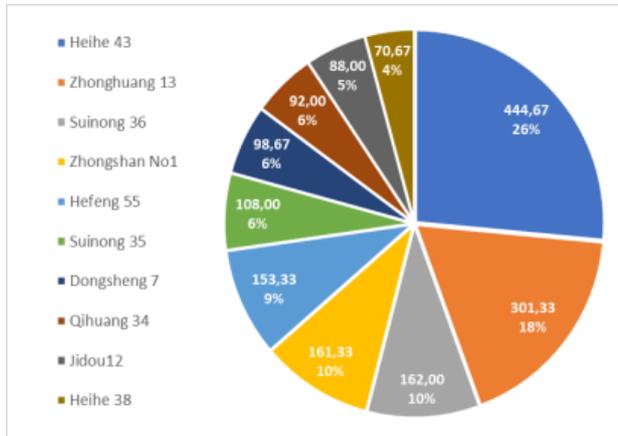


Figure 2: Main soybean varieties in China (data from 2016); the numbers indicate the cultivation area in  $\times 10^3$  ha and their share

Source: Big data platform of Chinese seed industry in Ministry of Agricultural and Rural Affairs of People's Republic of China

However, the statistical data on soybean varieties displayed in Figure 2 only covers about 20% of the total soybean cultivation area and hence, Chinese genetic resources of soybeans comprise of thousands of varieties which are adopted to very different climatic and environmental conditions. Recently, by making use of the more conventional technique of accelerating mutations with radioactive radiation, researchers developed several new hybrid species [11]. The most promising hybrid, Henong-71, is well adapted to windy conditions and set a new record in yields, producing 447.47 kg/mu of soybeans – almost four times the average yield of Chinese soybeans [1].

### International Trade Agreements

As the Chinese annual demand for more than 100 million tons of soybeans cannot be met by merely enhancing domestic production and therefore 100% self-sufficiency is unlikely, importing soybeans from reliable trading partners is of crucial importance. Figure 3 displays the dependence of China on global trading cooperations: in 2019 more than half of Chinese soybean imports originated from Brazil, a long-distance journey of more than 16000 km and about 40 days of shipment.

The shares of Brazil in China's soybean supply increased over the past ten years (Figure 4a). In 2010 the U.S. were the most important soybean exporter for China, followed by Brazil, Argentina, Canada and Uruguay. Since 2013, Brazil replaces the U.S. in the leading position. The recent trade war between the U.S. and China led to a significant decline of the U.S. share of China's soybean supply in 2018. At the same time China aims at diversifying the sources for soybean imports with plans to intensify trade relations with Russia [3]. As for soybean oil imports, Russia's share increases since 2015 (Figure 4b). The strong fluctuation in soybean oil imports to China were balanced by growing crushing capacities of imported whole soybeans and hence, greater domestic soybean oil production. Annual domestic consumption of soybean oil in China increased from 14 to 16 million tons between 2014 and 2019.

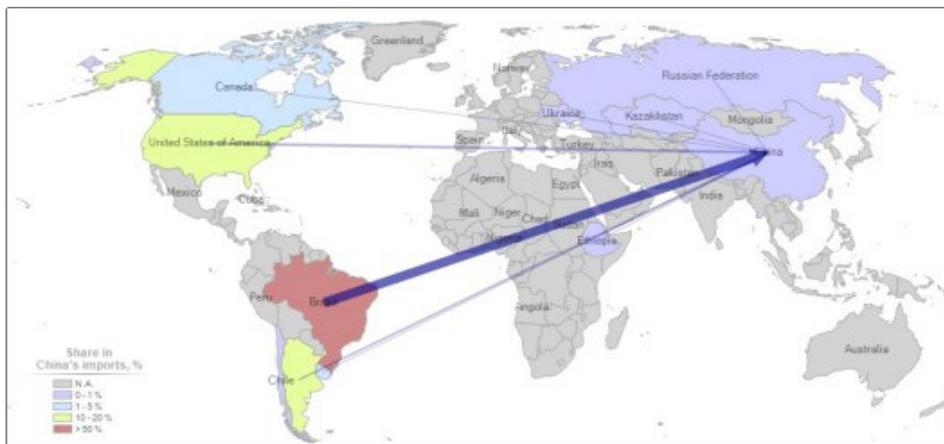


Figure 3: Supplying Markets for Chinese Soybean Imports in 2019 [12]

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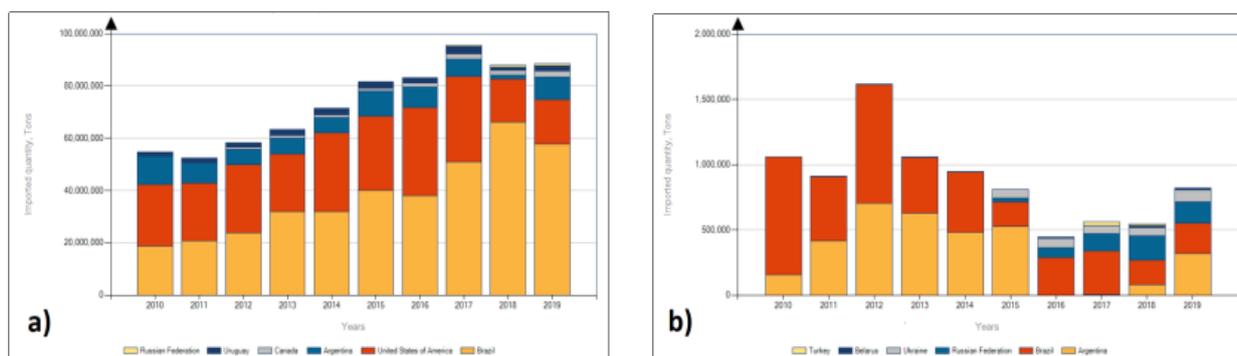


Figure 4: Changes in six main supplying markets for China, 2010-2019; a) for soybeans; b) for soybean oil [12]

### Recent Developments

China's dependence on soybean imports and its position as the largest soybean importer leads to strong links with its supplying markets. As a result, conflicts and crises in the soybean producing countries, such as the US trade war or the Corona pandemic, automatically affect China, whereas changes in Chinese soybean consumption, such as the African Swine Fever induced reduction of soybean meal demand in China, as well have direct impacts on the soybean exporting countries.

### US-China Trade Frictions

China's response to US American tariffs on Chinese steel and aluminum in spring 2018 especially targeted US soybean imports: as soybeans accounted for more than 50% of the US agricultural export value in 2017, a 25% tax from the main buying country led to a drop in American shipments [13]. Until 2018, more than half of the American soybeans were exported to China and hence, China has a strong influence on global prices. Even though the US tried to export their soybeans to other countries in 2018, Figure 5 displays that the 11 million tons drop in exports to China could not be balanced. The importance of soybeans in the US-China trade friction can also be seen from Chinese promises to purchase several million tons of US soybeans, which accompanied bilateral

trade talks. Furthermore, the 2019 informal tariff exclusions on the Chinese side that led to higher purchases of US soybeans by some Chinese state-owned and private companies could be seen as a sign of rapprochement [3]. According to the *Phase One trade deal*, which was signed in January 2020, China commits to increase purchase of agricultural goods from the US by at least 12.5 billion US dollars in 2020, aiming for annual US farm exports to China of 40.4 billion US dollars in 2021 [14]. However, the Chinese tariffs on many US agricultural goods were not reduced by the deal and hence, US soybean exports to China continue to depend on concessions in the form of further exclusions from tariffs.

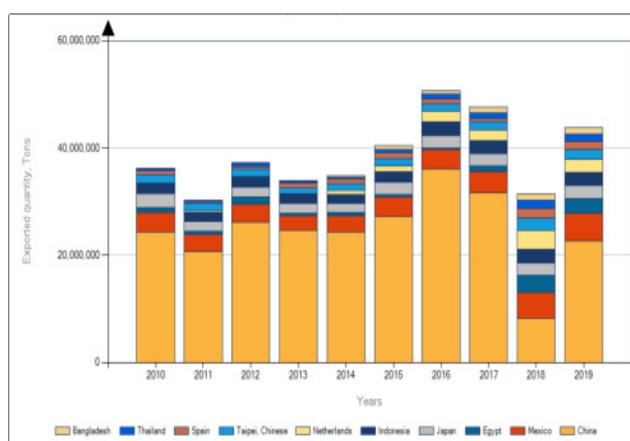


Figure 5: 10 most important receiving countries of U.S. American soybean exports, 2010-2019 [12]

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### Impacts of COVID-19

The corona pandemic has a large impact on the agricultural sector and on the economy at a global scale. With regard to a reliable soybean supply, especially a working agricultural sector in the soybean producing countries and functioning logistics chains are crucial to China. Expected peaks of COVID-19 for April and May during the main soybean export season in Brazil and Argentina already caused worries for food security in China [15]. Although Brazilian agribusiness and government officials tried to spread confidence about continuous export flows, the Brazilian dependence on truck drivers for cargo transport remains the weak point in soybean logistics. However, analysts explain the shipment delays and the resulting 12% reduction of Chinese soybean imports with cargo delays due to bad weather in Brazil rather than with Corona related disruptions. The shortage led to a depletion of Chinese soybean stocks and to operation decreases of the Chinese crushing industry. It is expected that a record-breaking number of shipments with soybeans will arrive in China in May and June, which covers the near months of soybean supplies [16]. With regard to Chinese commitments in the US-China trade deal, the competition from Brazilian agribusinesses in soybean trade adds to doubts that China will be able to fulfil the promised 36.5 billion US dollars purchases of agricultural goods from the US in 2020 [17]. In the absence of hardly any soybean purchases from US farmers by Chinese buyers since the trade deal, analysts expect a stronger influence of the US-China trade deal on sales of the 2020/2021 harvest which is planted now [18].

### ASF and Impacts on Pork Production in China

In 2018, in the first year of the US-China trade frictions and after the first round of Chinese tariffs on American products includ-

ing pork and soybeans, the first African swine fever (ASF) outbreak was reported in China. The resulting reduction of Chinese pig populations led to a drop in feed demand, primarily soybean meal, and hence, to a decrease of soybean imports from 94 million tons in 2017/2018 to 83 million tons in 2018/2019 [3]. It can be assumed that only with this drop in soybean demand, China was able to secure its soybean supply mainly with Brazilian soybeans during the US-China trade war.

According to official statistics, the bottom of sow and hog inventories was reached in October 2019 with 35% and 40% reductions, respectively, compared to the year earlier. Increasing prices and changes in consumption patterns among Chinese consumers caused a shift from the preferred meat, pork, towards other sources of animal protein and even to plant based meat alternatives. However, the identified pork supply gap is still high and demand for imported meat is high. As new tariff exclusions were announced in March 2020 imports of frozen swine meat and swine offal from the US are expected to increase considerably. In addition, China is undertaking strong efforts to recover domestic pork production. It therefore can be expected that demand for imported soybean will stay high.

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### Reports from Sino-German Co-operation Projects

#### News from the Sino-German Animal Breeding and Husbandry Project

##### First Online Conference on Fleckvieh Type Classification

The Sino-German Animal Breeding and Husbandry project is reacting to the new circumstances of the COVID-19 pandemic. Since travelling between Germany and China has been restricted for some time and restrictions may continue for an unknown period, new ways have to be found to proceed with bilateral cooperation. For the time being, project work is limited to online meetings, online trainings and the exchange of videos. In this context the online conference on Fleckvieh type classification represents the first larger event in the project with participation from China and Germany. The conference was organized on April 30<sup>th</sup>, 2020 to facilitate an exchange of technical knowledge between Chinese and German experts in the field of linear description of the dual-purpose cattle breed Fleckvieh.

At the beginning of the conference, Mr Shi Jianzhong, Deputy Director of the National

Animal Husbandry Service (NAHS), welcomed everyone and supported the organization of the online event. He congratulated both countries on more than 10 years of bilateral work in animal breeding. Mr Andreas Gramzow, program director at GFA Consulting Group, general agent of the bilateral cooperation program for the Federal Ministry of Food and Agriculture (BMEL), emphasized the long relationship between both countries and supported the project in applying new methods and technologies for the practical work between both partners in times like these.

After the official welcoming, the technical lecture started. The Fleckvieh cattle expert Mr Bernhard Luntz, director of the Breeding Value Test Center at the Bavarian State Research Center for Agriculture (LfL) introduced FleckScore. FleckScore is available online and supports the type classification of Fleckvieh cattle. It provides the description for each single trait in the areas of frame, muscularity, feet and legs and udder. Single traits are described on a scale of 1 to 9 while possible defects are assigned with the differentiation 1 and 2. The contributions from the single traits according to their effect on productive life length are weighted from the system for calculating an overall type index. The system is available at [www.fleckscore.com](http://www.fleckscore.com) and will be available in Chinese language soon.

Afterwards, Mrs Wang Yachun, Professor at the China Agricultural University (CAU) and expert in animal breeding gave a presentation on the introduction of a linear type assessment system for dual-purpose cattle breeds in China. She also referred to the past progress and work of the Dual-Purpose Cattle Breeding Alliance (DCBA) achieved in the past and showed what her plans for the future are. At the end, after more than two hours it was still time for a discussion and Mr Luntz answered questions that the audience brought up during the presentations.



Picture 1: Conference Participants (Source: ADT)

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Picture 2: Presentation via Zoom (source ADT)

Over 190 Chinese and German experts took part in the conference and hence, it was a highly successful event of bilateral cooperation work. The conference was coordinated and organized by the National Animal Husbandry Service (NAHS) and the Dual-Purpose Cattle Breeding Alliance (DCBA) on the Chinese side and the ADT Project Consulting GmbH on the German side. Dr Ferdinand Schmitt, the team leader of the project, guided through the conference and the final discussion. In his final remarks, Dr Schmitt thanked all speakers, translators and participants, drew an encouraging conclusion from the event and promised that more events of this type are planned in the course of the project work in the next months. Gerret Fredewess (ADT), the author of this article, can be contacted via [gerret.fredewess@adt.de](mailto:gerret.fredewess@adt.de).

For more information about the Sino-German Animal Breeding and Husbandry project please check out <https://www.dcz-china.org/en/animal-breeding/articles/development-of-animal-breeding-in-china.html> and <https://www.adt-rinderzucht-china.net/index.php?id=128> or follow the project's WeChat group (in Chinese)



### News from the Sino-German Crop Production and Agrotechnology Demonstration Project (DCALDP) WeChat Platform

The DCALDP is supported by the Chinese Ministry of Agriculture and Rural Affairs (MARA) and the German Ministry of Food and Agriculture (BMEL) within their bilateral cooperation programmes. The project is located in Jiangsu Province, Dayouzhen on the Huanghai Farm of the main project partner, SKIAD Co., Ltd. In this project an international and local project team is working together in order to demonstrate how crop production can be done in a more sustainable and environment-friendly way. The work is supported by European and Chinese business partners, providing modern machinery and inputs and other collaborating partners, such as universities and scientific institutions.

In March 2020 the DCALDP has set up a new WeChat platform, where they will inform on a regular basis on project activities. To subscribe to the platform please scan the QR code:



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*Rape fields (photo DCALDP)*

For more information you may also contact project team leader, Mr. Alejandro Figueroa and/or project assistant, Mrs. Jane Yu. They can be reached under [alejandro.figueroa@afci.de](mailto:alejandro.figueroa@afci.de), or [jane.yuhaojing@afci.de](mailto:jane.yuhaojing@afci.de)

Below you find a shortened version of the first article published on the DCALDP Website. We thank Jane Yu for providing the following article for the DCZ newsletter.

### **News from DCALDP**

The highlight in April was the visit from the company Debont, one of the leading companies for agricultural technology in China. Our project team leader, Mr. Figueroa got in contact with this company during the *Sino-German Agricultural Week* last October in Beijing. Originally planned in February, the visit only took place now due to the current situation.

The topic of this visit was irrigation, which is another improvement that our team leader, Mr. Figueroa wants to achieve for DCALDP after the field consolidation. Obviously, the effort made by Mr. Figueroa was not in vain, the Huanghai-Farm was inspired and is ready to change. Mr. He Yanping, the Deputy General Manager for agricultural technology of the Huanghai-Farm had a very successful meeting with the irrigation expert from Deb-

ont. It was agreed, that Debont will design a linear irrigation system for our consolidated fields.

In the same week when the irrigation issue was discussed, we also had a service technician from CLAAS with us. They improved the drum for application of wheat harvesting in the Dominator 370 and meanwhile did some upgrades on the machine.

Besides CLAAS, machinery from our business partner Lemken caught our eyes frequently when we were on the fields. The adjustment of the new sprayer *Sirius* (bought by the farm) was finished by the technician from Lemken last week. This week, the in-house technician made some more refinements. To make sure this sprayer can also work perfectly on the rice fields, they adopted wheels



*Debont irrigation expert (photo DCALDP)*

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Lemken Sirius sprayer in the field (photo DCALDP)



Rape Rating (photo DCALDP)

sealed with iron plates on the tractor, to prevent mud from sticking in the tractor's tyre treads whilst driving.

With regard to our production plan for the summer of 2020, the sketch has not been changed much. Just the dry rice production will be shifted to the "Drainage Area". Like in the past, fertilizer and pesticide reduction play a big role in the trials. Machinery tests

from Lemken, Horsch and Pöttinger are also planned in accordance with their own specializations. Thanks goes to Deutz-Fahr and CLAAS – without their tractors we would not be able to conduct the tasks.

### Field Work:

During the week we have carried out the rating (Bonitierung) for our buckwheat and rape.

P. Nr.	Crop		EC Stage	Rating Date
1,5	Buckwheat		10	14032020
	Sample position	200m	400m	600m
	Plant Height cm	6,30	5,90	6,10
	Root length cm	2,40	2,60	2,20
	Plant Density in average p/m <sup>2</sup>	70,00	73,00	91,00

P. Nr.	Crop		EC Stage	Rating Date
1	Rapes		66	14042020
	Sample position	200m	400m	600m
	Plant Height cm	135,00	156,00	156,50
	Root length cm	14,00	20,20	23,00
	Plant Density in average p/m <sup>2</sup>	30,00	54,00	23,00

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P. Nr.	Crop		EC Stage	Rating Date
2	Rapes		56	15052020
	Sample position	200m	400m	600m
	Plant Height cm	92,00	121,00	113,00
	Root length cm	13,00	10,00	13,00
	Plant Density in average p/m <sup>2</sup>	37,00	35,00	30,00

P. Nr.	Crop		EC Stage	Rating Date
3	Rapes		64	16042020
	Sample position	200m	400m	600m
	Plant Height cm	159,00	142,00	128,00
	Root length cm	22,00	16,00	26,00
	Plant Density in average p/m <sup>2</sup>	42,00	38,00	46,00

P. Nr.	Crop		EC Stage	Rating Date
4	Rapes		66	16042020
	Sample position	200m	400m	600m
	Plant Height cm	129,00	130,00	135,00
	Root length cm	18,00	20,00	17,00
	Plant Density in average p/m <sup>2</sup>	73,00	66,00	40,00

Special attention should be paid to the root development of the rape on plot No. 2: the side root is drilling further horizontally as vertically. According to Mr. Figueroa, there could be two possible reasons for this phenomenon: 1) the soil is too compact and hence, the root cannot drill downward, so they need to stretch more in the horizontal direction. 2) the underground water storage is too high,

the root does not have to drill hard downwards to get enough water.

For the moment the pesticides offered from our business partners BASF, Cantus for rape against *Sclerotinia*, have already been sprayed, the fields look clean and no sign of any kind of insect or illness outbreak was found. We will see how the yield performance will be.

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Main Root 13cm



Side Root 18cm



*The samples will be dried properly and then sent to the laboratory in Germany*

Another very important task that we accomplished was the sample collection of plant leaves. In this production season we followed the suggestions from the soil expert Dr. Christophel with regard to fertilization. In order to trace the consequences effectively, we need to collect sample of the plants, in this case the leaves, regularly for test. With the “live” instruction of our team leader in Europe, we finished the work on the field together.

End of April we will start with the rating for barley and wheat. Our team leader Mr. Figueroa and our long-time expert, Mr. Kindler, are still under lock-down in Europe. The good information is that they are safe and healthy.

*In early May, Jane Yu has published a follow-up article on WeChat introducing to DCALDP's experiments with spray windows for effectiveness and costs of plant protection measures*

*and training on spray technologies. For more information about the project history please also check: <https://www.dcz-china.org/en/dcaldp-project/articles/sino-german-crop-production-and-agrotechnology-demonstration-park.html>*

## Good to Know

### ***Politics and Law***

#### **MARA Releases Plan to Launch Industrial Development for Poverty Alleviation**

On February 21 MARA released “*Opinions on launching 2020 industrial development for poverty alleviation*”. The paper is related to Document No. 1 on Agricultural development, which in 2020 explicitly focuses on the

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elimination of rural poverty by end 2020 (for more details about Doc. 1 see “Sino-German Agriculture and Food Update No. 9”). The first paragraph relates to actions responding the COVID-19 pandemic. It calls for the development of emergency plans for marketing of products from impoverished regions that became unsaleable, improve the transport of fresh products and solve labor shortages in farmer cooperatives.

The document further proposes the promotion of industrial development in the “Three regions and three prefectures” (these are Tibet, the South of Xinjiang and Tibetan regions in Sichuan, Qinghai, Gansu and Yunnan province as well as Liangshan prefecture in Sichuan, Nujiang prefecture in Yunnan and Linxia prefecture in Gansu). The document recommends establishing bases for agricultural product storage and cold chain logistics in poverty areas. It further recommends prioritising environment-friendly projects and reduce the registration fees for certification of green food, organic food and food of protected geographical indication. More in Chinese: [http://www.moa.gov.cn/gk/tzgg\\_1/fw/202002/t20200224\\_6337608.htm](http://www.moa.gov.cn/gk/tzgg_1/fw/202002/t20200224_6337608.htm)

### **Animal Farming Mechanisation Targets for 2025**

On February 17 MARA released ambitious goals for mechanisation of animal farming. It foresees an overall mechanization for about 50 percent of the livestock and poultry sector by 2025. For large-scale dairy cow farming the mechanisation rate should reach 80 percent, for large scale farming of pigs, hens and broilers 70 percent and for large scale beef and mutton farming 50 percent. It foresees demand especially for high-efficiency food crop harvesting and processing, feed processing, precision feeding, smart control of environmental quality and waste utilisation. The introduction of foreign advanced tech-

nology and support of outbound investment for Chinese manufacturers is explicitly mentioned. Required are following technologies: High-quality feed and waste utilisation technology, equipment for crop straw processing and bio-fertiliser processing as well as energy conservation technology and equipment. The notice also mentions the promotion of agriculture machinery leasing systems, livestock waste disposal and utilisation centers. Large-scale farms will preferably receive government subsidies for upgrading mechanisation. More in Chinese: [http://www.moa.gov.cn/gk/tzgg\\_1/tz/202002/t20200217\\_6337222.htm](http://www.moa.gov.cn/gk/tzgg_1/tz/202002/t20200217_6337222.htm)

### **China Rolls Out Policies to Help Migrant Workers Find Jobs in Local, Nearby Areas**

China will bolster policy support to help migrant workers staying in their hometowns and obtain employment locally or in nearby areas, in an effort to boost the virus-hit rural job market, the country's agriculture ministry said. The country will pool resources to guide migrant workers to engage in agriculture, create jobs by implementing rural infrastructure projects, nurture innovative business models and support start-ups. Efforts will be made to implement pro-employment policies and guide enterprises to increase jobs. Supportive fiscal, tax and credit policies such as subsidies and loans with discounted interest rates for those starting their own business shall be put in place. More: [http://www.xinhuanet.com/english/2020-03/30/c\\_138931864.htm](http://www.xinhuanet.com/english/2020-03/30/c_138931864.htm)

### **Incentives for University Graduates to Take Up Jobs in the Countryside**

In face of the grim employment situation caused by the COVID-19 impacts Chinese local authorities offer incentives to universities graduates to take up jobs in rural areas to support the transformation of the countryside and the government's anti-poverty program. For example, in April 2020 Fujian province published a program that awards 600 successful candidates who apply for a job in the countryside with a living allowance and offers to cover their student loans. In May 2020, Guangdong province announced a program to recruit about 2000 graduate to spend two years in rural areas. In 2019, this campaign had already attracted 27,000 graduates. More: <https://www.scmp.com/news/china/politics/article/3084018/jobs-jobs-jobs-local-officials-under-pressure-deliver-china>

### **China's Rural Collective Property Rights System Pilot Reform to Cover all Agricultural Counties**

The pilot reform of the rural collective property rights system aims to cover all agriculture-related counties this year, an official report said. To promote the reform of rural collective property rights system is an important task of comprehensively deepening rural reform and is also crucial for the implementation of the rural vitalization strategy, said the report submitted to the ongoing regular session of the National People's Congress Standing Committee.

Since 2015, the government has organized four batches of rural collective property rights system pilot programs in 15 provincial regions, while other provincial regions also independently selected some counties and villages to carry out provincial-level pilot programs. More: [http://www.xinhuanet.com/english/2020-04/28/c\\_139012930.htm](http://www.xinhuanet.com/english/2020-04/28/c_139012930.htm)

### **MARA signs a Cooperation Agreement with Tencent and China Telecom on Digital Rural Governance**

As a follow up action to implement the rural governance strategy promulgated in China's 2020 No.1 Document, on April 2 the Department of Rural Cooperative Economy, Chinese Ministry of Agriculture and Rural Affairs (MARA), signed a cooperation framework agreement with Tencent Co., LTD and China Telecom Group to expand the application of information technologies and "Internet+" in rural areas. The cooperation will focus on improving the level of informatization, digitalization, intelligence in rural governance, and promoting the construction of a digitalized and highly efficient rural governance system.

According to the cooperation framework agreement, all parties should focus on promoting digitalization of rural governance and carrying out rural governance digitalization pilot projects in MARA's Rural Governance Reform Demonstration Areas. The cooperation will pursue to construct a national rural governance system supported by digital technologies and practices.

Tencent will launch a "Tencent for Village" program to assist rural governance, guide farmers to effectively use online communication technologies and tools and facilitate them in order to actively participate in rural governance. According to the agreement, villages in the pilot areas for the establishment of the national rural governance system can use the "Tencent for Villages" platform for free. China Telecom will support the rural digital governance system by establishing an "Integrated Village Information Service Platform" in the pilot areas with integrated service functions of party organization work, rural disaster and public emergency management, rural poverty alleviation, transparency

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and village governance, community social services, and featured rural community economic development, etc. It is anticipated that the information service platform will improve the farming productivity and overall livelihoods of farmers. It will also help the local government to improve its overall capacity in rural grassroots governance and enhance its rural community service competency. By Liu Yonggong (DCZ)

More on the DCZ website: <https://www.dcz-china.org/en/nachrichten-agri-news-d-en/mara-signs-a-cooperation-agreement-with-tencent-and-china-telecom-on-practicing-digital-rural-governance-2.html>

### Central Government Allocates 2.5 bln yuan for Rural Water Ecology

The Ministry of Water Resources and the Ministry of Finance have announced the first batch of 55 pilot counties for water system connectivity and comprehensive improvement of rural water systems. The 55 pilot counties will carry out projects to improve rural water conditions from 2020 to 2021 with support from the central government. More: [http://www.xinhuanet.com/english/2020-05/05/c\\_139032664.htm](http://www.xinhuanet.com/english/2020-05/05/c_139032664.htm)

### MARA Excludes Dogs from Draft List of Edible Animals

The Ministry of Agriculture and Rural Affairs has excluded dogs from its draft list of edible terrestrial animals. The draft was published on April 8 at the ministry's website to solicit public opinions. The draft has proposed as edible species the 18 traditional forms of livestock including pigs, cattle, chicken and ducks, alongside 13 special species including ostriches, silver foxes and minks. More: <https://www.chinadaily.com.cn/>

<a/202004/09/WS5e8edd30a3105d50a3d150ec.html>

### Business, Economy and Trade

#### Food Price Increases by 18.8%

Chinese consumer price index (CPI) in March 2020 was 4.3 percent higher than previous year. The Food price however was 18.8 percent higher, especially increased price for meat have been noted.

*Year-on-year price changes, China CPI, March 2020*

Item	Percent
CPI	4.3
Food	18.8
Grain	0.7
Edible oil	5.7
Fresh vegetables	-0.1
Pork	116.4
Beef	21.7
Mutton	12.1
Fish, shellfish	2.8
Eggs	1.9
Milk	0.6
Fresh fruit	-6.1
Tobacco	0.7
Alcohol	2.7

Source:

[http://dimsums.blogspot.com/2020/04/does-china-see-food-crisis.html?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+DimSumsRuralChinaEconomicsAndPolicy+%28Dim+Sums%3A+Rural+China+Economics+and+Policy%29](http://dimsums.blogspot.com/2020/04/does-china-see-food-crisis.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+DimSumsRuralChinaEconomicsAndPolicy+%28Dim+Sums%3A+Rural+China+Economics+and+Policy%29)

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### Food Spending Stable

While due to the COVID-19 crisis for the first quarter of 2020 China's National Bureau of Statistics reported a record shrink of GDP by 6.8 percent, China's food spending remained relatively stable. However, sales to restaurants, cafeterias and hotels shrank dramatically whereas online food sales of edible items increased. Due to impacts of ASF there was a sharp decrease in the output of pork.

*China change in food industry indicators, Q1 2020 vs. previous year*

Indicator	Percent
Consumer expenditure on food, alcohol, tobacco	2.1
Retail food sales by above-scale stores	12.6
Online sales of edible items	32.7
Food service industry sales	-44.3
Primary processing of farm products and foods	-11.1
Food manufacturing	-7.9
GDP from Primary sector	-3.8
Pork output	-21.7

Source: China National Bureau of Statistics.

Source:

[http://dimsums.blogspot.com/2020/04/chinas-food-spending-stable-in.html?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+DimSumsRuralChinaEconomicsAndPolicy+%28Dim+Sums%3A+Rural+China+Economics+and+Policy%29](http://dimsums.blogspot.com/2020/04/chinas-food-spending-stable-in.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+DimSumsRuralChinaEconomicsAndPolicy+%28Dim+Sums%3A+Rural+China+Economics+and+Policy%29)

### China Market Remains a Challenge for German Food Products

Chinese consumers appreciate beer and chocolates from Germany and look out for imported milk powder, yoghurt and German organic food products. However, for other German food products China is still a difficult

market as Stefanie Schmitt from German Trade and Invest (GTAI) reports. Complicated trade regulations differentiate between high "risk products" (such as milk, meat and fish) and "low risk" (beer and chocolate). The protocols, especially those for meat products, have very strict requirements. Every single item needs to be tested and registered by Chinese authorities before it can be exported to China. German companies also face competition from companies from Australia and New Zealand that enjoy advantages of free trade agreements. More (in German): <https://www.gtai.de/gtai-de/trade/branchen/branchenbericht/china/china-bleibt-ein-herausfordernder-markt-fuer-lebensmittel-220454>  
<https://www.gtai.de/gtai-de/trade/branchen/branchenbericht/china/deutsche-lebensmittel-in-china-mit-potenzial-216760>

### Hong Kong's Demand for Imported Food Decreases

The COVID-19 crisis and political unrest so far had only a minor impact on Hong Kong's increasing demand for imported food, observes Roland Rode from GTAI. Despite the crisis people need to eat and drink and although business of restaurants decreased, people ordered from delivery services or cooked at home. Therefore, economic impacts on the food and beverage sector have been milder than on other branches. In 2019 Hong Kong's food imports decreased only by 6 percent and beverages by 15 percent. In view of the COVID-19 pandemic it is expected that the downward trend will continue. In 2019, food and beverages imported from Germany amounted for 400 million US\$, a decrease of 20% compared to the previous years. Still high in demand are meat, sweets and pastries made in Germany. More in German:

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<https://www.gtai.de/gtai-de/trade/branchen/branche-kompakt/hongkong/nahrungsmittelmarkt-in-hongkong-schwaechelt-nur-voruebergehend-224644>

### **COVID-19 Impacts**

#### **Impacts of COVID-19 Crisis for China's Beekeepers**

One third of the plants consumed in China depend on bee pollination, but China's bee industry is facing a severe crisis. The lockdown during the height of the COVID-19 pandemic outbreak has been devastating for China's estimated 300,000 commercial beekeepers. In a normal season the nomadic beekeepers move about five times and travel about 3,000 km from Southern to Northern Shanxi and Western Xinjiang during the year. Most of Chinese beekeepers raise Italian bees, a honeybee introduced to China in the late 19<sup>th</sup> century. Italian bees are not used to very cold climate therefore beekeepers usually spent the winter in southern Yunnan, where canola blossoms in early November. In February, usually after spring festival they start travelling north. But this year due to the lockdown thousands of beekeepers were unable to move their colonies to new food sources. In addition, the China's bee industry suffers heavily from poisoning by pesticides. Chinese farmers use four times more pesticides than world average and many use neonicotinoids, that have been already banned in the EU. To save the China's bee industry experts recommend that beekeepers should not only be paid for honey but also for their pollination service. For more information on this topic watch a very informative video: [http://www.sixthtone.com/news/1005393/all-stung-out-chinas-bee-industry-crisis%2C-explained?utm\\_source=news\\_chinaskinny\\_com&utm\\_medium=medi-](http://www.sixthtone.com/news/1005393/all-stung-out-chinas-bee-industry-crisis%2C-explained?utm_source=news_chinaskinny_com&utm_medium=medi-)

[um=email&utm\\_content=The+Weekly+China+Skin-ny&utm\\_campaign=20200331\\_m157667265\\_20200401+-1&utm\\_term=All+Stung+Out\\_3A+China\\_E2\\_80\\_99s+Bee+Industry+Crisis\\_2C+Explained](um=email&utm_content=The+Weekly+China+Skin-ny&utm_campaign=20200331_m157667265_20200401+-1&utm_term=All+Stung+Out_3A+China_E2_80_99s+Bee+Industry+Crisis_2C+Explained)

#### **COVID-19 Crisis and Delivery Services Platforms: Older Users and Changing Demand**

China has the world largest food delivery service market, worth about 603 billion RMB (78 billion €) and this sector is among the winners of the COVID-19 crisis. The delivery platforms Meituan-Dianping and Alibaba's ele.me, which together share 90 percent of the Chinese market, not only increased their sales but also tapping markets for new customers and developed new product lines. Especially deliveries of groceries and semi-finished food products increased. The platforms recently have been used by more middle-aged and elderly customers, who were not familiar with online shopping before the outbreak. In Wuhan, where during the lockdown families for several weeks were not allowed to leave their compounds, group buying was organised by local communities. The e-commerce firm Pinduoduo developed a location and team-based app Kai Tuan Tuan which allows neighbors in the same compound to team up for grocery orders. Delivery companies further developed 'contactless' deliveries to minimize the risk of driver to customer infections. Meituan installed about one thousand of smart lockers, which disinfect delivered goods by ultraviolet light before customers pick them up. E-commerce companies also tried the use of driverless vehicles, robots and drones for delivery, but these innovations are still exceptions. Most of the business still heavily relies on China's millions of low-paid deliverymen who risked their lives during the outbreak to

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supply China's quarantined urban people with food. With help of the delivery services many closed restaurants managed to survive in times of the lockdown. But restaurant associations are now asking the delivery platforms for fee reductions to help restaurants to recover from the COVID-19 crisis. More: [https://www.scmp.com/tech/big-tech/article/3081251/smart-lockers-semi-finished-meals-how-chinas-delivery-services](https://www.scmp.com/tech/big-tech/article/3081251/smart-lockers-semi-finished-meals-how-chinas-delivery-services-challenges-idUSL4N2C81CO)

### Chinese Officials Urge Citizens to Refrain from Hoarding Grains

Chinese government officials called on citizens not to hoard grain after a recent ban on new export sales by Vietnam sparked concern over global supplies. According to MARA, China holds sufficient supply of rice and wheat for one year of consumption, while imports are only about 2% of domestic usage. (Bloomberg news) More: <https://finance.yahoo.com/news/chinese-officials-urge-citizens-refrain-094557579.html>

Although China's supply with edible grains seems to be sufficient thanks to domestic production and grain reserves, with ongoing global COVID-19 crisis and disrupted supply chains due to lockdowns there is concern about China's dependence on imported meat and soybeans. Forecasts expect China to import 96 million tons of soybean and 2.8 million tons of pork in 2020 (32.7% increase compared to 2019). When in April after rains cargoes from Brazil were delayed, 500,000 tons of soybeans from state reserves had to be released to supply China's state-owned crusher COFCO. More <https://news.cgtn.com/news/2020-04-19/Expert-No-food-shortages-in-China-meat-soybean-imports-worrying--PODVln4jmM/index.html> <https://www.reuters.com/article/china-agriculture/update-1-china-sees-higher-2020-soybean-pork-imports-aid-industry->

[challenges-idUSL4N2C81CO  
https://www.reuters.com/article/china-soybean-stocks/china-releases-500000-t-of-reserve-soybeans-to-cofco-amid-supply-crunch-sources-idUKL4N2BW148](https://www.reuters.com/article/china-soybean-stocks/china-releases-500000-t-of-reserve-soybeans-to-cofco-amid-supply-crunch-sources-idUKL4N2BW148)

### Lockdowns Protected China's Rural Families from COVID-19 Infections

A village-level phone survey conducted by a team of researchers of Stanford University's Rural Education Action Program among families of rural students from China revealed that the lockdowns that brought the country almost to a standstill in February and early March have been successful in protecting rural areas from COVID-19 infections, however caused serious economic losses. Whereas only 4 informants out of 726 reported there had been outbreaks in their village and no one reported a death, about 92% reported that the lockdown reduced their income. Almost all respondents reported that their villages installed strict control measures, including checkpoints and barriers to keep non-villagers out of the village, temporarily banned group gatherings including weddings and funerals and visits of families and friends. 96% reported that it was mandatory to wear masks, however 16% reported that masks were not available for purchase. About half of the villages reported average losses of 2000-5000 RMB per family in February. More: <https://www.ifpri.org/blog/lockdowns-are-protecting-chinas-rural-families-covid-19-economic-burden-heavy>

### **Biodiversity COP 15 Postponed**

The 15<sup>th</sup> conference of parties (COP 15) of the Convention on Biological Diversity (CBD), the most important international convention on biodiversity in a decade, which was scheduled to be held in China's southwestern city of Kunming, has been postponed because of the COVID-19 pandemic. A new date will be announced later. More: <https://chinadialogue.net/article/show/single/en/11915-Coronavirus-hits-crucial-year-for-nature-and-climate>

### **ASF and Beyond**

#### **China Encourages Firms to Raise Pigs Overseas to Plug Domestic Pork Shortage**

China has urged local authorities to support qualified domestic firms to “go out,” and build hog farming bases in countries where pig products are eligible to be exported back to China, according to a joint statement issued by the National Development Reform Commission and MARA. The latest official document highlights concern as soaring pork prices pushed consumer inflation to its highest levels in years, and an unprecedented coronavirus disease further disrupted logistics and hindered pig production. More: <https://www.reuters.com/article/us-china-swinefever-policy-pigfarming/china-encourages-firms-to-raise-pigs-overseas-to-plug-domestic-pork-shortage-idUSKBN2131AV>

#### **German Research Institute Tests Transgenic Pigs for ASF Resistance**

Using the CRISPR/Cas9 gene editing tool researchers from the Friedrich-Loeffler-Institute, Germany's Federal Institute for Ani-

mal Health, are trying to find a way out of the ASF crisis. Tests with transgenic pigs for ASF resistance were scheduled for May but had to be postponed until June because of the COVID-19 pandemic. According to EU regulations gene editing is only allowed for research purposes, but gene-edited animals cannot be used for commercial production. More: [https://www.pigprogress.net/Health/Articles/2020/5/Transgenic-pigs-tested-to-stop-ASF-virus-replication-583070E/?utm\\_source=tripolis&utm\\_medium=email&utm\\_term=&utm\\_content=&utm\\_campaign=pig\\_progress](https://www.pigprogress.net/Health/Articles/2020/5/Transgenic-pigs-tested-to-stop-ASF-virus-replication-583070E/?utm_source=tripolis&utm_medium=email&utm_term=&utm_content=&utm_campaign=pig_progress)

#### **Shrimp Virus Hits China's Seafood Industry**

Shrimp farmers in Guangdong province have reported outbreaks of the Decapod iridescent virus 1 (Div1), a virus that affects shrimp populations. The virus is not known to be harmful to humans but can decimate shrimp in just a few days and affects all shrimp species including freshwater prawns. There are growing fears that Div1 might have similar severe impacts to China's seafood industry as ASF had to the pork industry. More: <https://www.greenqueen.com.hk/shrimp-virus-hit-china-seafood-industry-another-blow-to-food-security/>

#### **Sustainable Protein for China – Dao Food and New Crop Capital Partner Announce New China Plant Based Incubator**

Dao Foods (<https://www.daofoods.com>), a cross border impact investment venture has recently partnered with the venture capital fund New Crop Capital (<https://newcropcapital.com>), an early investor in Silicon Valley food tech Beyond Meat to launch a new incubator project for plant-

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based start-ups in China. The call, which will offer financial support, mentorship opportunities and development workshops is now open for applications. The incubator will offer financial support of up to 500,000 RMB. Five plant-based companies will be chosen for each cycle of the incubator. The first selected group will be notified by July 3rd, 2020 and first incubator programme will start by August 3<sup>rd</sup>, 2020. More: <https://www.greenqueen.com.hk/dao-foods-new-crop-capital-partner-announce-new-china-plant-based-incubator/>

With ongoing ASF crisis and a steep increase in meat prices, over the past weeks the plant-based meat market in China has seen a notable growth. Starbucks launched a new plant-based menu with Beyond meat, Onipork and Oatly. KFC brings a plant-based fried chicken and Dao Foods backs the Chinese vegetarian start-up Starfield. Starfield partnered with 6 major restaurant chains (such as Element Fresh, Hong Li Village, Nayuki, Gaga Chef) and since end of April offers its plant-based meat products. The ground meat substitute primarily made from seaweed protein has been developed by food scientists from Beijing Technology and Business University and Jiangnan University. More: <https://www.greenqueen.com.hk/chinese-plant-based-meat-starfield-launches-at-hundreds-of-restaurants-across-mainland-china/>

### Science

#### CAAS Researchers Develop High-Resolution Digital Soil Atlas

Chinese researchers have developed a high-resolution digital soil atlas for China, which is expected to play an important role in arable land conservation, pollution control and environmental quality assessment.

The research, led by the Agricultural Resource and Regional Planning Institute of the Chinese Academy of Agricultural Sciences (CAAS), has combined soil information data investigated and collected since the 1980s. According to project leader Zhang Weili, the digital soil data can accurately reflect the spatial and temporal distribution characteristics of soil quality and the changing trend of soil and environmental quality, which is of great importance to policy-making on soil resource utilization and environmental management.

The research team has utilized big data, artificial intelligence and human-computer interaction technologies in constructing the digital soil database. The atlas, including various soil features with a span of 40 years, is the most complete and precise scientific record of soil resources and quality in China. The construction of the digital soil database has lasted for 21 years. During its construction, the data have been utilized by more than 60 research institutes across China to study the quality variation of cultivated land, nitrogen and phosphorus loss, greenhouse gas emission, water conservancy, forestry, surveying and mapping, etc. The data have also been consulted by China's agriculture, environment and natural resources management departments for decisions on arable land protection and quality improvement, pollution prevention and control, land remediation and fertilization.

By loading high-resolution digital soil information into the chips of agricultural machinery, precise fertilization, cultivation and irrigation can be realized, according to the researchers. By using the digital soil big data, precise management of key agricultural areas can be achieved and application of agricultural chemicals can be reduced which helps to increase crop yields and farmer's income.

Source: [http://www.xinhuanet.com/english/202004/06/c\\_138951814.htm?from=timeline&isappinstalled=0](http://www.xinhuanet.com/english/202004/06/c_138951814.htm?from=timeline&isappinstalled=0)

### **Funding Call in COVID-19 for Related Research by Sino-German Center for Research Promotion**

The Sino-German Center for Research Promotion (SGC) has issued a rapid response funding call for collaborative proposals jointly submitted by Chinese and German applicants in COVID-19 related research. The following subjects are covered

- Novel coronavirus structures, functions, key targets of infection and its evolution study
- The natural history of the virus, its transmission and diagnosis
- Animal and environmental research on the origin of the virus, including management measures at the human-animal interface
- Clinical characterization and management of disease caused by the virus
- Infection prevention and control, including best ways to protect health care workers
- Ethical considerations for research in connection with the afore-mentioned themes

Implementation of approved projects will take place from 1 October 2020 to 30 September 2021. A maximum funding of 1.5 million RMB (or equivalent sum of EUROS) per project will be available. Submission deadline is July 7, 2020. For full text of funding call, application form and contact details please go to:

[http://www.sinogermanscience.org.cn/de/aktuelles/de\\_2020/202005/P020200507368084164327.pdf](http://www.sinogermanscience.org.cn/de/aktuelles/de_2020/202005/P020200507368084164327.pdf)

## DCZ Publications

### **DCZ-Study: Biofertilizers in China – A Potential Strategy for China’s Sustainable Agriculture**

In the past 30 years Chinese farmers have applied up to 30 percent of the world production of synthetic fertilizers and pesticides on 9 percent of global cropland. Although they have achieved a remarkable increase of yields to feed 20 percent of world population this came at high environmental costs and risks for food safety. In recent years China has shown determination to develop alternatives to reduce the extreme high input of agrochemicals including the action plans to achieve *Zero Growth in the Application of Chemical Fertilizers and Pesticides by 2020*. DCZ short-term experts Ruan Zhiyong (professor of soil microbiology at Chinese Academy of Agricultural Sciences) and Ma Qingyun (graduate student at CAAS) give an overview of so called biofertilizers as a promising alternative to synthetic fertilizers. China started research and application of biofertilizers, which contain live microorganisms as early as in the 1950s. In recent years production increased and at present there are more than 6,528 biofertilizer products. With an annual output of 30 million tons the biofertilizer industry has become already an important economic factor. The authors introduce to the different types of biofertilizers, application and relevant regulations. They also point to potential biosafety risks and the risk raw materials of biofertilizers may contain toxic substances.

Free download at <https://www.dcz-china.org/en/reports-studies-and-policy-briefs.html>

### **DCZ-Study: Investigation of the Value Chain of Soybean in China**

This comprehensive study by Professor Li Yumei from China Agriculture University provides an overview about soybean breeding, planting and processing in China. The study can be downloaded at <https://www.dcz-china.org/en/dcz-publications.html>

### **DCZ-Study: Value Chain of Soybean in China and Germany**

This study by DCZ experts Lea Siebert and Karin Tränkner-Bensilimane summarizes the results of a study conducted by Professor Liu Yumei (China Agriculture University) and provides an analysis of the German soybean market. They conclude that China as well as Germany have an intrinsic interest in increasing the production of protein plants, especially soybeans and look at potential fields of research cooperation. The study can be downloaded at <https://www.dcz-china.org/files/Seiten/Reports%20and%20studies/Study-Soy-beans-Value-Chain-in-China-and-Germany-03-2020.pdf>

### **DCZ-Policy Brief: Nutritional Transition in China: Policy Approaches to Mitigate Health and Environmental Effects**

China's remarkable achievements in providing not only food security but also a great variety of food has resulted in changing diets and nutrition in China, for example in a steep increase of meat consumption. Lena Kuhn, Yanjun Ren and Thomas Glauben, experts affiliated to DCZ's partner institution Leibniz-Institute for Agricultural Development in Transition Economies (IAMO), assess the impacts of changing diets in China on public health and the environment and discuss po-

tential policy approaches to mitigate epidemiological and environmental consequences. The policy brief can be downloaded at <https://dcz-china.org/en/reports-studies-and-policy-briefs.html>

### **DCZ Article „Online Handel in China Boomt“ Published in *Agrarzeitung***

An article by DCZ science advisor Dr. Eva Sternfeld about the impacts of the COVID-19 crisis on China's agriculture and Food sector was published by the leading German agriculture newspaper „Agrarzeitung“.

More (in German) <https://www.agrarzeitung.de/nachrichten/wirtschaft/coronakrise-online-handel-in-china-boomt-90837> and <https://www.dcz-china.org/en/dcz-publications.html>

## Review of Publications

### **SAIN Information Sheet No. 21: China's Rural Vitalisation and Agriculture Green Development – Policy Framework and Action Plans** by Yuelai Lu

The latest issue of SAIN Information sheet provides a very useful compilation of China's past two years relevant policy papers and regulations related to rural vitalization and agriculture green development. The 53 pages document includes short summaries not only of the past three Documents No. 1 (2018-2020), the Rural Vitalisation Strategic Plan (2018-2022) and the Guidelines for Implementation of the Strategic Plan but also lists and summarizes more specific guidelines on development of agricultural industries, agricultural green development and institutional reforms for rural vitalization. The information

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sheet can be downloaded at [http://www.sainonline.org/pages/zhishiku/信息通报/SAIN\\_Inforsheet%20No%202021.pdf](http://www.sainonline.org/pages/zhishiku/信息通报/SAIN_Inforsheet%20No%202021.pdf)

For free subscription of SAIN information sheets and newsletters contact Dr. Yuelai Lu at [y.lu@uea.ac.uk](mailto:y.lu@uea.ac.uk)

### **IFPRI Global Food Policy Report 2020 - Building Inclusive Food Systems**

When, at the end of March 2020, the International Food Policy Research Institute (IFPRI) submitted its latest Global Food Policy Report the impacts of the corona virus outbreak on global food systems were still not assessable, but it was already clear that the pandemic is becoming especially a threat for poor people around the globe. The 100 pages report focuses on how to build inclusive food systems that provide opportunities for the most vulnerable groups. In six chapters the authors discuss the importance of inclusive food systems and access to employment opportunities and healthy nutrition for small holder farmers, for young people and women, refugees and conflict-affected people. In the section on regional developments the authors identify the impacts of the fall army worm and the African swine fever (ASF) as great challenges for especially smallholder farmers in East Asia.

The report can be downloaded at: <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/133646/filename/133857.pdf>

### **Klimaschutz und Klimaanpassung in China** by Florian Schierhorn and Daniel Müller

On behalf of GFA and BMEL, IAMO researchers Dr. Florian Schierhorn and Dr. Daniel Müller have compiled a study on climate protection and climate adaption in China in German language. Dr. Müller has been a member of

the DCZ climate component expert group. The study can be downloaded at [https://lsg.iamo.de/microsites/lsg.iamo.de/fileadmin/Dokumente/3\\_China\\_HP.pdf](https://lsg.iamo.de/microsites/lsg.iamo.de/fileadmin/Dokumente/3_China_HP.pdf)

### **Agriculture and Climate Change- reducing emission through improved farming practices** by Daniel Aminetzah, Niclas Denis, Kimberly Henderson, Joshua Katz and Peter Mannion (Mc Kinsey and Company)

The agriculture sector's role in greenhouse gas emissions (GHG) is widely known but not well understood. More than one-quarter of GHG emissions come from agriculture, forestry, and land-use change. This Mc Kinsey study looks at potentials of the agricultural sector to limit the impact of climate change to 1.5 degrees Celsius. Achieving this goal would require major changes in agriculture, farming practices, nutrition and management of food waste. The authors state that relevant actions need to take into account not only climate goals, but also biodiversity, nutrition needs, food security and the well-being of farmers and their communities. Reduction of emissions requires to produce food more efficiently. As the authors state in their study, through climate friendly technologies and farming practices up to 20 percent of sector's required emission reduction could be achieved by 2050. They have identified 25 measures to reduce on-farm emissions and calculated their potential contribution to emission reduction. The full report can be downloaded at: <https://www.mckinsey.com/~media/mckinsey/industries/agriculture/our%20insights/reducing%20agriculture%20emissions%20through%20improved%20farming%20practices/agriculture-and-climate-change.ashx>

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### Upcoming Events 2020-21

With ongoing Corona crisis all dates of conferences and trade fairs tbc.

Date	Location	Event	Contact
<b>May</b>			
16-18	Beijing	<b>China International Modern Agricultural Exhibition</b>	China International Exhibition Center
21-23	Chengdu	<b>China Food &amp; Drink Fair</b>	
<b>June</b>			
3-5	Guangzhou	<b>China (Guangzhou) International Food Exhibition and Import Food Exhibition (IFE China)</b>	Guangzhou Exhibition Center
8-10	Beijing	<b>International Conference on Agriculture &amp; Horticulture</b>	Double Tree by Hilton Hotel Xicheng District, Beijing Guang An Men Wai Avenue No. 168 Zip Code: 100055
16	Online	<b>DLG Feldtage – meet the crop professionals</b>	Forums live (in German) on June 16, 2020. Registration opens soon: <a href="https://www.dlg-feldtage.de/en/dlg-feldtage-digital">https://www.dlg-feldtage.de/en/dlg-feldtage-digital</a>
24-26	Online conference	<b>IAMO Forum 2020 – Digital transformation- towards sustainable food value chains in Eurasia</b>	Online conference: For registration <a href="https://forum2020.iamo.de/about-the-conference/">https://forum2020.iamo.de/about-the-conference/</a>
<b>July</b>			
1-3	Shanghai	<b>Biofach China</b> together with <b>Natural Expo China</b>	Shanghai World Expo Exhibition & Convention Center <a href="http://www.biofachchina.com/en/home.php">www.biofachchina.com/en/home.php</a>
<b>August</b>			
8-9	Urumqi	<b>China Xinjiang International Agricultural Fair (CXIAF)</b>	Xinjiang International Convention and Exhibition Center
<b>November</b>			
4-5	Shanghai	<b>14<sup>th</sup> China International Food Safety &amp; Quality Conference</b>	<a href="http://www.chinafoodsafety.com">www.chinafoodsafety.com</a> <a href="mailto:angela.cheng@infoexws.com">angela.cheng@infoexws.com</a> Lydia.wang@infoexevents.com.cn
30-6.12 tbc	Beijing	<b>Sino-German Agricultural Week</b>	<a href="http://www.dcz-china.org">www.dcz-china.org</a>

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2021			
June			
8-10	Gut Brockhof, Erwitte Lippstadt	<b>DLG-Feldtage</b> Meet the Crop Professionals	<a href="http://www.dlg-feldtage.de">www.dlg-feldtage.de</a>
23-24	Hessian State farm Gladbacherhof, Aumenau, Vilmar	<b>Öko-Feldtage (Organic Field Days)</b>	<a href="https://oeko-feldtage.de/?lang=en">https://oeko-feldtage.de/?lang=en</a>

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### Imprint

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

Any news about upcoming events and conferences to share? Please send your information to [e.sternfeld@iakleipzig.de](mailto:e.sternfeld@iakleipzig.de)

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