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## 1. SUMMARY

China is the World's largest food producer, but also one of the largest food consumers. The agricultural sector however remains underdeveloped and structural implications such as limited area of arable land and access to water resources are challenges that will need to be tackled in the future as demand for food continues to rise. Further efficiency improvements in the sector are moreover crucial preconditions for China to achieve other objectives including supporting the continuous urbanization and contributing to rising incomes in rural areas. In turn, modernization and mechanization continue to be top priorities as noted in the State Council's No. 1. Document released on February 1, 2015, and is expected to fill a significant role in China's 13<sup>th</sup> 5-year plan to be released in 2016.

On paper, recent years have seen the central government turn away from its long-standing grain self-sufficiency policies in favour of intensified focus on food safety and sustainability. In reality, the sector remains subject to a broad number of political support measures, which are projected to ensure grain self-sufficiency in the years to come as well as support the domestic sector with particular focus on securing rural income.

As the "New Normal" economy's structural composition becomes increasingly consumption-driven combined with rapid urbanization, a growing middle class and incomes as well as dietary patterns changing towards larger consumption of protein, China is deeming itself dependent on imports of soybeans, dairy and meat. The demand for imported food will thus only continue to increase in forthcoming years, in the light of strong demand growth and increasing production constraints. These are also anticipated as factors suggesting expansion of and additional market access permissions to China's agricultural market for global food producers.

## 2. GEOGRAPHY

China covers five climate zones and a wealth of topographies. In turn agricultural production is also highly varied. The diverse geography of the land does however pose challenges to the agricultural sector, as there is little arable land available as well as a strain on water resources, especially in the Northern part of the country. This has historically caused China to struggle with food security issues, and the difficult geographical conditions remains a challenge to be tackled for agricultural production to expand.

### 3. STRUCTURE

Only 9 pct. of China's land can be cultivated. This corresponds to an area covering 163.4 million hectare<sup>1</sup> which is currently used for agriculture. The area dedicated to three key grain crops – rice, corn and wheat – has changed significantly since 1990. From 1990 to 2011, rice and wheat cropland has decreased by 9.5 million hectares, while areas dedicated to growing corn increased by 12.1 million hectares, making it China's main agricultural crop. This trend, which has only continued after 2011, can mainly be attested to China's rapidly growing demand for animal feed, for which corn is often used, and its corresponding profitability to the farmers.

*Structure of key farm crops in China, 2013*

	Sown area (1,000 ha)	Pct. of total sown area
<b>Grains</b>	93,769	60 %
<b>Corn</b>	36,318	22.1 %
<b>Rice</b>	30,312	18.4 %
<b>Wheat</b>	24,117	14.7 %
<b>Vegetables</b>	20,899	12.7 %
<b>Oil-bearing crops</b>	14,023	8.5 %
<b>Soybeans</b>	9,224	5.6 %
<b>Cotton</b>	4,346	2,6 %
<b>Sugar crops</b>	1,998	1.2 %

Source: China Statistical Yearbook 2014

In China approx. 20 pct. of agricultural production comes from large farming units. In fact, the average farm size in China is only around 0.6 hectares, compared to over 160 hectares in the United States<sup>2</sup>. This can largely be attested to complex rules of land ownership, as central government technically speaking owns 100 pct. of all land, while rural residents only are granted the rights to manage it<sup>3</sup>. In turn, scale economies in agricultural production are limited, the exception being state-owned farms, which oftentimes are part of large, vertically integrated companies.

The Chinese government is however slowly moving forward with efforts to create rural land markets and to strengthen farmers' legal control over the land they work. In 2013 a directive was implemented in Guangdong, giving rural residential landholders the formal right to sell (or "transfer") their land to residents of the same township, rather than only to residents of the same village<sup>4</sup>. In March 2015, National People's Congress announced that the government would launch a rural

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<sup>1</sup> China Agricultural Yearbook 2014

<sup>2</sup> [USDA: Chinese government tackles high production costs and uncompetitive prices in new agriculture strategy](#)

<sup>3</sup> [Smart AG Analytics: China's huge, secretive state-owned farming system on the docket of reform](#)

<sup>4</sup> [Stratfor: In China, Rural Land Reform Faces Limits](#)

land reform pilot program. The initiative covers 33 of China's nearly 3,000 county-level regions and expected to resemble the Guangdong initiative<sup>5</sup>.

Another structural reform has been implemented in Heilongjiang, one of the country's top grain production regions in northeast China in 2013. Here, local government has initiated different forms of support schemes for large-scale farming, including joint partnerships, family farms and cooperatives<sup>6</sup>.

In addition to land reforms, which continue to be one of China's largest social policy issues, support schemes for machines, seeds and chemicals have been implemented, but in general the structure still remains a restraint to consolidation in the agricultural sector.

## 4. PRODUCTION, CONSUMPTION AND IMPORTS

China is the world's largest producer of food. In volume terms the most prevalent agricultural commodities are rice, corn, vegetables, sugar and wheat. In terms of value the largest commodities are pork, rice, vegetables, eggs and wheat.

### 4.1 GRAINS

Historically, grain self-sufficiency has been a goal for the Chinese government, which was only further reinforced by during Mao Zedong's reign<sup>7</sup>. For many years China was however a net-exporter of grains, only few years being the exception. The past decades have however seen the trend reverse, as the population has expanded and changed consumption patterns as a result of increased affluence. In light of grains being the staple source of sustenance, domestic production and supply will continue to be a major focus in the government's policies, which historically has been based on a vision of self-sufficiency.

#### 4.1.1 WHEAT

Wheat production has increased at steady pace since 2005, reaching more than 121 million tonnes in 2013 marking an increase of 24.2 pct. since 2005. According to Ministry of Agriculture<sup>8</sup>, wheat production will continue to expand, yet at a low pace in the years to come, reaching approximately 128 million tonnes in 2020. This trend reflects the changing structure of arable land use, and further indicates that any production increases must be built on efficiency enhancements, including improvements in grain yield and processing quality (without increasing needed inputs)<sup>9</sup>, rather than expansions in wheat-cultivating land.

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<sup>5</sup> [Stratfor Global Intelligence: China's Land Reform Will Be Neither Quick nor Clean](#)

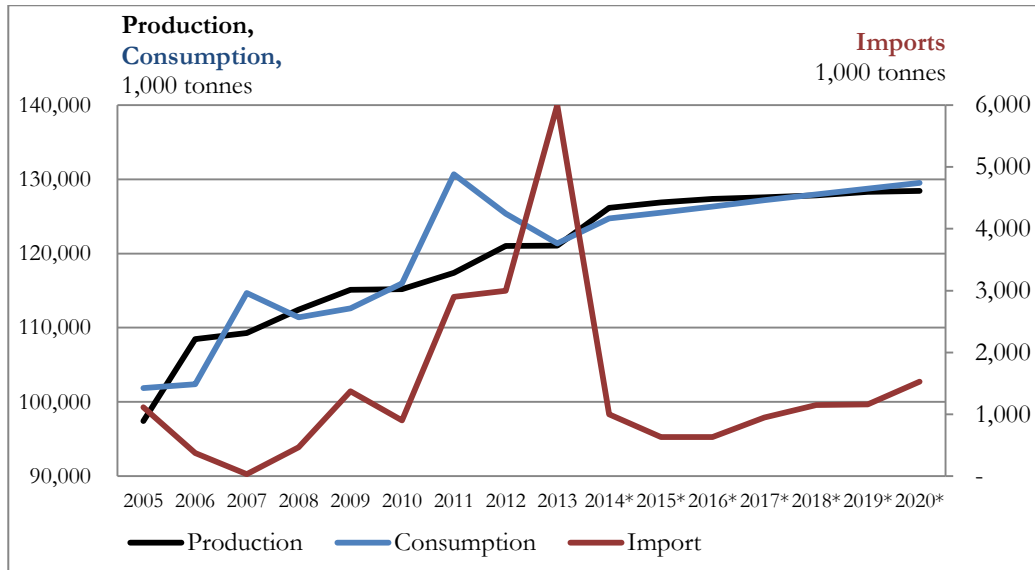
<sup>6</sup> [Xinhua: New government tests first major reform in agriculture](#)

<sup>7</sup> [The Jamestown Foundation: Facing Grain Shortfalls, China Asserts Self-Sufficiency Policy](#)

<sup>8</sup> China Agricultural Outlook 2015-2023

<sup>9</sup> [CIMMYT: China's Wheat Production Critical to Global Food Security](#)

### Wheat: Production, consumption and imports



Source: FAOSTAT, China Agricultural Outlook 2014-2023

Wheat imports are generally low as held relative to the amount of the Chinese production. 2011-2013 however saw a significant surge in imports peaking at 6 million tonnes in 2013. The development can mainly be attested to drastic declines in global wheat prices, diminishing the competitiveness of the still subsidized domestic sector<sup>10</sup>, combined with poor harvests in China’s main wheat producing provinces, Henan, Shandong, Hebei and Shaanxi due to weather conditions<sup>11</sup>. However, as seen in the graph below imports have reached previous levels and are forecasted to remain at stable growth rates until 2020. The main exporters of wheat to China are USA, France, Canada, Australia and Kazakhstan.

### 4.1.2 RICE

While China is the world’s largest rice producer generating more than 25 pct. of global production<sup>12</sup>, the sector’s development have proven less dynamic than for other crops, output only rising slowly since 2005. In 2013 total rice production reached more than 140 million tonnes, which is an increase of 13.2 pct. since 2005. The main rice-producing provinces are Hunan, Heilongjiang and Jiangxi<sup>13</sup>.

Production of rice is forecasted to be almost at a stalemate, reaching about 144 million tonnes in 2020<sup>14</sup>. The forecasted development is mainly attested to an increasingly market-driven agricultural sector, allowing farmers to convert fields to more profitable crops, as reflected in decrease in rice-cultivating land. In addition, millions of farmers are leaving for better-paying jobs in secondary industries, while

<sup>10</sup> [Bloomberg: China’s grain imports seen surging as global crop prices decline](#)

<sup>11</sup> [The Crop Site: Nine Year High for Chinese Wheat Imports](#)

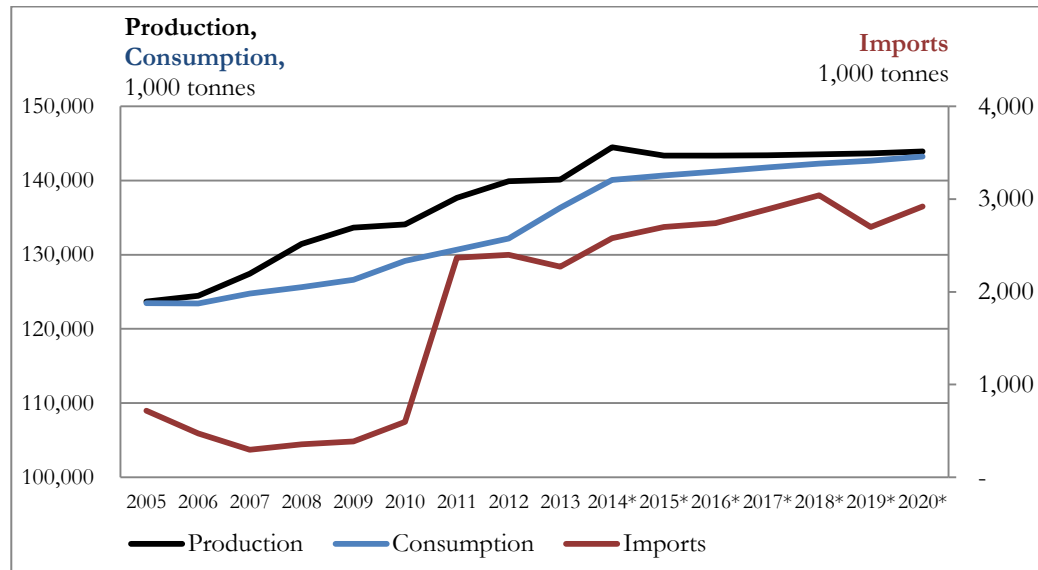
<sup>12</sup> [Farm Chemicals International: Global Rice Output Rises on Demand in China, India](#)

<sup>13</sup> China Statistical Yearbook 2013

<sup>14</sup> Ministry of Agriculture: China Agricultural Outlook 2014-23

government reforestation plans have also taken up significant amounts of land previously used for rice production<sup>15</sup>.

*Rice: Production, consumption and imports*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

In turn, the Chinese agricultural sector is in dire need of implementing measures for rice yield improvements, as prices continue to increase – only emphasizing the government’s ongoing challenge in balancing farmers’ incomes, inflation and food security, which in the end is a central issue in securing the country’s social stability.

Rice imports may initially appear minor held relative to domestic production; however China is also the world’s largest rice importer, deeming them increasingly reliant on global markets. In addition, 2011 saw a large increase in imports, from approx. 0.6 to 2.4 million tonnes. As it is also the case for wheat, the government has implemented policies to support farm incomes, which however makes the sector less competitive in global commodity markets<sup>16</sup>. The surge can thus be attested to the profit opportunities based on the difference between domestic and overseas rates. The main exporters of rice to China are Vietnam and Pakistan<sup>17</sup>.

Comparing consumption and production it is worth to note, that there has been a substantial surplus in the production of rice since 2005. According to Ministry of Agriculture this surplus will decrease at a steady pace and be almost completely depleted by 2020<sup>18</sup>.

<sup>15</sup> [New York Times: China Races to Reverse Its Falling Production of Grain](#)

<sup>16</sup> [Bloomberg: Rice Imports by China Jump Fourfold on Low Prices](#)

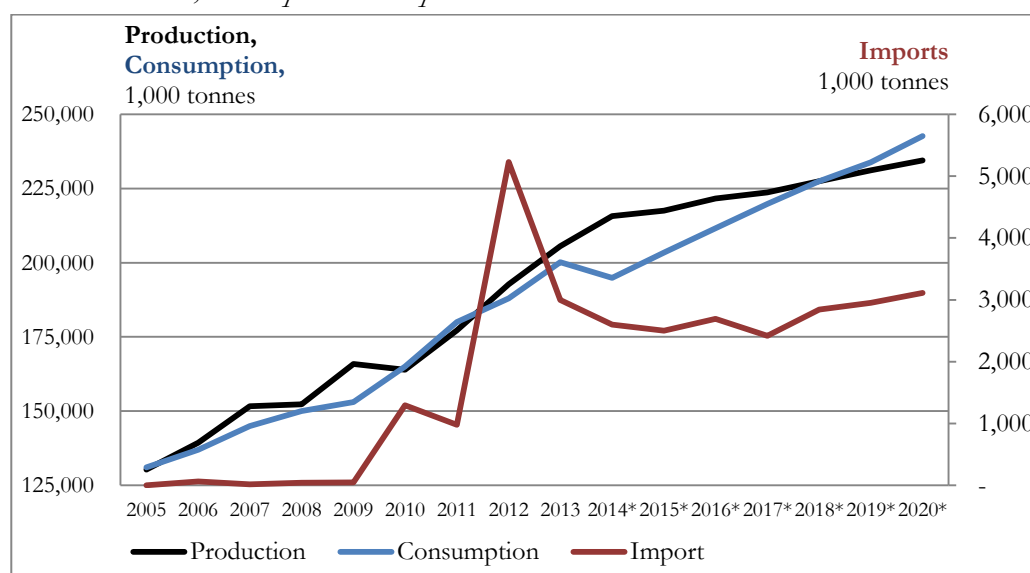
<sup>17</sup> [IRRI: Game changers in the global rice market](#)

<sup>18</sup> Ministry of Agriculture: China Agricultural Outlook 2015-2023

### 4.1.3 CORN

Chinese corn production has seen continuous increases in past years. In 2013 corn production amounted to 205 million tonnes, which is an increase of 57 pct. compared to 2005 figures. In turn corn production has exceeded previous OECD forecasts, making it the fastest growing grain sector in China. Heilongjiang, Jilin and Shandong are the provinces providing the largest output of corn<sup>19</sup>.

*Corn: Production, consumption and imports*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

The rapid growth is largely based on increased urbanization, a higher average income and an improved standard of living. These are factors, which has led to a significant increase in China’s per capita meat consumption, spurring increased corn demand for livestock feed. It is estimated that approximately 58 pct. of China's corn production is used for livestock feed<sup>20</sup>.

China’s rapidly growing demand for corn is observed to even greater extent in import figures. Prior to 2008, China imported very little corn and was in fact a net exporter of this grain. This was partly a result of Chinese livestock producers employing crop residues, forages, and other non-grain feeds as feed<sup>21</sup>. Chinese producers also grew corn for economic reasons, as it is a higher yielding and more profitable crop, as compared to other crops, such as soybeans. Today China’s government employs supportive policies including elevated price support mechanisms as well as generous input subsidies to drive expansion of corn production<sup>22</sup>. China mainly imports corn from USA, Argentina and Brazil<sup>23</sup>.

<sup>19</sup> China Statistical Yearbook 2014

<sup>20</sup> Own calculations, based on data from China Agricultural Outlook 2014-2023

<sup>21</sup> [AgPartners: U.S. Corn Exports to China](#)

<sup>22</sup> Business Monitor International: China, Indonesia To Drive Asia's Widening Corn Deficit

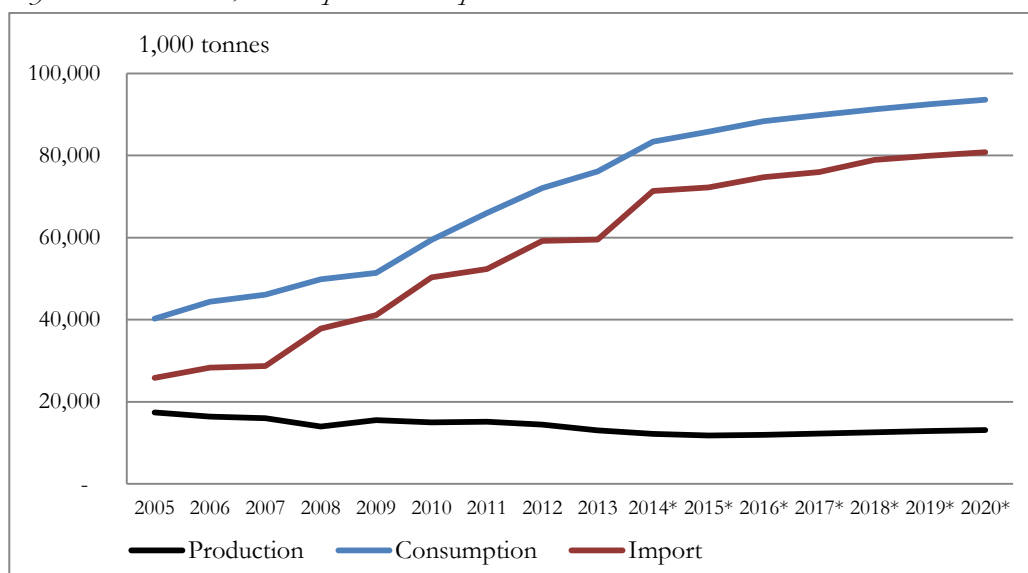
<sup>23</sup> [U.S. Grains: U.S. Competitors Face Barriers Too](#)



## 4.2 SOYBEANS

China's soybean production amounted to 13 million tonnes in 2013, seeing a total output decrease of 25 pct. as compared to 2005. The main soybean producing provinces are Heilongjiang, Inner Mongolia and Anhui<sup>24</sup>.

*Soybeans: Production, consumption and imports*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

The falling production figures reflect China's political decision to prioritize grain self-sufficiency by means of heavy subsidizing in favour of soybean production<sup>25</sup>. Rather China imports the majority of soybeans for domestic consumption and accounts for almost 60 pct. of global soybean imports, which is mainly attested to the rapid expansion of livestock production, including pork and poultry, for which soybeans are used as feed<sup>26</sup>. Also, the dominance of soybean imports is a result of tariff cuts made during the mid-90s when China was negotiating accession to the WTO<sup>27</sup>. Main exporters of soybeans to China are Brazil, Argentina and USA<sup>28</sup>.

## 4.3 DAIRY

The past three decades have seen both dairy production and consumption in China soar. The Chinese dairy sector has been one of the fastest evolving sub-sectors in China's food industry, where farm holdings quickly undergone transition to be large-scaled, intensive and standardized. The trend is also seen in production figures, and output has thus grown by 21 pct. from 2005 to 2013, despite the melamine scandal in 2008, which immediately was reflected in production levels.

<sup>24</sup> China Statistical Yearbook 2014

<sup>25</sup> [Permaculture Research Institute: China and the Soybean Challenge](#)

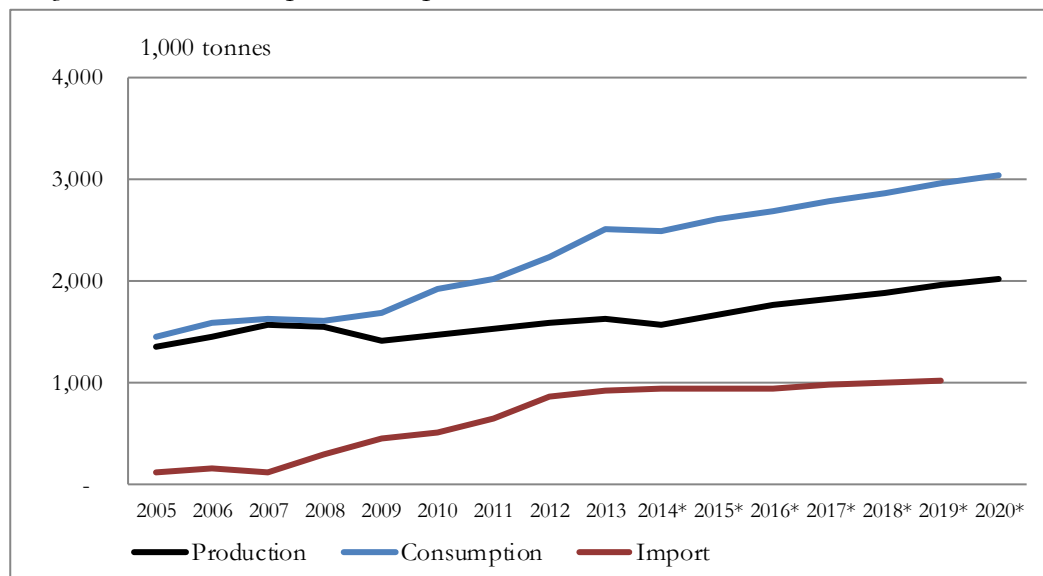
<sup>26</sup> [Bloomberg: China Seen Boosting Soybean Imports as Animal Feed Demand Rises](#)

<sup>27</sup> [China Economic Review: China's grain self-sufficiency policy lives on after its official demise](#)

<sup>28</sup> [WWF: Soy Facts and Data](#)

Despite the rapid production growth, domestic production does not cover domestic demand, deeming China continuously reliant on imports. Factors such as rising disposable incomes, increased urbanisation, improved affordability of cold storage and enhanced awareness of the health benefits of dairy products has helped the development underway. The melamine scandal has further spurred increased preference for imported products among consumers, as they are considered as safer<sup>29</sup>. Imports have thus grown by an incredible 630 pct. from 2005 to 2013. New Zealand, Germany, France and Australia are the main exporters of dairy to China<sup>30</sup>.

*Dairy: Production, consumption and imports*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

## 4.4 MEAT

Observing China's total meat production pork, poultry and beef constitute the most important categories. Pork is clearly the most significant meat type as reflected in the scale of domestic production. A quickly rising appetite for meat has fuelled rapid industrialization of the sector and thereby continuous production increases in the past decades. In the mid-1970s each Chinese citizen consumed an average of 8kg of meat, which in 2014 had risen to 55kg. By 2020 per capita consumption is expected to reach 65kg<sup>31</sup>.

### 4.4.1 PORK

The Chinese production of pork reached 55 million tonnes in 2013 from a domestic swineherd of 660 million head, marking an output growth of 20.5 pct. since 2005. This production figure is equivalent to almost half of global pork meat production, and is twice the amount of pork produced in EU27<sup>32</sup>.

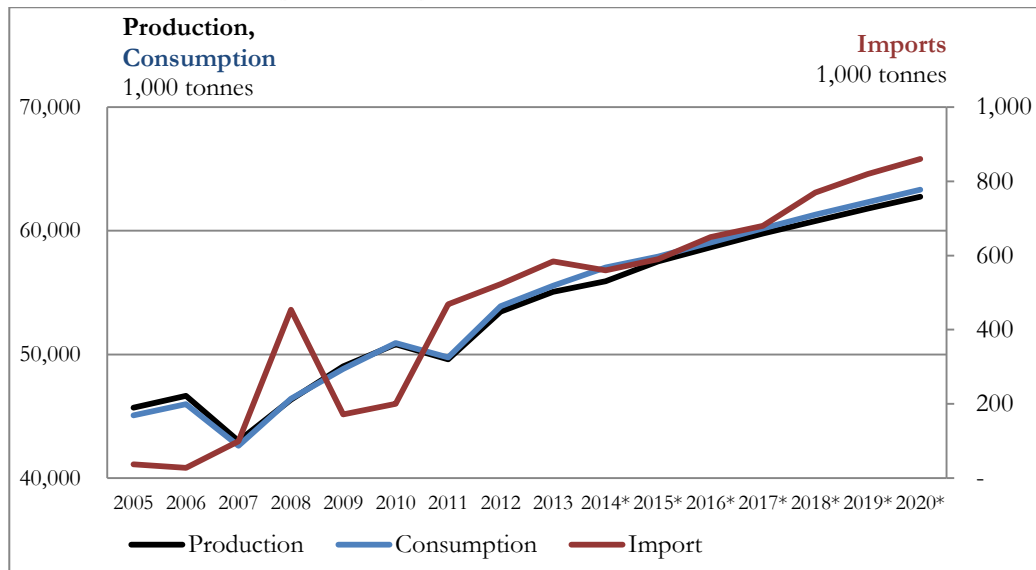
<sup>29</sup> [Forbes: China and its coming Great Milk Battle](#)

<sup>30</sup> [IATP: China's Dairy Dilemma](#)

<sup>31</sup> Business Monitor International

<sup>32</sup> [IATP: China Pork Miracle?](#)

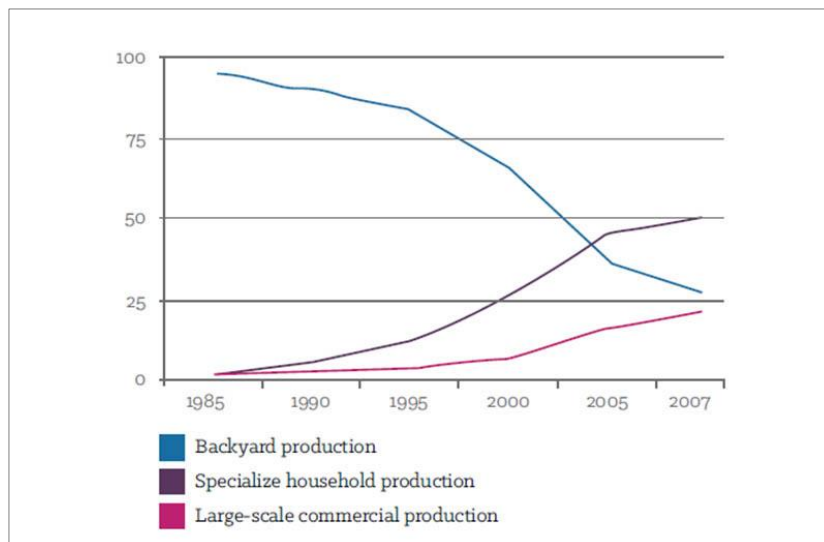
*Pork: Production, consumption and imports*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

Growing domestic demand has not been the only factor to encourage farmers to expand breeding stocks. Also, an extensive range of support measures including subsidies, investments, and favorable policies for medium- to large-scale industrial operations have been implemented by the Chinese government<sup>33</sup>. Consequently, the production of pork meat is forecasted to reach 62.8 million tonnes in 2020. Imports are expected to follow the same pattern. USA, Germany, Spain and Denmark<sup>34</sup> are the main exporters of pork to China.

*Share of total pig production by farm type, 1985-2007*



Source: INFORMA

<sup>33</sup> IATP: China Pork Miracle?

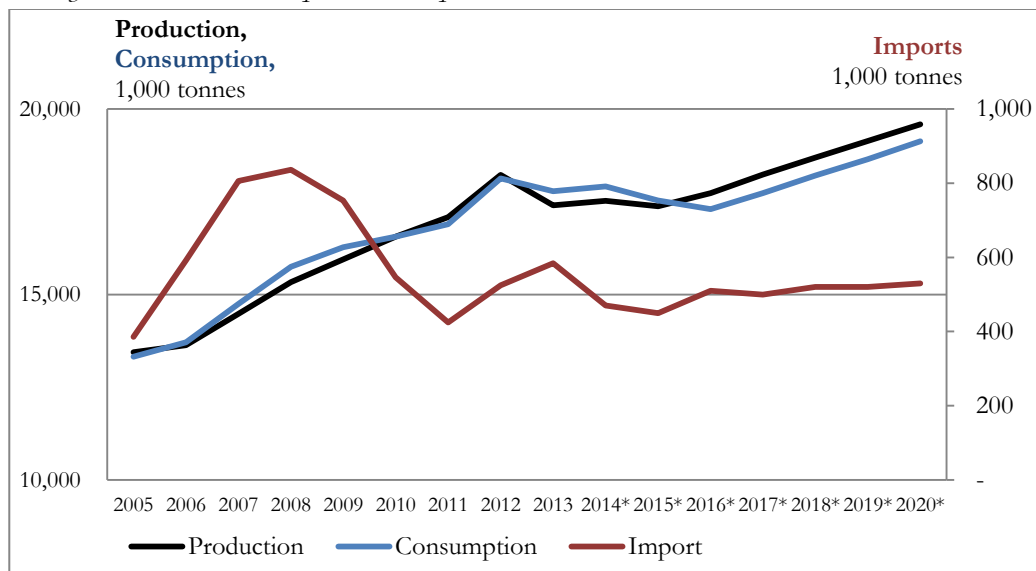
<sup>34</sup> Irish Food Board: Pork imports to China expected to increase in 2015

As a consequence of the government’s strong desire to modernize the agricultural sector, the pig sector in China has seen a major structural development. While backyard farmers accounted for nearly 100 pct. of national pork production in 1985, it accounted for 27 pct. in 2007.

#### 4.4.2 POULTRY

In 2013 the production of poultry reached 17.4 million tonnes. When comparing to 2005 this is an increase of 29.5 pct., illustrating that while pork meat remains the main source of meat in China, poultry has seen a larger percentage increase. This is an indication of much improved poultry production efficiency. Poultry meat production is forecasted to reach 19.6 million tonnes in 2020<sup>35</sup>.

*Poultry: Production, consumption and imports*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

The same trend is seen on the consumption side, which has grown by 34 pct. from 2005 to 2013. This exceeds consumption growth of pork and beef, and is mainly attested to the low cost, transformability and availability of chicken, spurring mass consumption. China imports poultry from Brazil, USA, Argentina and Chile<sup>36</sup>.

#### 4.4.3 BEEF

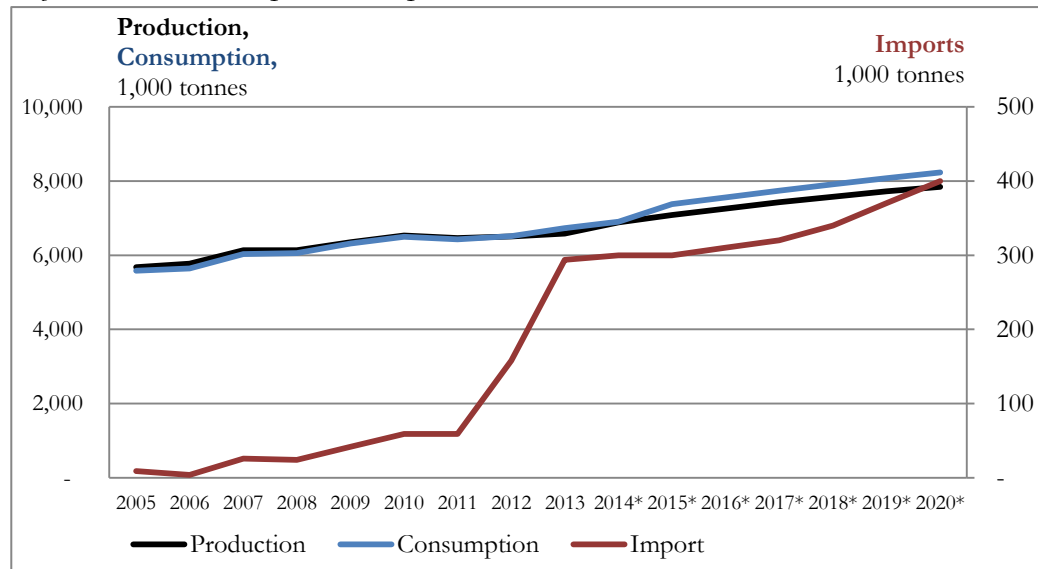
As compared to the developments in production and consumption of both pork and poultry, the beef sector has seen a much less dynamic development. The sector has however still seen output growth of 16 pct. between 2005 and 2013 and is expected to grow a further 19 pct. until 2020. The slow development is largely attested to a lack of government support, low productivity, and the lack of farmers willing to invest in beef production, being deterred by high costs and a shortage of

<sup>35</sup> Ministry of Agriculture: China Agricultural Outlook 2015-2023

<sup>36</sup> [FAO: Poultry Sector in China](#)

labor<sup>37</sup>. Consumption has in large terms followed the pattern of production, however supply gaps are expected in the years to come.

*Beef: Production, consumption and imports*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

Imports have however seen a much larger growth rates, reflecting China’s short supply of beef and hence the country’s willingness to allow beef imports. For instance imported corn and pork have faced strong Chinese resistance in recent years through non-scientific trade barriers<sup>38</sup>. During this same time, beef import access has improved with China opening to countries like Canada and Ireland. Australia and Uruguay remain the largest beef exporters to China, taking 45 pct. and 30 pct. market shares respectively<sup>39</sup>.

<sup>37</sup> [Rabobank: China beefs up imports as domestic cattle production continues to struggle](#)

<sup>38</sup> [Beef Issues Quarterly: Beef Demand in China](#)

<sup>39</sup> [Irish Food Board: China's beef imports forecast to increase in 2015](#)

## 5. SELF-SUFFICIENCY

Historically China has maintained a policy of agricultural self-sufficiency. This policy saw continued support when the People's Republic of China was founded in 1949. Chairman Mao Zedong feared that dependence on imports of crops such as rice and wheat could be used against China, e.g. via trade embargos. The current target aims to satisfy a minimum of 95 pct. of domestic consumption of rice, wheat, corn, soybeans and potatoes through domestic production<sup>40</sup>.

The self-sufficiency policy will however be facing a number of challenges in the years to come. The increasing demand for meat and wider diversity of agricultural products has put high pressure on the limited resources available to China, once again raising the question of food security.

The State Council recently stated that China should stabilize annual grain production at 550 million tonnes, which is significantly lower than the 602 million tonnes produced the year before. This is arguably marks a relaxation of the self-sufficiency policy, as the government has communicated it will add emphasis to food safety and quality<sup>41</sup>.

In turn the launch of China's "Go Global" strategy has seen central government urging private companies to make foreign direct investments in agriculture on a global scale. To this day, many of China's SOEs and largest companies thus possess investments in land and research facilities in Africa, South America, Eastern Europe and Central Asia, enabling them to supply the industries at competitive prices<sup>42</sup>. As a result China is now the world's third-largest source of foreign investment stocks in agriculture. An example is food processor and grain trader COFCO's 51 pct. share acquirement of Dutch grain trader Nidera. With a combined investment of USD 2.8 billion, this deal counts among the biggest overseas acquisitions in China's grain and oil sector to date<sup>43</sup>.

### 5.1 GRAINS

Overreliance on foreign grains is a concern and the rationale behind the Chinese policy on self-sufficiency – in fact, "food security" in Mandarin Chinese translates directly into "grain security". With a strong agricultural policy framework, China has supported a rapid growth in the domestic production of basic grains (wheat, rice and corn) and achieved a high level of self-sufficiency. To meet this objective

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<sup>40</sup> [The Dairy Site: China's Self-Sufficiency Policy](#)

<sup>41</sup> [Financial Times: China scythes grain self-sufficiency policy](#)

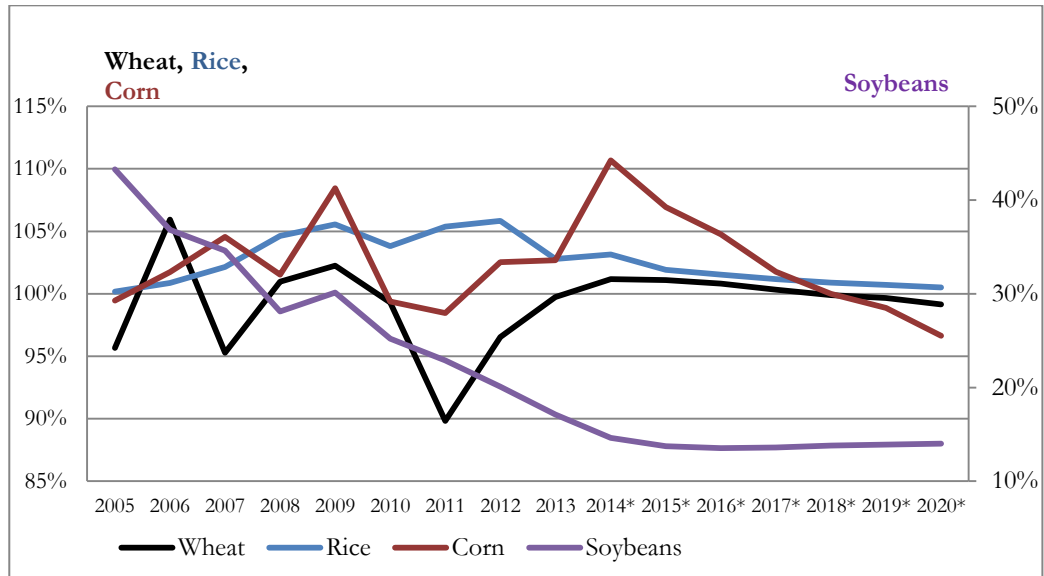
<sup>42</sup> [Investment Treaty News: The Quest for Commodities: Chinese Investment in Farmland](#)

<sup>43</sup> [KPMG: China Outlook 2015](#)

other commodities, which compete for land, have been scaled down and imported instead, e.g. oil seeds<sup>44</sup>.

Consumption has fluctuated around the level of production, causing speculations whether China is in process of easing its' self-sufficiency policies within grains. Ministry of Agriculture however forecasts a development until 2020, where the target of 95 pct. self-sufficiency is reached.

*Self-sufficiency: Grains*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

### 5.1.1 WHEAT

Wheat makes up approximately 40 pct. of grain consumption, while an expected 60 pct. of the Chinese population consumes wheat every day. In 2013 China had a self-sufficiency of 99.7 pct. of consumption. The rate of self-sufficiency is forecasted to be kept around this level.

### 5.1.2 RICE

Being the most important food crop in China, it is no wonder that China is completely self-sufficient. In 2013 the rate of self-sufficiency was 102.8 pct., observing both previous years and the forecasted values, the rate of self-sufficiency since 2005 never fell under 100 pct. and the same applies to the forecast. In fact China is overproducing rice in such manner, that it might be causing stockpiling issues due to loss of quality while kept in stock<sup>45</sup>.

<sup>44</sup> OECD–FAO. 2013. Feeding China: prospects and challenges in the next decade. In OECD–FAO 'Agricultural outlook 2013'.

<sup>45</sup> [Financial Times: China's rotten grains highlight troubled policy](#)

### 5.1.3 CORN

The rapid growth in demand for meat has consequently increased the demand for corn, as it is mainly used for feed. In 2013 the rate of self-sufficiency was 102.7 pct. and the 2014 forecasted value is a staggering 110.7 pct. However, the rate is forecasted to drop to 96.6 pct. in 2020.

## 5.2 SOYBEANS

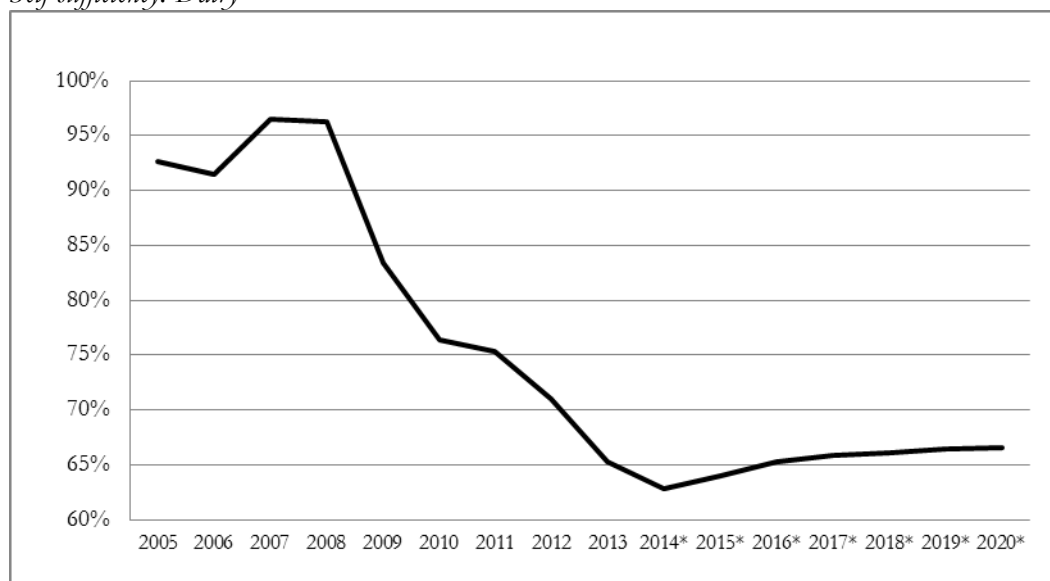
With the Chinese central government's focus on securing a high level of self-sufficiency in wheat, rice and corn, China is in turn heavily dependent on international trade to service its soybean needs. As arable land, previously used for soybean production, has been converted in order to serve grain production volumes, a huge drop in the rate of self-sufficiency for soybeans has been observed. In 2013 China's self-sufficiency rate was a mere 17.1 pct.

In turn, the domestic sector holds little international competitiveness as well as low profitability to farmers as compared to grain crops. As reflected in the very low degree of self-sufficiency, soybean may in fact be one of the main areas in which, China may be facing future challenges. Deeming itself increasingly reliant on imports, China has seen recent eases in GMO import policies<sup>46</sup>.

## 5.3 DAIRY

The gap between production and consumption for dairy products in China is expected to continue to widen in coming years, especially for whole milk powder, deeming the country to be increasingly dependent on imports.

*Self-sufficiency: Dairy*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

<sup>46</sup> [C&EN: China Approves Imports of Genetically Modified Corn and Soybeans](#)



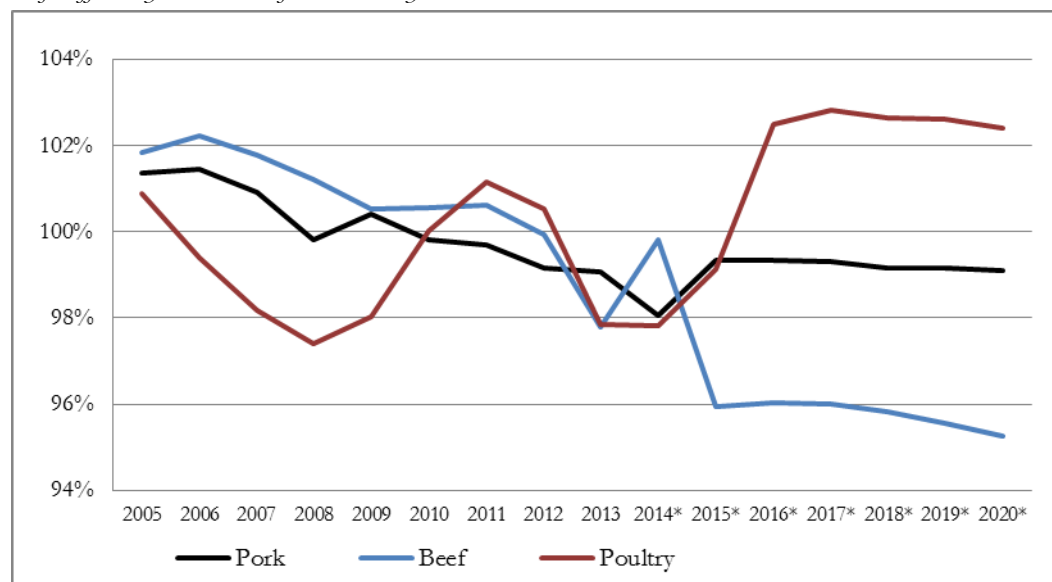
The major drop after 2008 clearly reflects the melamine scandal, which caused Chinese people to lose confidence in the domestic produced dairy products. Unfortunately, the years following 2008 continued to see dozens of milk safety scandals. In turn many Chinese consumers have since acquired a strong preference for imported products, as they are conceived as safer. This is also reflected in the self-sufficiency rate, which has continued to drop. In 2013 the rate was 65.3 pct. falling from 96.6 pct. in 2007.

The government has however taken an active stance in reversing this trend. Actions include official shut downs of offending suppliers, strict new regulations and an official consolidation policy, which has caused small farms to exit the industry faster than conglomerates boost output<sup>47</sup>. The consolidation of the industry is thus projected to continuously increase self-sufficiency levels until 2020, yet still leaving plenty of room for imports of foreign dairy products.

## 5.4 MEAT

While China’s self-sufficiency policy focuses mainly on grains, it is very clear, that China still maintains a very high degree of self-sufficiency in meat. In 2013 the rate of self-sufficiency of pork, beef and poultry was all around approximately 98-99 pct. The forecasted values show that beef will fall a bit behind reaching 95.3 pct. in 2020, pork will be very stable and reach 99.1 pct. in 2020 and poultry will increase to 102.4 pct. in 2020.

*Self-sufficiency: Pork, Beef and Poultry*



Source: FAOSTAT, China Agricultural Outlook 2014-2023

<sup>47</sup> [Efeed: China’s dairy sector gets its groove back](#)

### 5.4.1 PORK

For pork meat, domestic consumption matches production, why imports currently are negligible relative to China's overall production. The domestic preference for safe, reliable products is however expected to continue to deem China continuously reliant on imports, which have grown more than 20 pct. between 2005 and 2015.

### 5.4.2 POULTRY

China's poultry industry is one of the most modernized agricultural industries in the country, yet while being industry sustaining a high level of self-sufficiency, consumer preferences for high-quality and safe poultry will deem the country continuously dependent on imports.

### 5.4.3 BEEF

Beef stands out as a type of meat losing grounds in terms of self-sufficiency, which is largely based on the relatively low profitability associated herewith. This has further paved the way for further market openings and in turn increased exports, which are expected to increase steadily in the years to come.

## 6. GMO

China has historically shown reluctance in implementing use of genetically modified organisms (GMO) in agricultural production. At current stage only very few GM crops have been approved in China, of which only papaya and cotton can be used for commercial production. Reluctance has generally been based on safety concerns but also the fact that China is disinclined to increase seed supplies from foreign multinational companies, as the country is trying to safeguard its national interest and maintain self-sufficiency in food items, including agricultural inputs. Rather China has supported a strong national biotech programme, which has kept foreign players out of the market. As a result domestic insect-resistant cotton accounts for more than 90 pct. of China's GM cotton market<sup>48</sup>.

The promotion of GMO research has been mentioned several times in past years' "No. 1 Central Document" issued by the State Council in 2015 being no exception. Here the domestic GMO research scheme was supported, stating that not only should GMO research be promoted but also how more effort should be put into the popularization and enhancement of public awareness of GMO technology. As such the promotion of GMO technology can be seen as a cornerstone of the promotion of a modern and efficient agricultural sector in China from central side, where GMO technology is promoted as a tool to enhance agricultural productivity, due to limitations of environmental resources.

*Global use of GM crops (million ha), 2013*

	GM crop area	GM crops
<b>USA</b>	70.1	Corn, soybean, cotton, canola, beet, alfalfa, papaya, squash
<b>Brazil</b>	40.3	Soybean, corn, cotton
<b>Argentina</b>	24.4	Soybean, corn, cotton
<b>India</b>	11.0	Cotton
<b>Canada</b>	10.8	Canola, corn, soybean, beet
<b>China</b>	4.2	Cotton, papaya, poplar, tomato, sweet pepper
<b>Paraguay</b>	3.6	Soybean, corn, cotton
<b>South Africa</b>	2.9	Corn, soybean, cotton
<b>Pakistan</b>	2.8	Cotton
<b>Uruguay</b>	1.5	Soybean, corn

Source: Business Monitor International

Still, China import a great amount of GMO products, including cotton as well as soybeans and corn, which is used for livestock feed.

<sup>48</sup> Business Monitor International: Industry Trend Analysis - Asia GM Outlook

## 7. DANISH EXPORTS TO CHINA

In 2014 the total Danish food and agricultural export to China amounted to almost USD 1.7 billion, of which the majority was mink skin and pork meat. The total export of goods to China was approximately USD 4.3 billion meaning the food and agricultural export contributed 39.5 pct. of total goods exports.

*Danish food and agricultural export to China, 2014*

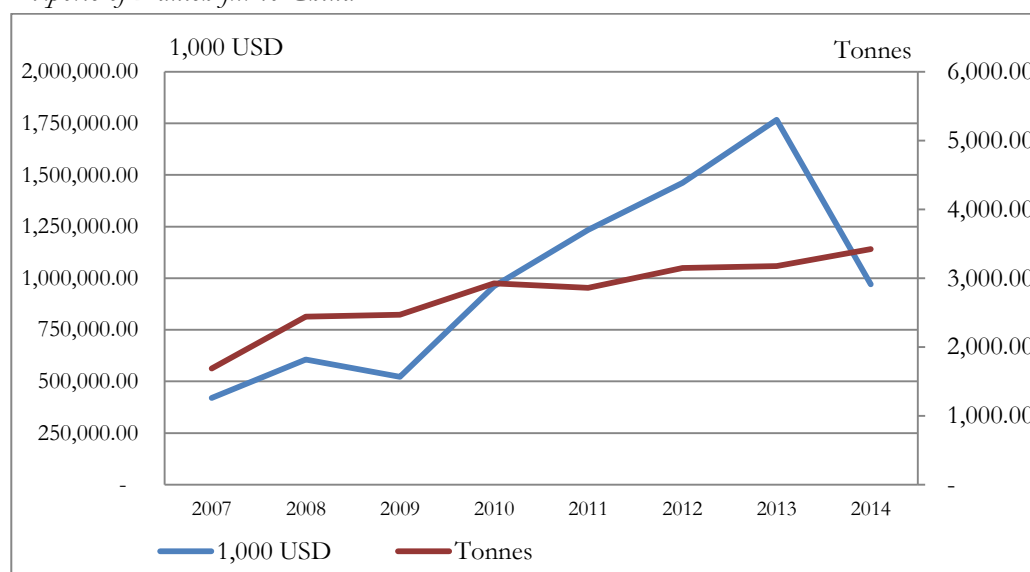
	1,000 USD	Pct. of total exports
Live animals	28,230	2 %
Meat products	301,501	18 %
Dairy and eggs	39,650	2 %
Aquatic products	110,759	7 %
Grains and feed	92,949	5 %
Fur and skin	988,539	59 %
Misc.	117,351	7 %
<b>Total</b>	<b>1,678,980</b>	

Source: Statistics Denmark

### 7.1 FUR AND SKIN

Denmark is the world's largest producer of mink. This is also reflected in the export of fur and skin to China, which consists of mink mainly. In recent years the value of the export has increased tremendously with increases almost every year. In 2014 the value reached close to 1 billion USD, compared to 2013 with a value of almost 1.8 billion USD this is a decrease of 44 pct.

*Exports of Danish fur to China*



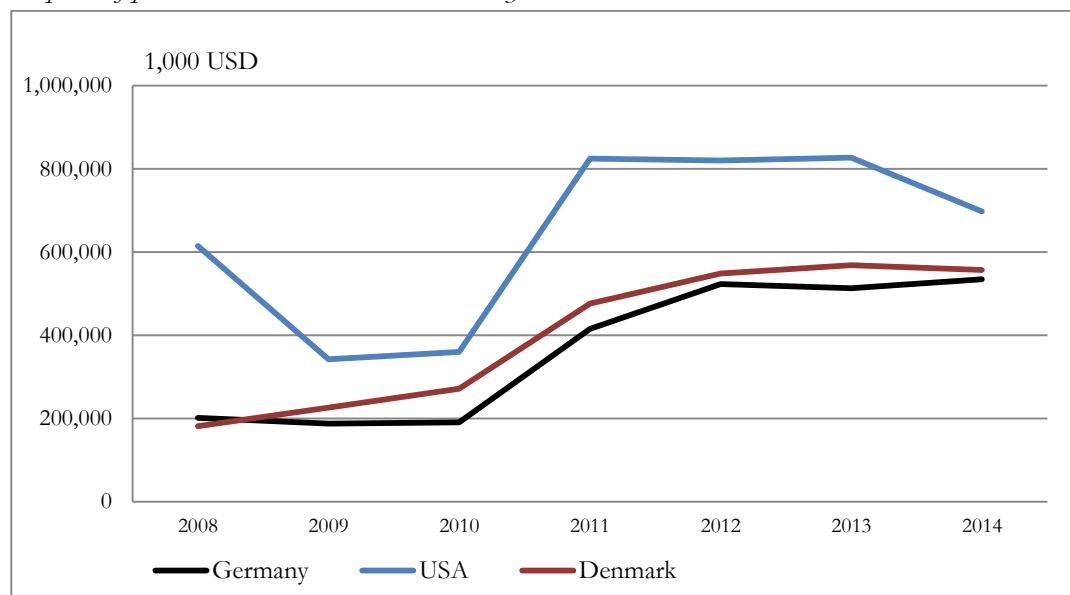
Source: Statistics Denmark

The explanation for the decrease is the huge drop in the price of mink fur in 2014. This price drop has been long foreseen and is a direct consequence of the burst of the so called “Chinese fur bubble”. Some other arguments have been made including increasing negative public and political debate and the governments intensified fight on corruption. However, observing the development in the amount of fur and skin export to China this does not seem to be the case.

## 7.2 PORK

Meat and meat products are the second most significant agricultural export to China, which consists almost exclusively of pork meat or products. In 2014 the total export of meat and meat products amounted to 301 million USD. This is actually a tiny decrease of about 2 pct. compared to 2013. As such, today Denmark is among the largest pork exporters to China alongside USA and Germany.

*Exports of pork to China: Denmark, Germany and USA*



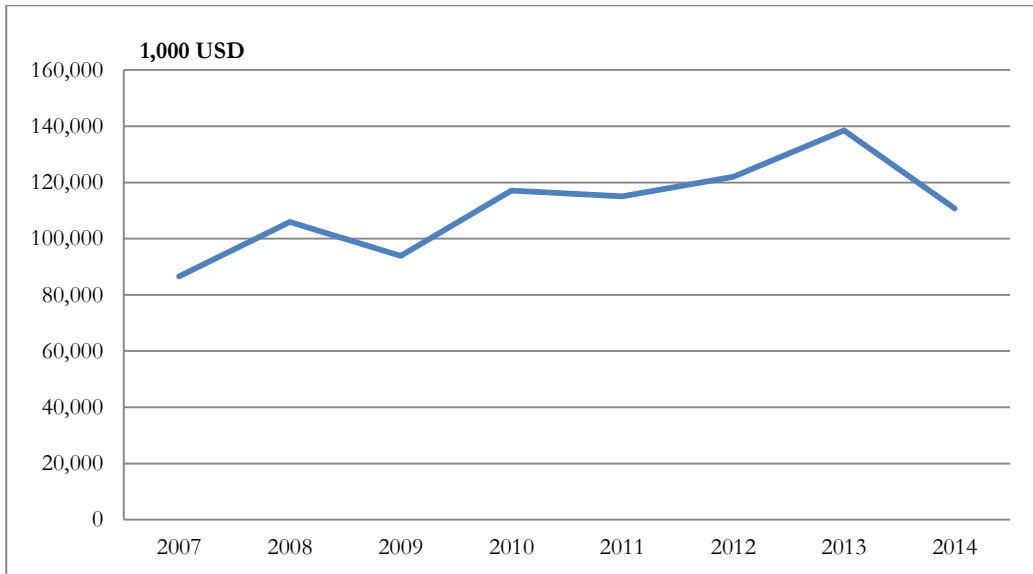
Source: DESTATIS, USA Trade Online, Statistics Denmark

The development in the export of meat and meat products has seen a remarkable growth. One major factor is that China has proven to be a profitable market for the export of meat by-products, e.g. pigs’ ears, tails and feet, which can be hard to sell in Western markets. The coming years are however expected to see a shift towards higher value pork products as Chinese consumers become increasingly willing to spend money on imported meat products.

## 7.3 AQUATIC PRODUCTS

In 2014 the value of export of aquatic products reached USD 110 million. Observing the development since 2007 there has been a steady increase peaking in 2013 with a value of USD 138 million. The decrease from 2013 to 2014 of 20 pct. is mainly due to a big drop in the export of frozen flat fish and fish meal.

*Exports of Danish aquatic products to China*

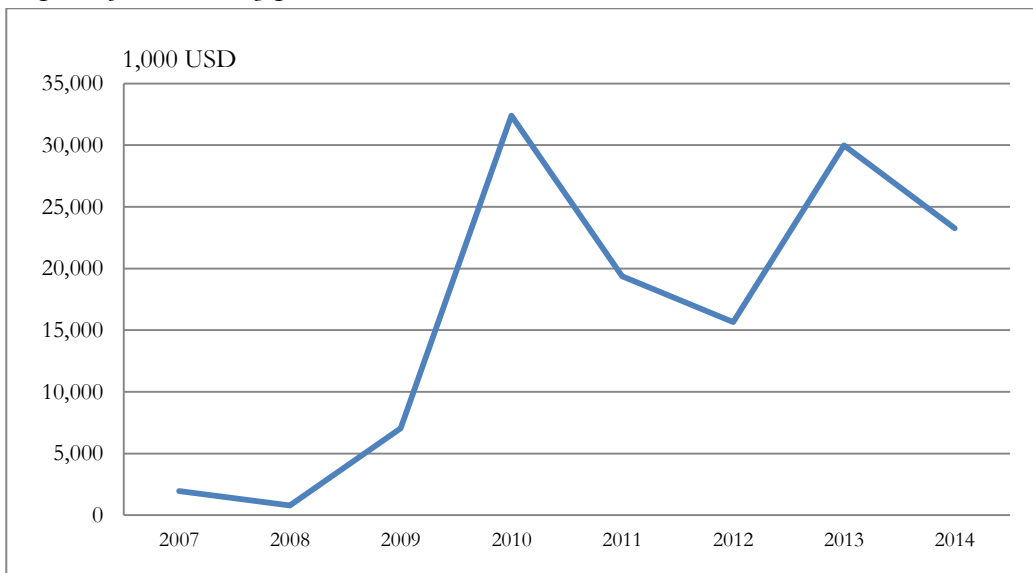


Source: Statistics Denmark

## 7.4 DAIRY

In 2014 the dairy export reached USD 23.2 million, which is a decrease of 23 pct. compared to the USD 30 million in 2013. The export of dairy to China has generally proven volatile and for instance saw an evident boost following the 2008 melamine scandal.

*Exports of Danish dairy products to China*



Source: Statistics Denmark

## 8. POLICIES AND LEGISLATION

The centralized planning and policy-making is an essential part of governmental rule in China, as well as for the Chinese approach to modernize the agricultural sector. This approach has proven to be very successful, and it is also in this manner China seeks to further develop and modernize its agricultural sector. This in itself underlines the importance and relevance of these policies for foreign stakeholders on the Chinese market.

### 8.1 THE 12TH FIVE-YEAR PLAN, 2011

In March 2011 the Chinese government released China's 12<sup>th</sup> 5-year plan, which set out the broad strategic goals and guidelines for China's development in the period 2011-2015. In relation to the agriculture the 5-year plan has meant the following main priorities:

- Maintaining supply of farm produce  
I.e. the area of grain sown to be above 106.7 million hectares and gross production to be above 540 million tonnes
- Growth in the agricultural and rural industrial sector
- Development of agricultural material and technology  
Additional 2.667 million hectares farmland will be under effective irrigation, coefficient on effective use of water for agricultural irrigation will reach 0.53; Mechanization of ploughing, planting and harvesting works will cover 60 pct.; rural laborers with practical know-how and better education will amount to 13 million; Science and technology will contribute to 55 pct. of agricultural output.
- Increased size of agricultural operations  
130 million households will benefit from industrialized organization in agriculture; Large dairy farms of >100 animals will account for 38 pct. of all farms; 50 pct. of all pig farms will have a slaughter population of over 500.
- Increase of agricultural return and farmer's income.  
Added value of agriculture, forestry, livestock and fisheries will grow at 5 pct. annually; rural residents' per capita net income will grow at an annual average of over 7 pct.
- Agricultural resource utilization and conservation of the environment.  
Use of fertilizer and chemicals will be improved; utilization rate of straws will be 80 pct.; Biogas digesters will be installed at >50 pct. of suitable rural households; 150 billion aquatic seedlings will be released for proliferation.
- Improvements in rural infrastructure  
I.e. supplies of tap water, electricity and gas.

## 8.2 THE “TWO SESSIONS”, 2015

Every spring the “two sessions” are held in the Great Hall of the People. These sessions last up to two weeks and bring together the full assembly of legislators and political advisors, (National People’s Congress and Chinese People's Political Consultative Conference to review past major policies and present future ones.

On March 5, 2015 China’s Premier Li Keqiang gave a speech on the implementation of the 2014 plan for national economic and social development and on the draft plan for 2015. Topics included the improvement of agricultural science and technology, increases in pace of progress for water conservancy projects, further mechanization of agricultural production and that the work regarding rural land-used rights had proceeded as planned.

Regarding the work plan for 2015 for food and agriculture, Premier Li Keqiang addressed the following:

- Top priority will be given to agriculture, rural areas and its population in order to speed up transformation of the agricultural growth model.
- Total grain output will be kept at approx. 550 million tonnes and arable land will be kept at 120 million ha. Work will be carried out to designate permanent basic cropland throughout the country and improve the quality of cultivated land. This will include improving the subsoil of 13.3 million ha. of cropland.
- Development of water-efficient agriculture by improving water conservancy and irrigation infrastructure is a priority.
- Development of new technology, new crop varieties and new agricultural machinery will be further strengthened.
- Farmers will be guided in production for better market responsiveness. Support will be given to the development of a broad range of agricultural producers, including large family farming businesses, cooperatives and family farms, in order to cultivate a new type of skilled farmer among a diversity of scaled agricultural operations.
- Efforts to address problems in the agricultural environment and improve the rural living environment will be intensified. This includes addressing residual traces of chemicals in agricultural products and livestock and making safe drinking water available to another 60 million rural residents.
- Progress regarding the rural land-use rights will be ensured to run smoothly, including launch of pilot reforms to further develop the rural land-use rights.
- Policies on minimum state grain purchase price, temporary state purchase and storage of major agricultural products will be refined. Further the system of subsidies and guaranteed base prices for agricultural products will be improved.

Moreover Premier Li Keqiang emphasized that whatever the fiscal difficulties China is facing, the policies on agriculture must be strengthened and related funding must be increased.



### 8.3 “No. 1 Central Document”, 2015

The “No. 1 Central Document” is the first major policy document of the year and is considered an important indication of the priorities of the Chinese government in that year. The No. 1 Central Document was jointly released by the Central Committee of the Communist Party and the State Council on February 1, 2015 with the main theme to step up reform and accelerate agricultural modernisation.

More specifically the document lists 32 tasks in 5 different areas. These areas include the following:

- Accelerating shift of agricultural development pattern with focus on agricultural modernization.
- Intensifying pro-farming and pro-farmer policies with focus on increasing farmer’s income.
- Pushing forward the development of a new countryside through an integrated urban-rural development.
- Deepening rural reforms in an all-round manner to inject new vitality into rural development.
- Strengthening rule of law in dealing with rural issues.

2015 is the 12<sup>th</sup> consecutive year the No. 1 Central Document focuses on agriculture. As stated in the document the agricultural sector faces many challenges, including surging production costs, worsening pollution, limited agricultural resources (water and land) and over-exploitation of farmland.

In the document food safety and modernization of farms are among the top priorities. Additionally the Chinese production should put equal emphasis on quantity, quality and benefits of the agriculture products. Previous goal on solely pursuing large quantities will be halted.

The importance of competitiveness was highlighted. Concerning the agricultural modernization, future development should be based on environmentally sustainable fundamentals. High-quality farmland development, soil fertility conservation, innovation in agriculture investment and financing mechanisms, projects for medium-large scale irrigation facilities, improvement of water-efficient technology and environment-friendly production systems were mentioned.

Further, boosting the income of the farmers will be pursued by implementing different measures to ensure investment in agriculture, improving efficiency and effectiveness of agricultural subsidy policies and improving pricing mechanisms.

For the development of the new countryside, the document emphasises better rural infrastructure and public service levels, as well as improvement of the rural environment. For deepening rural reforms efforts will be made to establish a new

agricultural management system covering resources of land tenure, financials and water. Finally strengthening rule of law is important in protecting property rights, market regulation and implementation of pro-farming policies in the rural areas.

As highlighted in the document, the strong agricultural focus is based on the sector's vital role in the social and economic development of China. At the 2013 Central Rural Work Conference President Xi Jinping stated that a strong agriculture is the precondition for a strong China.

## 8.4 EXPECTATIONS FOR THE 13TH FIVE-YEAR PLAN, 2016

The 13<sup>th</sup> 5-year plan will be covering the years 2016-2020 and most likely be released in early spring 2016. This five-year plan will be the last plan before 2020, in which China has set out to construct a moderately prosperous society in all respects emphasizing the 13<sup>th</sup> five-year plan's importance. This goal was set out at the Chinese Communist Party's 18<sup>th</sup> National Congress in November 2012. Preparation for the 13<sup>th</sup> five-year plan has already been long underway.

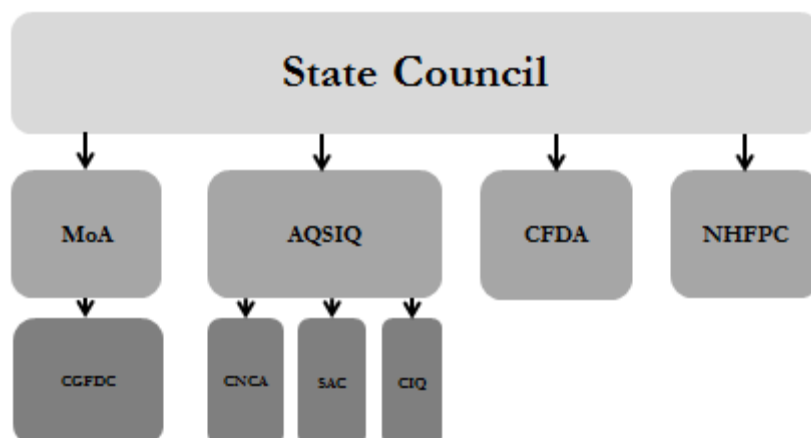
Little information on the 13th 5-year plan has been released, yet according to Premier Li Keqiang the continued economic development will be a top priority. Further, Zhang Guobao, Vice Minister of the State Development and Reform Commission has stated, that ambitious reforms laid out in 2013 targeting average annual income and increase them twofold by 2020 from 2010 levels will be reflected in the five-year plan.

From an agricultural perspective, content continues to be speculated, though policies, which already have been published, may be used as guidelines. On this basis the 13<sup>th</sup> five-year plan will most likely focus on accelerating modernization of the agricultural sector. In regards to this focus, top goals would be overcoming challenges like the constraint of natural resources, food safety and promote organic products by reforms and innovation. Further, a standardization of the agricultural sector through construction of infrastructure including irrigation, water conservancy, information-feedback and development of brands and talents are expected. Finally, due to its crucial social role, raising the income of farmers and develop the rural countryside is expected to be a key priority.

## 9. OVERVIEW OF CHINESE AUTHORITIES

The Chinese decision-power within food and agriculture is divided mainly between four ministries, however with a complex division of responsibilities. Below is a diagram illustrating an overview of the different administrative bodies working on ministerial level with the authority to deal with the issues relating to food and food-related laws, administrative statuses, notices, registrations, etc.

*Agriculture and food authority overview*



### 9.1 STATE COUNCIL

The State Council, synonymous with the Central People's Government, is the highest executive organ of State power, as well as the highest organ of State administration. Under the current constitution, the State Council exercises the power of administrative legislation, to submit proposals, of administrative leadership, of economic management, of diplomatic administration, of social administration, and other powers granted by the National People's Congress and its Standing Committee. Ministries report directly to the State Council.

### 9.2 MINISTRY OF AGRICULTURE

MoA is responsible for the general administration, inspection and control of veterinary and phytosanitary control of agricultural primary production until “the market” or “farm gate”. This includes inspections of pesticides, veterinary drugs, feed and feed additives, fertilizer, animal and plant health and quarantine of GMOs and agricultural product safety. In short, MoA's main responsibility is to issue all legislation as well as to supervise all primary agricultural production. Legislation and control of organic foodstuffs is also under their area of responsibility.

#### China Green Food Development Center

CGFDC is an agency under the supervision of MoA with main function to organize and supervise national development and management of green food. The

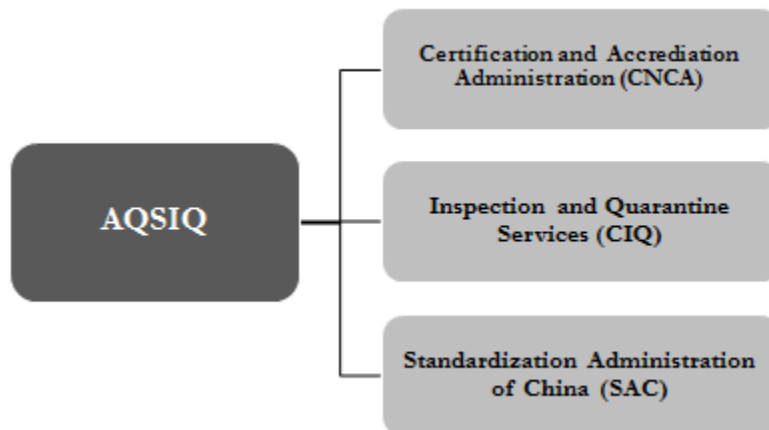
center's main functions include creation of policies, regulations and strategic plans for green food development (under authorization of MoA), creation and implementation of standards, management of logo and trademark, quality control as well as research and development activities.

### 9.3 GENERAL ADMINISTRATION OF QUALITY SUPERVISION, INSPECTION AND QUARANTINE

AQSIQ is responsible for secondary processing as well as for import and export control including food products. In turn, AQSIQ is the relevant authority for protocols and certificates and the authority to maintain the list of entry-exit commodities subject to inspection and quarantine inspection through its entry-exit and quarantine agencies. AQSIQ administers the inspection and quarantine of goods related to environmental, health, animal, and plant health, and human security, and transport and personnel.

In short, the law enforcement related to quality and daily hygiene supervision of food processing is overseen by AQSIQ. Concerning import into and export out of China AQSIQ is at present considered to be the most powerful Chinese authority, also administering a number of sub-units as illustrated below.

#### *Sub-units of AQSIQ*



#### China Certification and Accreditation Administration

CNCA is a vice-ministerial sub-department of AQSIQ, undertaking registration of establishments of imported food as well as supervision and certification of organic agriculture and food production establishments. CNCA plays a major role in approval of foreign establishments, providing recommendations directly to AQSIQ on whether inspected companies should be approved.

#### Inspection and Quarantine Services

AQSIQ manages 35 Entry-Exit Inspection and Quarantine Bureaus (CIQ) in China's 31 provinces, near 300 branches and more than 200 local offices across the

country. The CIQs employ more than 30,000 in goods distributing centres at sea ports, land ports and airports. AQSIQ provides direct leadership to all the CIQs' purpose to perform the function of entry-exit inspection and quarantine.

#### Standardization Administration

Authorized by the State Council, SAC is a vice-ministerial level department, performing nationwide administrative responsibilities and carries out unified management for standardization across China under administration of AQSIQ.

## 9.4 CHINA FOOD AND DRUG ADMINISTRATION

On the basis of State Food and Drug Administration, CFDA was established as a minister-level authority in 2013 with the purpose for it to be the main authority for domestic food safety matters relevant to the production, distribution and consumption. The ministry's responsibilities include drafting of food safety regulation as well as inspection and enforcement along the entire value chain.

## 9.5 NATIONAL HEALTH AND FAMILY PLANNING COMMISSION

NHFPC is responsible for assessment of food safety risks and establishing national food safety standards and in general to promote health awareness and education. With its main functions to draft laws and regulations within the health area, NHFPC's role in food-related matters is more assessing and guiding as compared to CFDA's.

## 9.6 OTHER INSTITUTIONS

Apart from the authorities reporting directly to State Council, the following authorities contribute to the policy-making agenda in China within food and agriculture:

#### China National Center for Food Safety Risk Assessment

CFSA is the first public health institution managed through the mechanism of a steering council. NHFPC serves as the chair of the steering council, while MoA and the Food Safety Commission of the State Council serve as vice chairs. Its major functions include scientific research on food safety risk assessment and surveillance.

#### China Animal Agriculture Association

CAAA is an affiliation formed at the national level with membership from enterprises, public institutions and individuals involved in animal husbandry and related industries. It is a non-profit social body with legal entity. Amongst its various roles in the animal agriculture industry CAAA provides service, coordination, self-discipline, right protection and management.

China Organic Food Certification Centre

COFCC is an organization under the MoA, which is responsible for the promotion of organic farming and is involved in the certification and management of organic food. They are also approved by the CNCA to certify organic products and to train others to certify organic products.