

Food Security in China

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Preamble

The people are the foundation of a country; food is the primary need of the people. As food decides national prosperity and the people's wellbeing, food security is a major prerequisite for national security. Since the founding of the People's Republic of China (PRC) in 1949, China has always prioritized food security in state governance. Despite a weak agricultural foundation and extreme poverty, the Communist Party of China (CPC) has led an unremitting campaign of hard work over the past 70 years that has made China basically self-sufficient in food supply. China now has enough food to feed its nearly 1.4 billion population, and has remarkably improved the people's nutrition and life quality. China's food security is a success of worldwide significance.

Since the CPC's 18th National Congress in 2012, the CPC Central Committee with Xi Jinping as its core has treated food security as a top state issue. The central leadership has introduced a food security policy of "ensuring basic self-sufficiency of grain and absolute security of staple food". The Chinese government has established a national strategy on food security featuring self-sufficiency based on domestic grain production, guaranteed food production capacity, moderate imports, and technological support. Abiding by the principle of basic food self-sufficiency based on domestic grain production, China practices the strictest farmland protection system and a strategy of sustainable farmland use and innovative application of agricultural technology to increase farmland productivity. Through supply-side structural reform and institutional innovation in agriculture, China has raised grain productivity, modernized grain circulation, improved food-supply structure, and achieved steady development in the grain industry. Step by step, China has established a food security guarantee system at a very high level characterized by quality, efficiency and sustainability. China's food security has a stronger guarantee, along a steadier and wider path with Chinese characteristics.

Food security is an essential guarantee for world peace and development, a significant foundation for a global community of shared future, and an influential factor for the

development and future of humanity. As the world's largest developing country, and a major country that shoulders its responsibilities, China has always been a positive force in safeguarding world food security. China has been an active part of global food security governance, enhancing international exchanges and cooperation, supporting the multilateral trade system, and implementing the United Nations 2030 Agenda for Sustainable Development. In this sense, China has made a positive contribution to improving global food security and promoting common development.

The Chinese government is publishing this white paper to provide a full picture of how food security operates in China, in order to increase the international community's understanding in this important field.

I. China's Achievements in Ensuring Food Security

With one fifth of the world population, China accounts for a quarter of total global food production. China is self-reliant in securing its own food supply; its people now have not only enough to eat, but also a greater range of choices. Compared to past times when they were underfed, this historical change has been made possible by the Chinese themselves through hard work and development. It is also a key contribution to world food security.

1. Steady growth in food output

– Per capita food output remains above the world average. Currently China's per capita food output is around 470 kg, growing by 14 percent from 414 kg since 1996 when China published its first white paper on food – The Grain Issue in China, and by 126 percent from 209 kg in 1949, when the PRC was founded. This is higher than the world average.

– Per unit yield has significantly increased. The average food yield per hectare is as follows:

- more than 5,000 kg in 2010;
 - 5,621 kg in 2018, an increase of 1,138 kg, or 25 percent, over 1996.
- The yields per hectare for rice, wheat and corn in 2017 are as follows:
- 6,916.9 kg, up 11.3 percent over 1996, 50.1 percent higher than the world average;
 - 5,481.2 kg, up 46.8 percent over 1996, 55.2 percent higher than the world average;
 - 6,110.3 kg, up 17.4 percent over 1996, 6.2 percent higher than the world average.

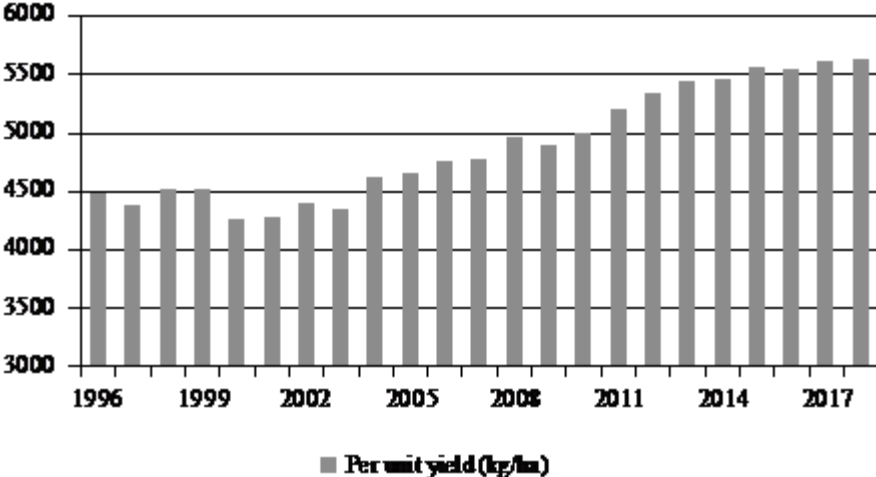


Figure 1. Per unit food output in China (1996-2018)

Source: National Bureau of Statistics

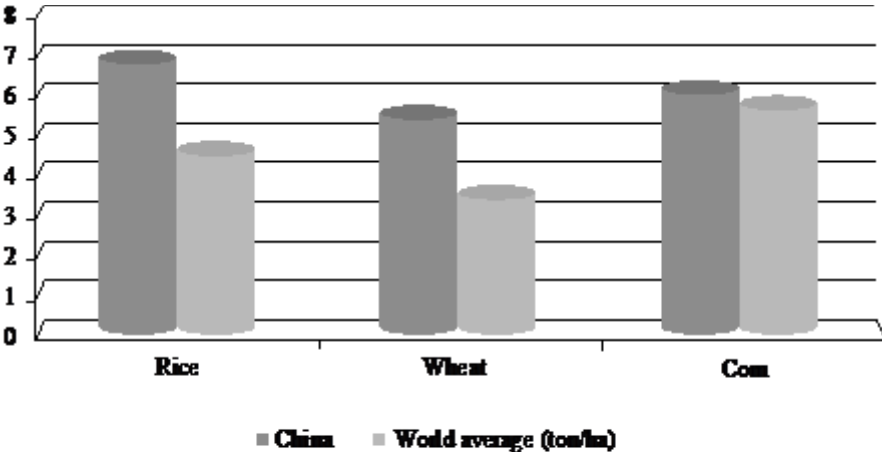


Figure 2. Per unit yields of three major grain crops in 2017

Source: FAOSTAT

- Total food output has seen a steady increase. China’s total food output surpassed
 - 550 million tons in 2010,
 - 600 million tons in 2012,
 - 660 million tons in 2015,
 - 650 million tons for four years from 2015.

In 2018 the figure was near 660 million tons, up 30 percent over 1996 (500 million tons), the year China published its first white paper on food security, 116 percent over 1978 (300 million tons), the year of the launch of China’s reform and opening up, and by nearly 600 percent over 1949 (110 million tons), the year the PRC was founded.

Over the years food output each year has fluctuated within a range of ±6 percent, with the exception of a few years.

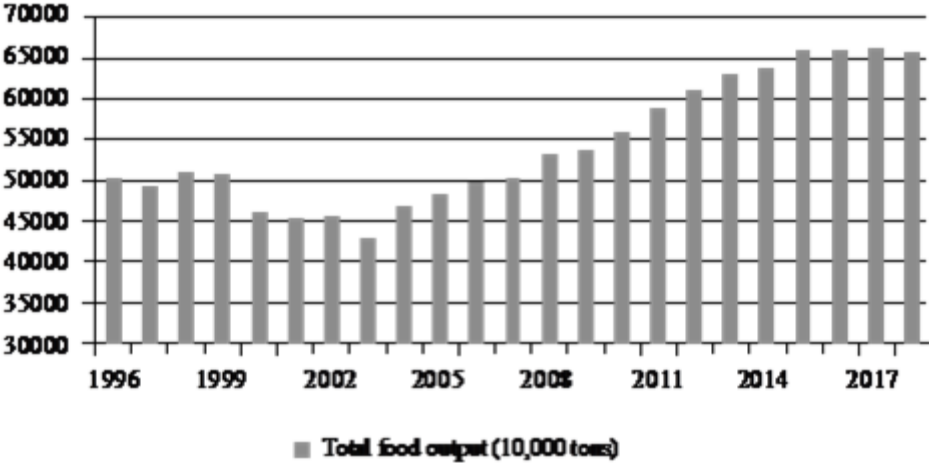


Figure 3. China’s total food output (1996-2018)

Source: National Bureau of Statistics

2. Self-sufficiency in grain supply

– China is self-sufficient in grain supply. In 2018 the grain output was 610 million tons, accounting for more than 90 percent of total food output, and growing by 160 million tons over 1996. Currently China supplies 95 percent of its own needs for grain, laying down a solid material foundation for maintaining national food security, promoting socioeconomic development, and safeguarding long-term peace and stability.

– China ensures absolute security of staple grains. In 2001-2018, soybean accounted for 75.4 percent of imported grains, and the two main staple grains of rice and wheat together accounted for less than 6 percent. In recent years, with rice and wheat output meeting domestic needs, China is fully self-sufficient in food supply, and the main driver of food imports and exports is to satisfy the need for variety. China makes sure it relies on itself for food supply.

3. Greater food reserve capacity

– Food storage is further modernized. In 2018 the storage capacity of qualified grain warehouses was 670 million tons, and that of simple warehouses was 240 million tons. Total effective warehouse capacity grew by 31.9 percent over 1996. The total tank capacity for edible oils was 28 million tons, a seven-fold increase over 1996. China has built new modern grain storage facilities and renovated old ones, further increasing storage capacity. With the facilities’ functions also improved, China has secured a continued increase in its food storage capacity, generally reaching world advanced levels.

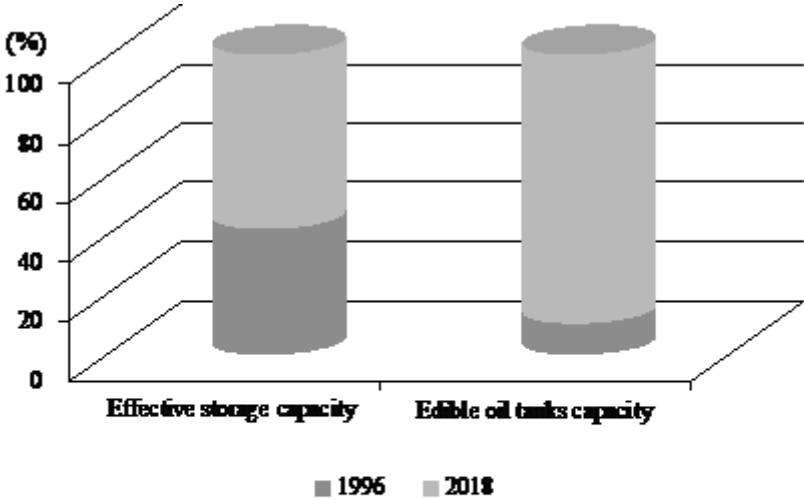


Figure 4. Growth in effective storage capacity and edible oil tanks capacity

Source: National Food and Strategic Reserves Administration

- Logistics capacity has increased markedly. In 2017, the total volume of food transported reached 480 million tons, including 230 million tons of interprovincial transport. All major channels of food logistics have been integrated to form a multimodal transport network composed of highways, railways and waterways. Food logistics now involves more unprocessed grain, bulk grain, and finished grain products transported by container. The efficiency of food logistics has seen steady improvement.
- Grain reserves and emergency response systems are improving. The government has sufficient and quality food reserves, with secured storage. Emergency food reserves for 10-15 days are available in large and medium-sized cities and areas prone to price fluctuation. A network of emergency reserves, processing and distribution is in place, with outlets to supply sub-districts and communities in urban and rural areas. These play an important role in response to natural disasters such as earthquakes, sleet, snowstorms, and typhoons, as well as public emergencies.

4. Improved nutrition for residents

- More choices for meals. Per capita shares of various foods in 2018 and their increase over 1996 are as follows:
 - oil, 24.7 kg, growing by 6.5 kg (35.7 percent up);
 - pork, beef and mutton, 46.8 kg, growing by 16.6 kg (55 percent up);
 - aquatic products, 46.4 kg, growing by 19.5 kg (72.5 percent up);
 - milk, 22.1 kg, growing by 17 kg (333.3 percent up);
 - vegetables, 505.1 kg, growing by 257.7 kg (104.2 percent up); and
 - fruits, 184.4 kg, growing by 117.7 kg (176.5 percent up).

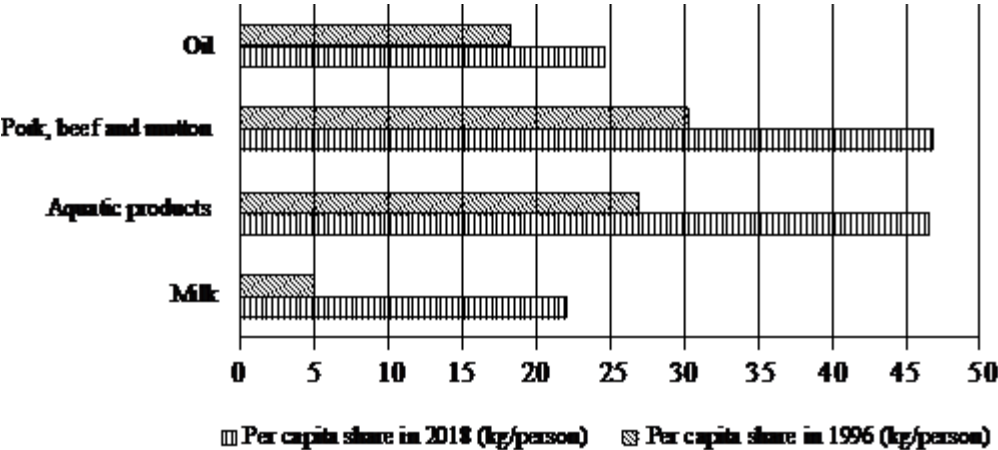


Figure 5. Per capita shares of oil; pork, beef and mutton; aquatic products, and milk

Source: National Bureau of Statistics

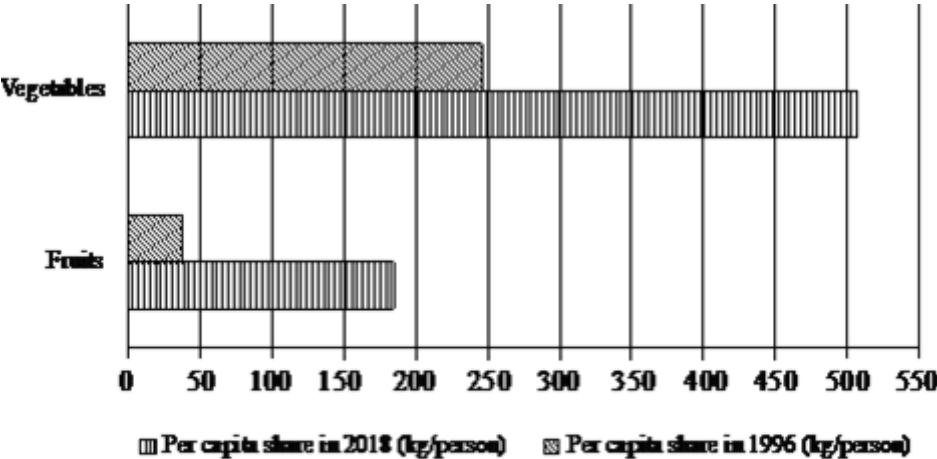


Figure 6. Per capita shares of vegetables and fruits

Source: National Bureau of Statistics

The per capita direct consumption of staple grains has decreased, and the consumption of non-grain foods such as meat and fish, ligenous foods, vegetables, and fruits has increased. The Chinese have more choices in what they eat and have a healthier diet.

– Improved nutrition. Data from the National Health Commission shows that the average daily energy intake of a standard person in China is 2,172 kcal, and the intakes of protein, fat and carbohydrate are 65g, 80g and 301g. Chinese citizens have an adequate supply of dietary energy, with sufficient intake of the three major nutrients – proteins, fat and carbohydrates. The proportion of carbohydrate intake has fallen, and those of fat and quality protein intake have risen.

5. Food for the poor

– Poor people in China no longer need to worry about food. The Chinese government has always attached great importance to eliminating hunger and poverty. Since the

18th National Congress of the CPC, in particular, it has explored ways to develop the rural economy, increase farmers' incomes, and eliminate hunger and poverty. Remarkable results have been achieved in targeted poverty alleviation and eradication. According to China's current poverty standards, as of the end of 2018 there remained 16.6 million people living in poverty in China. This represented a reduction of 82.39 million compared to 2012, and the incidence of poverty was down from 10.2 percent to 1.7 percent. The government has helped 750 million people out of poverty since 1978, when a staggering 770 million people were struggling for the means to live. According to the World Bank's poverty line of 1.9 US dollars per person per day, China has contributed more than 70 percent of the global poverty reduction effort. China has lifted more people out of poverty than any other country, and is the first country to reach the poverty reduction goal in the UN's Millennium Development Goals.

– Nutrition for key groups in poverty has improved markedly. In 2018 the per capita disposable income of residents in impoverished rural areas reached 10,371 yuan, an actual increase of 1.7 percentage points higher than that of rural areas in general. This increase in income has enabled poor areas to acquire more food, and the intake of grains among poor groups has grown steadily. The government has carried out extensive nutrition improvement programs in poor areas for young students, infants, children, pregnant women, and the elderly, as a result of which there have been noticeable improvements in their nutrition and health.

II. Food Security in China

Based on its own national conditions and food availability, China has embarked on a road to establishing food security in its own way by implementing the concepts of innovative, coordinated, green, open, and inclusive development, the requirements of high-quality development, and a national food security strategy for a new era.

1. Steadily increasing grain production capacity

– Never crossing the red line for the protection of cultivated land. The Chinese government has implemented an overall plan for land use throughout the country. It strictly controls the occupation of cultivated land, especially high-quality land. It is improving the mechanism for linking the increase and deposit of construction land, and implementing a policy of balancing the occupation and replenishment of arable land, thus drawing a red line for its 120 million hectares of cultivated land. We have implemented a complete and special protection system for permanent basic farmland, and designated more than 103 million hectares of permanent basic farmland. At present, the country has 134.88 million hectares of cultivated land, an increase of more than 4.8 million hectares over 1996. There are more than 117 million hectares sown with grain, an increase of about 4.5 million hectares over 1996. The foundations of grain production have been strengthened.

– Improving the quality of arable land and protecting the environment. China has implemented an overall plan for the development of high-standard farmland, promoted the protection of quantity, quality and ecology of cultivated land, and upgraded medium- and low-yield fields. It has built high-standard farmland with concentrated contiguous land, guaranteed harvests in drought or flood, stable and high yield, and a sound ecology. Since 2011, we have created more than 42.6 million hectares of high-standard farmland, improved the quality of cultivated land by 1 to 2 grades in

related zones, increased grain production by about 1,500 kg per hectare, and increased grain production capacity. We have carried out soil testing and formula fertilization, popularized the practice of returning straw to the field, green manure planting, the application of organic fertilizer, soil improvement and other supporting technologies, and steadily improved the quality of cultivated land. We have also implemented cultivated land rehabilitation planning and carried out a pilot system of fallow rotation of cultivated land. We will continue to control the application of chemical fertilizers and pesticides, gradually eliminate non-point source pollution, and protect the environment.

– Establishing functional areas for grain production and protected areas for the production of important agricultural products. In accordance with the planning of the main functional areas and the configuration of superior agricultural products, China has established functional areas for grain production and protected areas for important agricultural products on the basis of permanent basic farmland. We have designated 60 million hectares of functional areas for grain production, such as rice, wheat and corn, and nearly 15 million hectares of protected areas for the production of important agricultural products such as soybeans and rapeseed. We have strengthened the superior industrial belt of rice, corn and soybeans in Northeast China, and formed a dominant area for the large-scale production of wheat, special corn and high-protein soybeans on the North China Plain. We are building a core area for the production of double-cropping rice and high-quality special wheat in the Yangtze River Economic Belt, and we are expanding the scale and improving the quality of high-quality wheat, corn and potatoes in Northwest China. In Southwest China we are focusing on the cultivation of rice, wheat, corn and potatoes, and increasing the yield of high-quality double-cropping rice and potatoes in Southeast and South China. We will continue to optimize the regional configuration and the combination of production factors, promote agricultural restructuring, enhance the quality and efficiency of agricultural products and market competitiveness, and ensure the effective supply of important agricultural products, especially grain.

– Improving the efficiency of water resource utilization. The Chinese government has planned and built a number of major water conservancy projects for water saving and water supply. We have developed a full range of water-saving irrigation technologies and products that are reliable and complementary to each other. We have vigorously popularized water-saving irrigation technologies such as pipe irrigation, sprinkler irrigation and micro-irrigation, and promoted the integration of water and fertilizer and other agronomy water-saving technologies. We will further speed up the installation of support facilities and modern and efficient water-saving reconstruction in irrigation districts, standardize and improve the quality of small-scale irrigation facilities, and realize the scientific and efficient utilization of water resources in agricultural production.

2. Cultivating and arousing the enthusiasm of grain planting

– Guaranteeing farming incomes. Grain production makes an essential contribution to feeding the people; it also provides employment to farmers. China has a huge agricultural population, and it will be a gradual process to reduce the agricultural population through urbanization, during the course of which the employment and income of farmers must be guaranteed. In order to develop the rural economy and society in an all-round way, China has abolished the animal husbandry tax, pig

slaughtering tax, tax on agricultural and forestry specialties and other taxes, especially the agricultural tax, which had existed in China for 2,600 years and was abolished in 2006. All these efforts have fundamentally reduced the burden on farmers.

We will gradually adjust and improve the grain price formation mechanism and agricultural support and protection policies, and improve farmers' ability to resist natural and market risks through the implementation of land fertility protection subsidies for cultivated land and subsidies for the purchase of agricultural machinery and equipment. We will guarantee the basic income of farmers, cultivate their enthusiasm for growing grain, and ensure the sustainable development of agriculture.

– Improving the mode of production and operation. China has consolidated the basic management system in rural areas, adhered to a two-tier management system based on household contract management and combined with unification and division, and aroused the enthusiasm of hundreds of millions of farmers in grain production. We have invested a great effort in cultivating new-type agricultural business entities and socialized service organizations, promoted moderate-scale operations, and guided small-scale farmers onto the track of modern agriculture, gradually forming a three-dimensional compound agricultural management system based on family management, with cooperation as the link, and social services as the support. At present there are nearly 600,000 family farms, 2.17 million farmers' cooperatives, and 370,000 social service organizations in China. The problems of “who farms the land” and “how to farm the land” have been effectively solved, and the efficiency of agricultural production has significantly improved.

3. Innovating and improving the food market system

– Building a pattern of multiple market players. China is furthering reform of state-owned grain enterprises, encouraging the development of a mixed ownership economy, promoting cross-regional integration of state-owned grain enterprises, and creating backbone grain enterprise groups. We will transform and upgrade the grain industry, cultivate large transnational grain groups, support the development of small and medium-sized grain enterprises, and foster a market environment for fair competition. We have actively guided multiple players into the market, and the proportion of market-based procurement has been increasing. A network of diversified grain purchasers has gradually taken shape.

– Improving the grain trading system. China has built a standardized and unified national electronic grain trading platform, forming a national grain trading system with the platform as the center and provincial (autonomous regional, municipal) grain trading platforms as the support. The functions of macro-control and grain circulation have continuously improved. There are more than 500 grain commodity and logistics markets across the country. Grain futures trading cover major grain varieties such as wheat, corn, rice, and soybeans, and the scale is expanding.

– Steadily improving services in the grain market. The government has actively guided various localities to develop a variety of grain retail methods, and improved the supply network of “safe grain and oil” in urban and rural areas. Grain e-commerce and new forms of retail business are in good shape. We are building platforms for cooperation in grain production and marketing, and encouraging production and marketing areas to strengthen strategic cooperation at government level. In 2018, we organized 3,935

grain fairs of all kinds, with a transaction volume of nearly 136.27 million tons and a value of 231.9 billion yuan. In 2018 and 2019, China held China Grain Trade Conferences with an intended purchase and sale of more than 60 million tons, pushing grain production and marketing cooperation to a new level.

4. Improving macroeconomic regulation

– Paying close attention to state planning as guidance. China has formulated a series of plans, including the Outline of the Thirteenth Five-year Plan for National Economic and Social Development of the People's Republic of China, Outline of the Medium- and Long-term Plan for National Food Security (2008-2020), National Plan for an Increase of Production Capacity for 50 Billion Kg of Food (2009-2020), Outline of China's Food and Nutrition Development (2014-2020), National Agriculture Sustainable Development Plan (2015-2030), National Land Planning Outline (2016-2030), National Rural Vitalization Strategic Plan (2018-2022), and Outline of the 13th Five-year Development Plan for the Food Industry. Through these plans, China defines its goals and measures at different levels, and guides agricultural modernization, food nutrition, and the food industry, with the goal of safeguarding national food security in every respect.

– Furthering reform of the grain collection and storage system and the price formation mechanism. In order to encourage farmers to grow grain, increase their employment prospects and incomes, and protect them from low grain prices and problems in selling their output, the government has, over specified periods, on specific grain varieties in specific regions, and in accordance with specific prices, carried out procurement policies including minimum purchase price procurement and temporary state collection and storage. The purchase price was determined by the government according to the production cost and the market situation, and the grain purchased was sold at the market price. As the market changes and develops, and as the grain supply increases, the government has made different policies for different grain varieties, actively and steadily promoted reform of the grain collection and storage system and the price formation mechanism. Since 2014, we have canceled the national temporary collection and storage policy of grain and oil varieties such as soybeans, rapeseed and corn, and carried out market-based procurement in an all-round way. Since 2016, we have gradually improved the minimum purchase price policy for rice and wheat, further reduced the proportion of policy procurement, and realized market-based procurement.

– Giving full play to the important role of grain reserves. The government has a rational process for determining the functions of central and local reserves: the central grain reserves are mainly used to maintain basic needs, respond to disasters and stabilize expectations, which is the “ballast stone” of national food security. Local grain reserves are mainly used in the regional market to meet emergencies, stabilize grain prices and guarantee supply, which is the first line of defense of national food security.

5. Developing the grain industry economy

– Speeding up the transformation and upgrading of the grain industry. China upholds the principle of “grain planting to the forefront and produce to follow” and “agriculture to the forefront and industry to follow”, giving full play to the role of processing enterprises as the engine, extending the grain industry chain, upgrading the value

chain, and building a supply chain. We have an overall strategy to build four major carriers to raise national food security to a higher level: demonstration cities and counties, industrial parks, backbone enterprises, and the Quality Food Project, so as to raise national food security to a higher level.

– Transforming grain processing into refined and deep processing. China will increase the effective supply of special rice, special flour, special oil, functional starch sugar and protein, and promote dietary diversity among the people. We will continue to respond to the trend of rapid growth in feed demand, promote feed processing and transformation, facilitate the development of livestock and poultry breeding, and meet the nutritional needs of residents for meat, eggs and milk.

– Implementing the Quality Food Project. China has established professional post-production grain service centers to provide cleaning, drying, storage, processing and marketing services for farmers. We have established and improved a grain quality and safety inspection and monitoring system composed of 6 national-level, 32 provincial-level, 305 municipal-level and 960 county-level grain quality inspection institutions, basically realizing the full coverage of the monitoring network. We have also formulated and issued a series of standards for grain and oil to upgrade the quality of grain and oil products and increase the supply of green grain and oil.

6. Establishing a comprehensive food science and technology innovation system

– Strengthening scientific and technological support for grain production. China has promoted research into improved varieties of corn, soybeans, rice and wheat, and made concerted efforts to cultivate and popularize the best varieties. Highly efficient technology is in place for cultivation of super rice, dwarf male-sterile wheat, and hybrid corn, and tens of thousands of new combinations of high yield and high quality crop varieties have been successfully cultivated after five or six phases of major upgrading. These have been popularized and applied over large areas, covering almost all major food crops. The per unit yield of super hybrid rice cultivated by Chinese scientist Yuan Longping has reached nearly 18.1 tons per hectare, setting a new world best. We will speed up the breeding of high-quality special rice, strong gluten and weak gluten wheat, and green and high-quality varieties such as high starch, high protein and high oil corn, and transform grain production from high yield to both high yield and high quality.

– Applying agricultural science and technology. In 2018, the contribution of scientific and technological progress to agriculture reached 58.3 percent, an increase of 42.8 percentage points from 15.5 percent in 1996. Scientific fertilization, water-saving irrigation, and green prevention and control have been popularized over large areas. That year pesticide and chemical fertilizer utilization rates for rice, wheat and corn reached 38.8 percent and 37.8 percent, and the loss rate from diseases, pests and weeds has fallen significantly. Since 2004, China has concentrated efforts to increase crop yield through science and technology, building a total of 1,276 research fields, core areas, demonstration areas and rollout areas, with a cumulative increase of 130 million tons of grain; the per unit yield in the project areas is as much as 2.3 times the national average. The popularization and application of agricultural science and technology has played a positive role in increasing grain output.

– Upgrading the science and technology of grain storage and transportation. China has overcome a series of key technological problems in grain storage and preservation,

improving pest and mildew control, loss reduction, and ensuring freshness and quality, and systematically addressed the technical problems of container transportation in bringing bulk grain from North China to the South. China continues to expand the scale of advanced storage facilities, and in 2018 the storage capacity of mechanical ventilation reached 750 million tons. Storage capacity where grains can be monitored reached 660 million tons, and storage capacity featuring circulation fumigation was 280 million tons. Scientific research findings in the fields of safe and green grain storage, quality and safety, nutrition and health, processing and transformation, modern logistics, and “intelligent grain” have been widely applied.

7. Strengthening management and operations in accordance with the law

– Improving laws and regulations on food security. To accelerate food security legislation, China has promulgated and revised the following laws and regulations:

- Agricultural Law
- Land Administration Law
- Soil Pollution Prevention and Control Law
- Law on Soil and Water Conservation
- Rural Land Contracting Law
- Law on the Popularization of Agricultural Technology
- Law on Promotion of Agricultural Mechanization
- Seed Law
- Law on Quality and Safety of Agricultural Products
- Law on the Entry and Exit Animal and Plant Quarantine
- Law on Farmers' Specialized Cooperatives
- Regulations on the Protection of Basic Farmland
- Regulations on Land Reclamation
- Regulations on Pesticide Administration
- Regulations on Plant Quarantine
- Regulations on the Administration of Grain Circulation.

– Implementing the responsibility system of provincial governors for food security. In ensuring national food security, the central government should take overall responsibility, and the provincial governments bear the primary responsibility. At the end of 2014, the State Council issued the “Directives on Establishing and Improving

the System of Provincial Governors' Responsibility for Food Security", defining the power and responsibilities of provincial governments in safeguarding national food security in terms of production, circulation and consumption. In 2015, the General Office of the State Council issued the "Measures for the Assessment of Provincial Governors' Responsibility for Food Security", established an assessment mechanism and formed a working group composed of relevant state departments, which was responsible for carrying out the assessment, thus further consolidating the responsibility of local governments in maintaining national food security. All local governments have increased their awareness of food security issues, and the level of food security has continuously improved.

– Promoting reform in simplifying administration and delegating power, combining decentralization and management, and optimizing services. The goals are to strengthen market consciousness, reinforce thinking on the rule of law, foster an awareness of the need to manage and administer grain in accordance with the law, and strengthen supervision by such measures as random selection of targets for assessment and random selection of assessors, and timely provide information on grain-related affairs to the general public. We will improve the inspection methods of grain inventory and the quality and safety supervision system, and build a responsibility system and code of conduct for the safe storage of grain and oil, so as to ensure that grain stocks are accurate in quantity, good in quality, and safe in storage. We will continue to establish a new regulatory mechanism that mainly monitors the credibility of all players in the food industry to maintain the normal order of grain circulation.

III. Opening Up and International Cooperation

China is an active promoter of free trade. It has worked hard to fulfill its commitments to the WTO, and shares China's food market resources to facilitate world food trade. By expanding international cooperation in food and agriculture and actively participating in global food security governance, China has made an important contribution to the healthy development of the world food industry and food security.

1. More areas are opening up

– The Chinese food market is more open than before. Foreign-funded enterprises in China have been processing more food, and their revenue from sales is increasing over the years, accounting for 14.5 percent and 17 percent of the national total in 2018. Foreign-funded enterprises are becoming more involved in depth and width of China's food market, with growing shares of business in edible vegetable oil and food processing, and activities extending into procurement, wholesale and retail, and staple food supply. They have become a key force in developing China's food industry.

– China has honored its commitments to the WTO. In strict accordance with its commitments upon joining the WTO, China has rescinded import quotas, permits and other non-tariff measures for relevant agroproducts, exercised quota management for imported wheat, corn and rice, and cut import duties on other food types by large margins. It has further eased restrictions on foreign investment in agriculture, allowing foreign-invested seed companies to operate in all grain types other than wheat, corn, and rare species or species unique to China, or genetically modified crops. Restrictions on foreign-invested companies regarding the procurement, processing and wholesale of agroproducts have also been lifted.

– China works for the development and prosperity of international food trade. On the precondition of ensuring national food security, China strictly abides by WTO rules and fulfills its commitments to the organization, sharing its huge food market with major food-producing countries. In 2018, China imported 115.55 million tons of oil crops (including soybeans), feed and other foods, and exported 3.66 million tons of food. These figures represented growth of 945 percent and 171 percent over 1996. It imported 88.03 million tons of soybeans, and 20.47 million tons of grains and grain powders, accounting for 4.9 percent of world grain trade in 2018.

2. International cooperation is strengthened in all areas

– Sharing resources and experience on food security with the rest of the world. Since 1996, the Chinese government and the United Nations Food and Agriculture Organization (UNFAO) have jointly implemented more than 20 multilateral South-South cooperation programs, and sent 1,100 agricultural experts and technical personnel to around 30 countries and regions in Africa, Asia, the South Pacific, and the Caribbean, accounting for 60 percent of the total number of personnel dispatched by the UNFAO's South-South cooperation program. It supports competent food enterprises in going global, encouraging them to invest in agriculture in countries and regions where such investment is needed, and share with them technology and experience on food production, processing, storage, logistics, and trade in accordance with the principles of extensive consultation, joint contribution and shared benefits. By the end of 2017, China had a total investment of 17.33 billion US dollars in agriculture overseas, with 851 enterprises operating in 100 countries and regions in six continents and employing 134,000 foreign employees. They have helped these countries and regions create more jobs, develop their economy, and improve peoples' lives.

– Deeper international cooperation. China has signed more than 120 bilateral and multilateral agreements on food and agriculture cooperation with over 60 countries and international organizations, and more than 60 inspection and quarantine protocols for food imports and exports. It has established exchanges in agricultural science and economic cooperation with over 140 countries and regions, and formed bilateral work groups on agricultural cooperation with more than 50 countries and regions. China has always prioritized agricultural development and food security in its cooperation with African countries. As of 2016, China had provided assistance to more than 50 African countries in implementing nearly 500 agricultural programs, including complete projects, technical support and material supply, in the areas of farming, food storage, agricultural machinery, farmland irrigation, and agroproduct processing. Since it launched the Belt and Road Initiative in 2013, China has strengthened trade and economic relations with many participating countries to promote cooperation in the food industry.

– Actively participating in world food security governance. China has actively responded to and participated in the initiatives and activities organized by the UNFAO, the World Food Programme, and other international organizations for agriculture. It has worked to enhance the representation and voice of Africa and other developing countries in international organizations for agriculture, lending support to their reasonable demands. It is committed to implementing the UN's 2030 Agenda for Sustainable Development, and has developed its country program for the Agenda and released a report on its progress for the Agenda, providing beneficial experience for

other countries to do their work. China is engaged in the development of the Codex Alimentarius, International Plant Protection Convention, and other international rules. It led the formulation of and revisions to international standards on the specifications of wheat, corn, and other foods, and facilitated the development of about a dozen international standards on pesticide residues, grain transport, and food inspection and quarantine in foreign trade initiated by the World Organization for Animal Health and the International Standardization Organization. In order to push for consensus on food security governance, it took the lead in promoting the Asia Cooperation Dialogue on the relationship of food, water and energy security, and joined the 10+3 rice emergency reserve between ASEAN countries, China, Japan, and the ROK. It has also initiated or hosted APEC ministerial meetings on agriculture and food security, G20 meetings of agricultural ministers, BRICS meetings of agricultural ministers, the China-Latin America and the Caribbean Agricultural Ministers Forum, the China-Pacific Island Countries Agriculture Ministers Meeting, and the World Agricultural Outlook Conference.

– Providing emergency food assistance within its capacity. In response to the emergency food needs of other countries, China has provided bilateral and multilateral free emergency food assistance within its capacity, playing a positive role in alleviating humanitarian crises and facilitating global efforts toward eliminating hunger, for which it has won recognition and commendation from the international community.

IV. Prospects and Policies

China has recently enjoyed a run of good harvests. There are adequate grain supplies and reserves, and a stable grain market, which are indicators of increasing food security. Looking to the future, China has the conditions, capabilities and confidence to enhance food security relying on its own efforts. A national system of food security guarantee policies is in place. China's food strategy in the new era consists of ensuring security of food through food self-sufficiency, pooling domestic resources to ensure key links in food security, and securing food supply as a foundation for national development and social stability. There is plenty of space for supply-side structural reform in China's agriculture industry; there is plenty of room for progress in China's agro-technology, in terms of increasing per unit area yield, reducing food waste, and developing non-grain foods. Adequate grain reserves help ensure market supply and a basically stable market; a modernized grain storage and logistics system helps prevent regional or provisional food supply crises; market mechanisms in full play help improve the structure of grain varieties.

In the medium to long term, China's grain production and demand will remain closely aligned, which means China must not slacken its efforts to ensure food security. Per capita grain consumption and demand will drop slightly with social and economic development; the consumption of grain as feed for livestock and grain used for industrial purposes will continue to rise; total grain consumption will increase and pursue higher quality. In terms of grain production, agricultural costs are still rising, and resource and environmental carrying capacity (RECC) is broaching its limit. Agricultural infrastructure is comparatively weak, and capacity for disaster prevention and relief must be improved. China will find itself under considerable pressure to maintain steady grain production while ensuring green development and sustainable resource use. In terms of grain circulation, grain production will continue to be

concentrated in core production areas. Transregional grain flows will increase, and there is still the risk of dramatic fluctuations in the grain market.

In global terms, international institutions for food and agriculture have achieved outcomes in improving global food security governance. All countries have an increasing will to facilitate orderly circulation in the international food market and overall stability. Progress has been made in grain production in low-income food-deficit countries, which will mitigate the negative impact of international market fluctuations upon domestic markets, and create a sound environment for China's and for global food security.

At the same time, today's world is still facing severe food security challenges. There are still over 800 million people suffering from hunger, while international food trade is being disrupted by protectionism and unilateralism, and showing increasing instability. These challenges mean that the world has a long way to go in reaching its sustainable development goals.

In view of domestic and global food security, China will forge ahead along its own path. Pursuing a new development philosophy, China will implement its national strategies for food security and rural vitalization through sustainable farmland use and agricultural technology innovation to increase farmland productivity. China will advance from a large grain producer to a food industry power, holding firm its "rice bowl". While ensuring domestic food security, China will join the global fight against hunger. China will continue to provide assistance to the best of its ability to other developing countries within the framework of South-South cooperation, and promote the sound development of the global food industry.

1. Enhancing food productivity

– Keeping to the red line for the protection of cultivated land and saving and utilizing water resources efficiently. By 2020, China will implement the following mandatory indexes and achieve the following targets:

- 124 million ha of cultivated land,
- 103 million ha of permanent basic farmland,
- no more than 40.7 million ha of land for construction,
- 53.3 million ha of high-standard farmland,
- complete functional areas for grain production and protected areas for the production of important agricultural products,
- maintain a grain planting area of above 110 million ha, and
- maintain a comprehensive grain production capacity of above 600 million tons.

China will continue to improve farmland quality. By 2022, it will complete the construction of 66.67 million ha of high-standard farmland, and by 2035, it will keep its grain planting area generally steady. It will implement major hydro construction

projects for water conservation and supply, improve farmland hydro facilities, and increase water resource utilization efficiency.

– Adjusting the crop planting structure and increasing the supply of green and high-quality grain and edible oil. China will keep its grain planting area steady, and develop tuber crops, legume crops, and miscellaneous grain crops in accordance with local conditions. Crop varieties will include strong gluten wheat, weak gluten wheat, high-quality rice, silage corn, special corn, and high-oleic and high-protein soybean. Farmers' incomes will increase by selling high-quality produce at higher prices. China will continue implementing the Quality Food Project and the Healthy Grain and Edible Oil Action Plan, facilitate green agricultural development and the Healthy China initiative, and increase the supply of green and high-quality grain and edible oil.

– Upgrading institutions and mechanisms for better organized grain production. China will separate the ownership, contracting right and management right of rural contracted land in an orderly manner. It will foster new types of operating and service entities, promote moderate-scale management oriented by land transfer and service, and transform small-scale, decentralized management into moderate-scale, multi-entity management. A new generation of professional farmers will benefit from better technical training, who will be encouraged to participate in large-scale, industrialized management through shareholding and shareholding cooperative systems. China will improve policies to support small agricultural households, and help them adapt to modern agricultural development.

– Enhancing agro-technological innovation and improving grain production capacity. China will promote basic agricultural research and upgrade technologies in water conservation and irrigation, and focus on agricultural machinery, pesticide R&D, fertilizer development, the processing, storage and transport of grain, and circular agriculture. China will continue to innovate in the seed industry, making breakthroughs in core technologies such as germplasm improvement, and the creation, efficient cultivation, processing, and circulation of new crop varieties. China will enhance integrated technological innovation, breaking logjams in improving per unit area yield, crop quality, economic benefits, and the environment. China will promote mechanization in agriculture and transform and upgrade the agricultural machinery industry, increasing grain supply and improving grain quality through the application of agronomy and agro-techniques.

2. Improving the management of emergency grain reserves

– Improving the management of grain reserves. To facilitate macro-regulation, a steady market, sound emergency response, and national security, China will apply scientific rationale in designing the functions and scale of grain reserves. It will reform and complete its management mechanisms, improve its operating mechanisms, and strengthen internal management and external supervision. The goal is to build a food security guarantee system which is more advanced, effective, efficient and sustainable.

– Improving the emergency grain supply guarantee system. China will establish a network for the supply, delivery and processing of grain for emergency use. A number of standardized delivery centers, emergency processing enterprises, and emergency supply centers for grain and edible oil. China will form an emergency grain supply guarantee system with well-distributed shops and complete equipment that runs

efficiently and provides solid support. China will enhance emergency response functions and guarantee emergency supplies.

– Improving the grain monitoring and pre-warning system. China will improve the pre-warning mechanisms for the grain and edible oil market by establishing a national monitoring and pre-warning system at the state, provincial, municipal and county levels. China will accurately follow domestic and international grain developments through IT application. China will improve the monitoring network for the grain and edible oil market, to provide timely, accurate and all-faceted market information services, and to guard against abnormal market fluctuations.

– Encouraging grain conservation and reducing losses. China will launch publicity and education activities to enhance public awareness of food conservation, contain unnecessary consumption, reduce food waste, and to foster rational, healthy and civilized consumption. China will popularize new equipment and technologies for grain storage that are economical, effective, insect-resistant and mildew-proof, to reduce farmers' post-production losses. China will popularize green, eco-friendly and smart equipment and facilities for grain storage, encourage moderate processing, raise logistics efficiency, and reduce circulation losses and spoilage.

3. Building a modern grain circulation system

– Stepping up efforts to build a modern grain market system. China places equal importance on market-oriented reform and protecting farmers' interests. Upholding its red line of absolute security of staple food and zero risk to farmers from low grain prices, China will adapt itself to the WTO rules, actively and steadily reform its grain purchase and storage systems and pricing mechanisms, giving full play to the decisive role of market in allocating grain resources, and letting the government play its role better. Through these measures, China hopes that grain prices can better reflect market demand and supply, that market vitality will be boosted, and a balance between demand and supply can be achieved, to form a unified and open modern grain market system with orderly competition.

– Improving grain storage and logistics. Focusing on improving distribution, structure and functions, China will encourage rational reconstruction, expansion and construction of grain storage and logistics facilities, to advance the smart management of grain depots and guarantee their safe operation. China will improve the distribution of large grain logistics parks, and build logistics passageways and major junctions for grain imports and exports, to increase efficient circulation on major grain logistics routes.

– Building a modernized grain industry system. Pursuing high-quality development, China encourages a circular food economy. China will develop deep and intensive processing and conversion of grain, industrialize the processing of staple food, and increase the supply of green, high-quality and specialty grains and edible oils. China will boost the production of high-quality grain, purchase it at higher prices, and prioritize its storage, processing and sales. China will move faster to build a modernized grain industry system.

4. Safeguarding global food security

– Advancing South-South cooperation. China will work hard to achieve the goals set in the United Nations 2030 Agenda for Sustainable Development: “End hunger, achieve food security and improved nutrition and promote sustainable agriculture.”

– Enhancing grain trade cooperation with the countries along the routes of the Belt and Road. Together, we will establish a new international platform for grain cooperation, to facilitate the free and orderly flow of agricultural resources and deep integration of markets in the Belt and Road countries.

– Supporting Chinese grain enterprises in “going global” and “bringing in”. China will make rational use of both domestic and international markets and resources. China will improve grain import channels, expand diversified food resource markets, and promote rational and efficient allocation of global grain resources.

– Engaging in global and regional food security governance. China will explore new modes of international food cooperation, and conduct multifaceted and advanced cooperation with other countries. Observing WTO rules, China will do all it can to make international food security more secure, stable and rational in order to better safeguard food security of our world.

Conclusion

There is an ancient Chinese teaching: All good principles should adapt to changing times to remain relevant. In the new era, the Chinese people are more concerned with their nutrition and health, from having enough food to eat to eating well and safely. The people's needs are the highest responsibility of the Chinese government. In line with Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, China will see that the people are able to realize their expectations for a better life. Pursuing a holistic approach to national security, China will further implement its national strategies for food security and rural vitalization. As a foundation for providing greater wellbeing for the people, China will increase food productivity, boost grain reserves, and improve grain circulation, to facilitate the high-quality development of its grain industries and strengthen the food security guarantee.

China has allied itself with the global effort to ensure food security. Under the principle of openness, inclusiveness, equality, mutual benefit, and win-win cooperation, China will be embracing a new situation of opening up with regard to food issues. In pursuit of common development, China is enhancing cooperation with all other countries to safeguard global food security, as a contribution to building a global community of shared future.

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