

China at a Glance

A Statistical Overview of China's Food and Agriculture

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The United States and China are at very different stages of development and have quite different resource endowments that are in many ways complementary. China has the world's largest population while the United States has the world's largest economy. The U.S. economy is consumption oriented, with a large trade deficit. China is investment oriented, accumulating capital through trade surpluses and foreign direct investment. Many of China's imports are capital equipment and intermediate inputs, while the United States imports many consumption-oriented goods. The investment orientation of China is reflected by its high Gross Domestic Product (GDP) growth rate.

The agricultural outputs and the land areas of the two countries are similar, but China has a much larger labor force employed in agriculture and most of its population lives in rural areas (table B-1). Productivity and income of agricultural laborers in China are accordingly much lower than in the United States. China's food share of exports is 6 percent, surprisingly high (only 2 percentage points less than the land-abundant

United States) for a country with limited land resources. Its food imports are just 4 percent of total imports.

Surprisingly Self-Sufficient in Food

For a country with nearly 1.3 billion consumers and limited natural resources, China's level of food imports is surprisingly low. China is nearly self-sufficient in food and is a major net exporter of many food products, including manufactured food and beverages, animal products, vegetables, fish and seafood, tea, and fruits (table B-2). China's agricultural exports go primarily to neighboring Asian countries, including Japan and South Korea, which are also among the top markets for U.S. agricultural products.

Overall, China is a net importer of bulk commodities, primarily wheat. In some years, China has been a major importer of corn and cotton, and in other years, it has been a major exporter of those commodities. China is a major exporter of rice. During the 1990s,

Table B-1—China-United States statistical comparison, 1999

Item	Unit	China	United States
Population ¹	Million	1,266	282
Population growth	Percent	.9	1.2
Rural share of population	Percent	68	23
Population density	Persons per square km	134	30
Gross domestic product (GDP)	Billion dollars	989	9,152
GDP per capita	Dollars	770	30,850
GDP growth	Percent	7	3
Cultivated land area ²	Million hectares	130	174
Value of agricultural output ³	Billion dollars	255	215
Agricultural value added per worker	Dollars	325	72,000
Merchandise exports	Billion dollars	195	695
Merchandise imports	Billion dollars	166	1,059
Food share of exports	Percent	6	8
Food share of imports	Percent	4	5

¹ Data from population censuses, year 2000. ² Data from agricultural censuses, 1997. U.S. land area is harvested cropland. ³ For China: gross value of farming and animal husbandry obtained from *China Statistical Yearbook*; for United States: agricultural sector value added, U.S. Department of Agriculture. Source: World Bank World Development Indicators, except where noted.

Table B-2—China exports and imports of agriculturally related items, by category, 1995-2000

Category	Average annual trade, 1995-2000		
	Exports	Imports	Net exports
	<i>Billion dollars</i>		
Manufactured food and beverages ¹	3.5	.3	3.3
Animals and animal products ²	2.2	.5	1.7
Vegetables	1.6	.1	1.5
Fish and seafood	1.9	.8	1.2
Tobacco, coffee, tea, and spices	1.1	.2	.9
Fruits and nuts	.4	.2	.2
Grains, feeds, and milled products ³	1.4	2.6	-1.3
Oilseeds, fats, and oils	1.3	2.9	-1.6
Fiber, fabrics, hides, and skins ⁴	5.5	7.2	-1.6
Fertilizers	.2	2.8	-2.6
Other agricultural products	.4	1.2	-.9

¹ Baking products, preserved food, beverages. ² Live animals, meat, dairy, eggs, honey, and other animal products. ³ Cereals, feeds and food waste, and flour and other milled products. ⁴ Silk, animal hair, cotton yarn and fabric, and hides and skins.

Source: ERS analysis of China customs statistics reported in Hsin-Hui Hsu and Fred Gale, *China: Agriculture in Transition*, USDA/ERS Agriculture and Trade Report WRS-01-2, November 2001, appendix tables 5 and 6.

China emerged as a major market for imports of oilseeds, vegetable oils, and oil meal.

China uses most other agriculturally related imports as intermediate inputs for manufacturing. China uses imports of fabrics, hides, and skins in its export-oriented garment, footwear, and leather product industries. Net imports of fertilizers help boost China's domestic crop production, reducing the need for food imports.

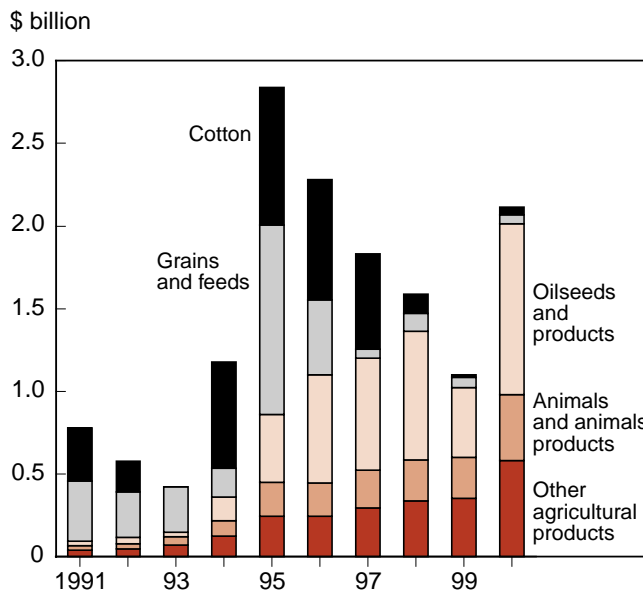
Volatility in Bulk Commodity Imports

Much of the volatility in China's agricultural trade reflects swings in imports for a few bulk commodities, especially corn, wheat, and cotton (fig. B-1). U.S. exports of cotton to China sharply increased in 1994, and grain and oilseed exports rose in 1995. In subsequent years, U.S. grain exports to China dropped off dramatically to minimal levels and cotton exports were minimal in 1999 and 2000. China's imports of oilseeds and their products have been more stable, but the overall stability in the oilseed category masks a policy-induced switch from imports of oils to imports of unprocessed oilseeds during the 1990s. China's meat and other agricultural imports from the United States have grown at a steadier rate.

Poor, But Not Hungry

China has a rising urban middle class with world-class consumption standards, but it is still largely a poor country. Its per capita GDP is similar to those of developing countries, such as the Philippines and Sri

Figure B-1
U.S. agricultural exports to China by commodity type, 1991-2000



Note: Data are for calendar years.

Source: USDA, Foreign Agricultural Trade of the United States.

Lanka.¹ In 2000, China's urban residents spent an average of \$236 per person on food, and rural expenditures were even lower, at \$56. Farm families, which still make up the bulk of China's population, grow much of the food they consume.

¹ Source: World Bank Development Indicators, per capita GDP adjusted for purchasing power parity.

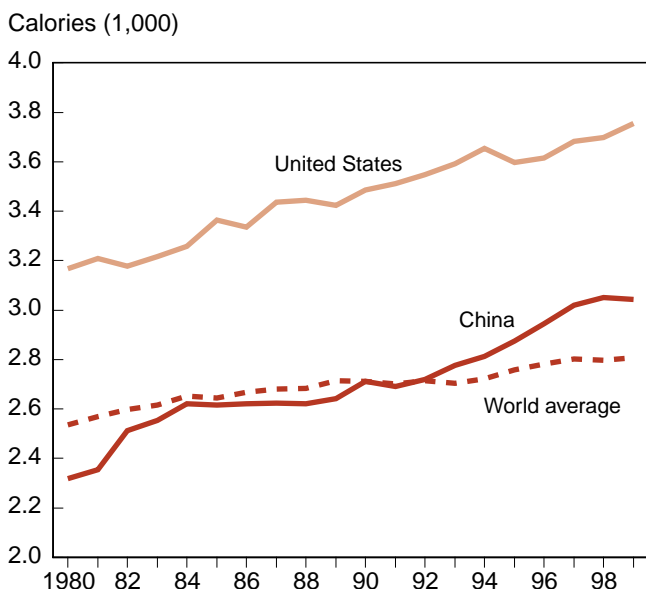
Food insecurity, however, is not a problem for most of China's population. China's per capita food supply, measured by calories per person per day, was 8 percent above the world average in 1999 (fig. B-2). Famine and food insecurity were common in China's past, but food consumption and food availability have soared since economic reforms began in the late 1970s.

High Consumption of Grains and Vegetables

Grains (mostly rice and wheat) and vegetables, by weight, make up about 70 percent of per capita food consumption in China, a much higher share than in the United States (fig. B-3). China's per capita consumption of grains, vegetables, and fish exceeds the world and U.S. averages, but China's consumption of fruits, sugar and sweeteners, and fats and oils is lower. China's per capita meat consumption exceeds the world average but is less than half that of the United States.

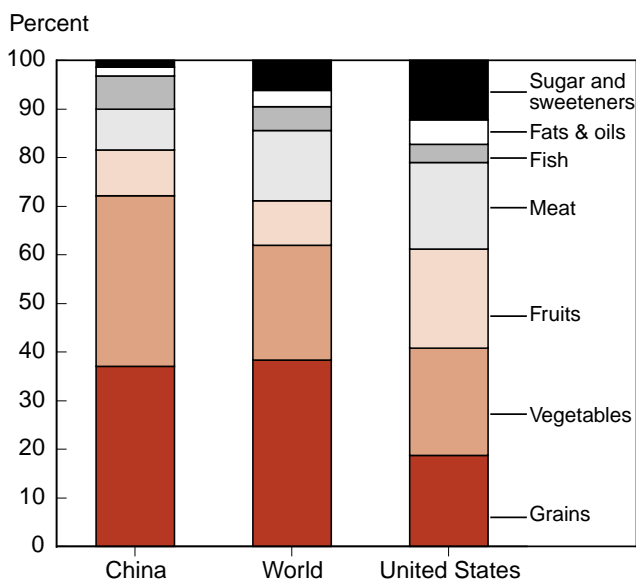
These differences in food consumption between China and the rest of the world reflect a combination of low per capita incomes in China and differing tastes and preferences. As China's consumers grow wealthier, consumption of all foods will grow, but consumption of meat, fruits, fish, fats and oils, and sugar and sweeteners will grow the fastest.

Figure B-2
Food supply—calories per person per day—China, world, and United States, 1980-99



Source: United Nations Food and Agriculture Organization, FAOSTAT database.

Figure B-3
Food consumption shares by food category, China, world, and United States, 1999



Note: Based on per capita kilograms of consumption.

Source: United Nations Food and Agriculture Organization, FAOSTAT database.

A Major Producer

China has 10 persons to feed per hectare of arable land—more than twice the world average of 4.4 persons per hectare. Yet China has remained largely self-sufficient in food production and is a major producer of many important commodities. China's share of world production exceeds its share of world population for most major commodities (table B-3). Most notably, China produces over 40 percent of the world's pork and vegetables. China's low shares of milk, sugar, beef, soybean, and fruit production reflect its relatively low consumption levels for these commodities.

In contrast with China, the United States is richly endowed with farmland. While China's population is more than four times that of the United States, the United States has about one-third more cropland than China. The United States and other land-abundant countries can potentially relieve the stress on China's limited natural resource base by supplying China with land-intensive food and feed grains, oilseeds, and meats and poultry.

Intensive Cultivation

China maintains its high level of food production by double- and triple-cropping and applying large quantities of fertilizer and labor to its limited land base.

Table B-3—China and U.S. shares of world population, land, and production of selected agricultural commodities, 2000

Item	China	United States
<i>Percent</i>		
Arable cropland	9	13
Population	21	5
Pork	47	9
Vegetables and melons	42	6
Eggs	41	9
Tobacco	35	10
Rice ¹	34	2
Rapeseed	28	2
Corn ¹	21	40
Cotton ¹	20	19
Wheat ¹	19	11
Poultry	19	25
Fruit	15	7
Soybeans ¹	9	45
Beef and veal	9	22
Sugar cane	6	3
Milk	2	13

¹ Note: Data from U.S. Department of Agriculture, World Agricultural Supply and Demand Estimates, market year 1999/00.

Source: United Nations Food and Agriculture Organization, FAOSTAT database, except where noted.

China's high consumption and production of vegetables, which yield high quantities per unit of land, makes efficient use of scarce land resources. Importing soybeans, which have low yields per hectare, allows China to free up land for higher yielding crops. Yields of China's major crops are above world averages (table B-4). Fertilizer use per hectare is more than 2.5 times higher than the world and U.S. averages. China has over 300 laborers for every 100 hectares of farmland.

China also has a relatively high share of its land irrigated and relatively few tractors.

China's strained natural resource base and high levels of fertilizer and pesticide use mean that further expansion of agricultural output through greater input use may not be sustainable. Water supplies in northern China are dwindling, and pollution from industrial effluents and agricultural runoff is worsening. China is returning environmentally fragile land to more sustainable forest or grass cover, further reducing the availability of arable land. To accommodate growing consumer demand for food, the agricultural sector will probably need to make more efficient use of its limited land and water resources by changing the mix of crops planted, adopting higher yielding varieties, improving land management, or consolidating land holdings to achieve size economies.

China's farms are small and mostly cultivated by households. The average household cultivates about 2.5 acres, frequently in multiple noncontiguous plots. Farmland is owned collectively by villages. Village leaders allocate land-use rights among village households based on family size and labor availability. Farmers cannot sell their land, but land rentals occur in many villages.

Rising Rural-Urban Inequality

Inequality between rural and urban areas in China has risen markedly in recent years. Incomes and living standards have advanced most rapidly in coastal cities, such as Shenzhen, Guangzhou, Shanghai, and Beijing, where per capita incomes are about twice the urban average. Some rural areas, such as those in Zhejiang and Guangdong provinces, have shared in the income

Table B-4—Comparison of agricultural yields and input per hectare of cropland, China and United States, 1997

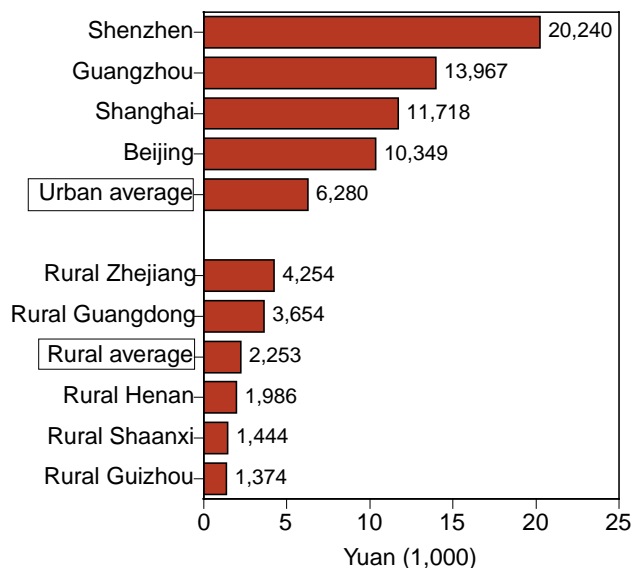
Item	Unit	China	World	United States
Production per hectare of land:				
Rice, paddy	Tons	6.2	3.9	7.0
Wheat	Tons	3.7	2.7	2.8
Corn	Tons	4.6	4.3	8.6
Soybeans	Tons	1.7	2.2	2.6
Vegetables and melons	Tons	18.4	15.7	17.1
Fertilizer consumption per hectare	Kilograms	271	94	111
Farm workers per 100 hectares ¹	Number	310	82	2
Land irrigated	Percent	40	18	13
Tractors per 1,000 hectares	Number	6	18	27

¹For China, farm employment is the sum of those engaged in crop planting, animal husbandry, and agricultural services reported in 1997 agricultural census. Other employment figures from FAOSTAT.

Source: Estimated from United Nations Food and Agriculture Organization, FAOSTAT database.

Figure B-4

Annual per capita income in China, selected cities and rural provincial averages, 2000



Note: 1 dollar = 8.28 yuan.

Source: China and Guangdong statistical yearbooks.

growth, but most of rural China has experienced much slower income growth. About 800 million of China's 1.3 billion people live in rural villages, where per capita incomes are less than 40 percent of the urban average. With about three workers for every hectare of farmland, farming in China is highly labor intensive and income per worker is low. China is expected to see

an exodus of labor from farms to factory and service jobs similar to the labor shift in the United States in the mid-20th century but on a much larger scale. The rural-urban income gap will be a consideration in farm and rural policy decisions as the country's leadership seeks to maintain social order and preserve its support among the rural populace.

Further Reading

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