

# Medium-term prospects for major agricultural commodities 2017-2026

## The People's Republic of China

### Highlights

- China will continue to play a major role in global demand growth for many commodities, although domestic consumption will in most cases grow more slowly than in the past decade.
- Stock-to-use ratios of both **cotton** and **maize** state stocks are projected to decline over the projection period.
- China's Environment Protection Act, combined with structural adjustments in the Chinese **livestock** market, will result in larger and more commercially-oriented enterprises. It is expected that this will reduce the negative environmental impact of the livestock sector.
- Self-sufficiency in wheat and rice will continue to be a priority. Nevertheless, overall caloric consumption is expected to shift from cereals towards a diet that increasingly favours **fish, sugar, dairy, meat** and **vegetable oils**.

### Overview

The *OECD-FAO Agricultural Outlook* foresees that consumption growth in China will exceed that of production. Food demand, while expected to slow down, will gradually evolve towards greater protein intake. The country remains the world's largest grain importer and although trade is increasing for several commodities, self-sufficiency in wheat and rice will continue to be a priority. The *Outlook* assumes that the current policy framework will remain intact over the next decade. Agricultural productivity gains are expected, but environmental constraints are likely to limit future supply response.

#### Macroeconomic assumptions

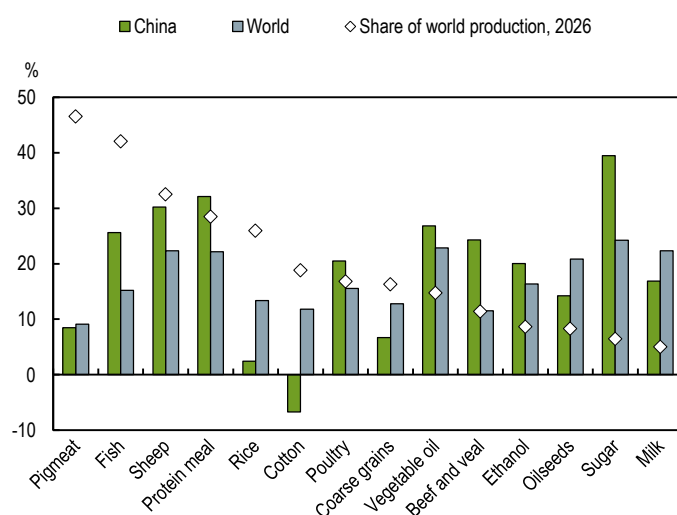
- Population is assumed to increase at an annual rate of 0.3%, from 1.38 billion in 2016 to 1.42 billion in 2026.
- Annual inflation is expected to average around 3% in the coming decade.
- The Chinese Yuan is projected to appreciate by 12% in nominal terms relative to the USD to CNY/USD 5.8 in 2026.
- GDP is projected to grow by nearly 6% per year.

#### Policy assumptions

- Tariffs are assumed to remain at their 2016 levels until 2026.
- Maize price and stocks policies are to be

### Production

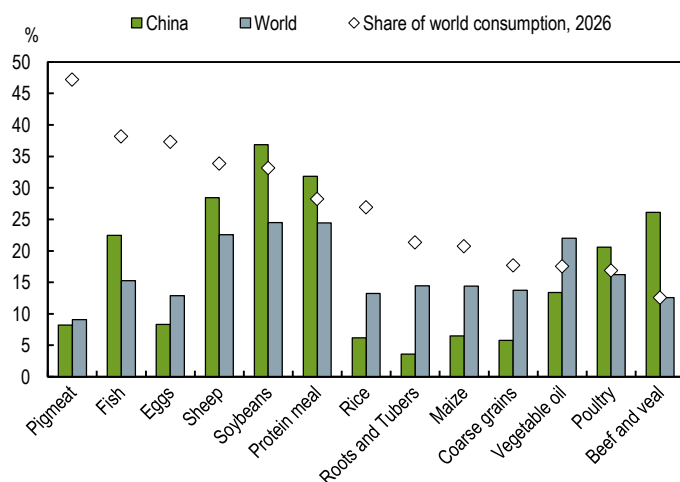
**Production: Percentage change 2026 compared to 2014-16 average**



- The production of coarse grains is projected to grow more slowly than in the previous decade, with an increase of 7% over the outlook period as accumulated stocks of maize are released. Production is expected to shift to oilseeds, with a projected increase of 14%.
- Slower growth of about 17% is expected for milk production as consumers slowly regain confidence in dairy products.
- Meat production is projected to increase significantly, with projected increases of 30% for sheepmeat, 15% for beef and veal and 11% for poultry. Production of pork, however, is expected to increase at a slower pace (+9%) than other meats due to stricter environmental policies.
- Production growth of ethanol is projected to be high at around 20%, which could consolidate China's role as the world's third largest producer. Cotton production is projected to grow by 8%, slower than the global growth rate of 12%. The sugar sector should benefit from increased mechanisation and is projected to grow by almost 40%.

## Consumption

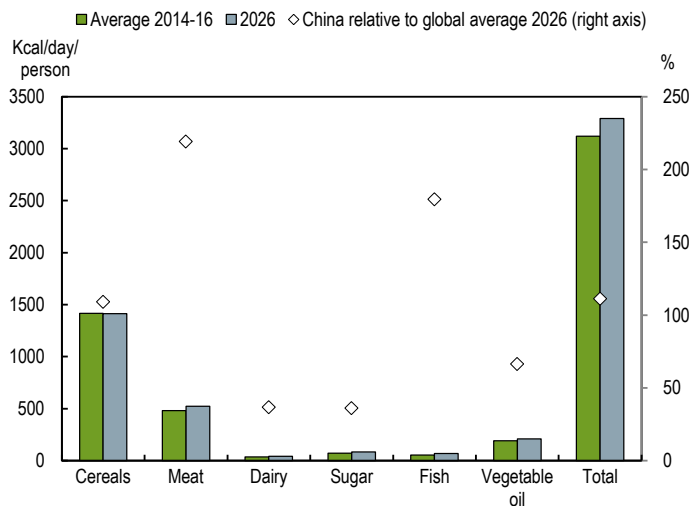
**Consumption: Percentage change 2026 compared to 2014-16 average**



- Growth in demand growth is expected to be high over the coming decade for food products that have low per capita consumption levels, such as **beef and veal** (+26%), **sheepmeat** (+28%), **poultry** (+21%), and **sugar** (+23%).
- However, for food products where Chinese per capita consumption is already high – such as **eggs** (+8%), **pigmeat** (+9%) and **rice** (+6%) – it is projected that growth will be slower than the world average, with the notable exception of **fish** (+22%).
- The growth in demand for **coarse grains** (+6%) will largely be driven by the feed sector. Consumption of **soybean** is projected to continue to increase (+37%), with China expected to crush a third of the world total by 2026.
- The projected growth rate of **vegetable oil** consumption (+13%) is expected to be slow down as per capita consumption levels reach saturation.

## Caloric and protein intake in China

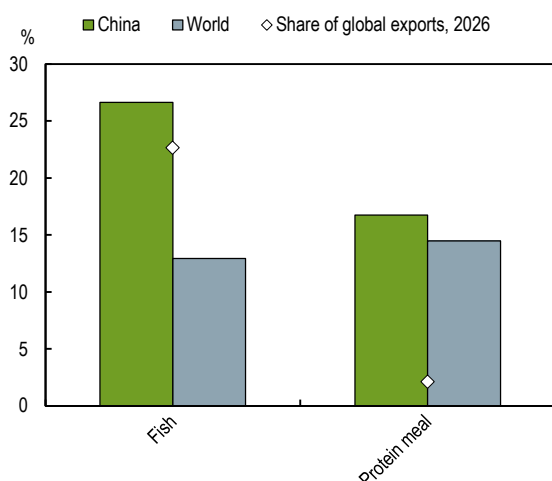
**Projections of caloric intake per capita by commodity, 2026 compared to 2014-16 average**



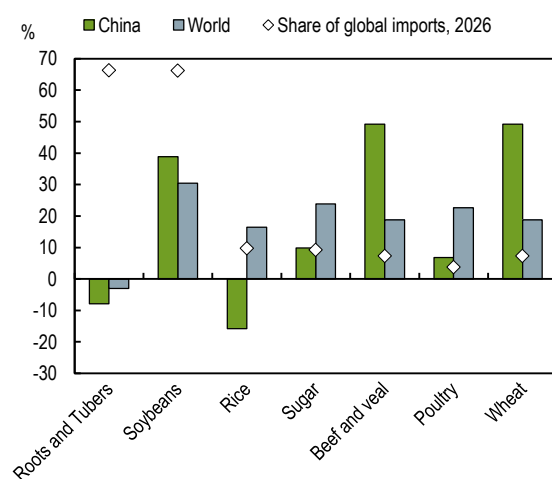
- Total caloric intake is expected to increase by nearly 6% to 3 290 kcal/day/person by 2026, 11% above the world average. Some changes are expected in the composition of caloric intake, although a modest shift is expected from **cereals** (-1%) to **fish** (+21%), **sugar** (+20%), **dairy** (+17%), and **meat** (+9%). Caloric intake from **dairy** and **sugar** products is expected to remain 50% below the world average.
- **Rice** will remain the main staple component of the Chinese diet and will continue to account for 25% of daily caloric intake. In 2026, however, China will consume considerably more calories from **meat** (+220%) and **fish** (+180%).
- **Protein intake** (not shown) is expected to increase by 9% over the outlook period, double the projected global rate of 4%. Overall protein consumption will be higher in China than the global average due to dietary changes that will increasingly favour **fish**, **meat**, and **vegetable oils**. It is projected that protein intake on a per capita basis will reach 115 g/day/person by 2026, nearly 20% above the world average rate.

## Trade

Exports: Percentage change, 2026 compared to 2014-16 average



Imports: Percentage change, 2026 compared to 2014-16 average



- China is projected to consolidate its leading role as a major exporter of **fish**, with a projected increase of 27% by 2026, as well as remain the world's largest **grain** importer.
- Demand for both food and feed **wheat** will continue to increase.
- Over the outlook period, China will remain a leading **sugar** importer and will import about two-thirds of the world's **soybeans** and **roots and tubers** to satisfy the country's strong demand for **protein meal** and **vegetable oil**.
- Self-sufficiency in **wheat** and **rice** will continue to be a priority.
- High levels of imports of **meat** products to supplement domestic production are expected over the projection period, with growth in **beef and veal** and **poultry** imports of nearly 50% and 7% respectively.

## Policy and market uncertainties

- China is addressing growing structural problems by promoting more efficient and large-scale farms. Price reforms will be implemented to lower domestic prices and narrow the gap with prices on the international market. Moreover, a programme to decrease maize production by reducing the area planted to maize and introducing direct payments is expected to encourage conversion from maize production to other crops, such as soybeans, pulses and feed crops
- Growing environmental concerns are being addressed, including the serious degradation of agricultural and grass lands, and the high level of water pollution. Recently introduced environmental regulations and laws will likely limit or displace pork production away from densely populated and environmentally-sensitive areas. Extreme weather events and animal diseases will also impact agriculture with increasing frequency. China is currently experiencing its fifth epidemic of Asian H7N9.
- China has been identified as one three major future water risk hotspots for agriculture production globally. While improvements in productivity may increase the domestic supply, environmental constraints appear likely to limit future supply response.

## Further reading

OECD/FAO (2017), *OECD-FAO Agricultural Outlook 2017-2026*, OECD Publishing, Paris.

[http://dx.doi.org/10.1787/agr\\_outlook-2017-en](http://dx.doi.org/10.1787/agr_outlook-2017-en).

OECD-FAO Agricultural Outlook: [www.agri-outlook.org](http://www.agri-outlook.org)

Methodology of the Aglink-Cosimo Model: [www.agri-outlook.org/abouttheoutlook/Aglink-Cosimo-model-documentation-2015.pdf](http://www.agri-outlook.org/abouttheoutlook/Aglink-Cosimo-model-documentation-2015.pdf)

Policy information for these country notes is drawn from the *OECD Agricultural Policy Monitoring and Evaluation*: <http://oe.cd/pse>

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## China: Selected commodity projections

			Average	Growth <sup>2</sup>			
			2014-16est.	2021	2026	2007-16	2017-26
<b>Wheat</b>	Area harvested	kha	24 137	23 919	23 723	0.16	-0.20
	Production	kt	128 325	129 668	133 858	193	0.60
	Consumption	kt	119 633	131 004	135 530	1.14	0.41
	Per capita consumption <sup>1</sup>	kg/cap	64.3	63.9	63.7	-0.31	-0.09
	Imports	kt	2 862	3 190	3 680	49.80	2.99
<b>Maize</b>	Area harvested	kha	37 233	36 539	36 595	3.00	0.04
	Production	kt	219 742	223 438	234 053	4.62	0.94
	Consumption	kt	225 559	228 233	240 229	5.43	0.91
	Per capita consumption <sup>1</sup>	kg/cap	6.2	6.2	6.2	-1.86	0.01
	Imports	kt	3 563	2 523	6 267	57.24	16.73
<b>Protein meals</b>	Production	kt	82 770	96 640	109 358	7.93	2.32
	Consumption	kt	82 167	95 938	108 320	7.89	2.29
	Exports	kt	1847	1868	2 156	10.17	2.71
	Imports	kt	897	1 131	1 110	-2.42	0.01
<b>Vegetable oils</b>	Production	kt	25 499	29 061	32 340	6.64	2.04
	Consumption	kt	33 886	36 293	38 430	4.76	1.07
	Per capita consumption <sup>1</sup>	kg/cap	24.6	25.8	27.1	4.21	0.85
	Imports	kt	8 166	7 352	6 323	-1.63	-2.58
<b>Sugar</b>	Production	kt	9 635	11 896	13 439	-3.24	2.99
	Consumption	kt	15 726	17 739	19 353	2.20	1.86
	Per capita consumption <sup>1</sup>	kg	11.4	12.6	13.7	1.67	1.64
	Imports	kt	5 379	5 915	5 910	24.30	0.53
<b>Beef and veal</b>	Production	kt (cwe)	7 005	8 105	8 706	1.71	1.91
	Consumption	kt (cwe)	7 564	8 887	9 540	2.98	1.84
	Per capita consumption <sup>1</sup>	kg/cap	3.8	4.4	4.7	2.45	1.62
	Imports	kt (cwe)	589	822	879	74.81	14.2
<b>Poultry</b>	Production	kt (rtc)	18 358	20 475	22 115	2.80	1.59
	Consumption	kt (rtc)	18 420	20 579	22 210	2.43	1.54
	Per capita consumption <sup>1</sup>	kg/cap	11.8	12.9	13.8	1.90	1.33
	Exports	kt (rtc)	429	412	430	4.85	1.33
	Imports	kt (rtc)	491	515	524	-5.66	-0.49
<b>Milk</b>	Cow inventory	000 hd	14 457	13 957	14 257	2.66	0.47
	Production	kt	41 677	45 072	48 697	0.53	1.78
<b>Cheese</b>	Production	kt	258	293	320	-0.72	2.19
	Consumption	kt	337	454	515	2.37	2.94
	Per capita consumption <sup>1</sup>	kg/cap	0.2	0.3	0.4	1.84	2.72
	Exports	kt	0	0	0	-2.99	1.22
	Imports	kt	80	161	195	26.73	4.31
<b>Fish and seafood</b>	Production	kt	64 860	76 565	81 461	4.44	1.81
	Food consumption	kt	56 746	68 327	71 017	4.78	1.56
	Per capita consumption <sup>1</sup>	kg/cap	41.2	48.6	50.2	4.24	1.34
	Exports	kt	7 867	8 099	9 963	1.84	3.31
	Imports	kt	3 428	3 047	2 486	2.10	-3.19
<b>Ethanol</b>	Production	mIn L	9 822	11 377	11 790	4.53	1.16
	Domestic use	mIn L	10 250	11 530	11 949	5.59	0.98
	Fuel use	mIn L	3 250	4 177	4 542	7.82	2.49
	Share in gasoline fuel use	%	2.2	1.9	1.7	..	..
	Imports	mIn L	513	184	190	110.62	-3.51
<b>Biodiesel</b>	Production	mIn L	158	1 336	1 466	14.09	2.23
	Fuel use	mIn L	1 272	1 425	1 556	15.55	2.11
	Share in diesel fuel use	%	1.0	1.1	1.1	..	..
	Imports	mIn L	113	89	90	..	0.37

1. Per capita consumption expressed in retail weight. Carcass weight to retail weight conversion factor of 0.7 for beef and veal, 0.78 for pigmeat and 0.88 for both sheep meat and poultry meat.

2. Least squares growth rate.