

China Agricultural Outlook (2014-2023)

Executive Summary

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In the broad context of comprehensively deepening economic system reform, China's economy is going to embark on a moderately stable growth phase in the next 10 years. China's agricultural development is facing new opportunities and challenges in the process of national economic transformation and upgrading. "China Agricultural Outlook (2014-2023)" covers major agricultural commodities, including grain, oil, cotton, sugar, vegetable, fruit, feed, meat, egg, milk, aquatic products, and forecasts the development trend of these commodities in the next decade in terms of production, consumption, price, market and trade. The main conclusions are as follows:

Grain: The consumption increase of three major staple grains is expected to exceed their production increase, and the self-sufficiency rate is projected to be steady at around 97%. In the next 10 years, the production of three major staple grains (rice, wheat and corn) will grow steadily with average annual growth rate of 0.6% to reach 577.91 million tons by 2023. Annual consumption growth rate is 1.5%, which is 2.5 times of the production increase. The total consumption will rise up to 595.87 million tons by the year 2023. Since the consumption grows faster than production, the self-sufficiency rate of three major grains is projected to decrease from above 98% to around 97% over the next decade.

Rice: The production will grow after a reduction first and stocks-to-use is expected to hit a record high. Planted area will steadily decrease at a rate of 0.3% p.a. The rice output will experience a slight shrink during the first four years of projection period. 2018 is the turning point, and after then, output is expected to slightly increase by 0.4% compared with the based period to reach 204.14 million tons. Although rice demand will increase with the population growth, the situation that production is larger than demand will not change, and that makes that stocks-to-use of rice will go up from 52.6% to 72.3% and hit a record high over the projection period.

Wheat: Supply and demand will show a slightly tight situation and self-sufficiency rate is expected to remain at about 98%. Wheat planting area is decreasing at a rate of 0.1% p.a. and wheat yield growth rate is 0.53% p.a. which is significantly lower than 2.5% p.a. in previous decade. Overall production is expected to increase at a rate of 0.41% p.a. to reach 126.854 million tons by 2023. Wheat consumption as food use will grow stably steadily but wheat consumption as feed use and industrial use is projected to increase significantly. The overall consumption is expected to reach 127.57 million tons by 2023 with an annual growth rate at 0.3%. The gap between output and demand is projected to show in 2018, and imports will reach 3 million tons in 2023.

Corn: Consumption will keep increasing significantly and import will present a remarkable increase. Planting area expansion and yield growth is main reasons for production increase in the next 10 years. During the projection period, area is expected to increase at 0.8% p.a., yield at 1.0% p.a. and overall production at 1.3% p.a. to reach 246.92 million tons, 13.4% higher than the based period. Driven by the growth of feed and industrial use of corn, overall consumption of corn maintain rapid growth at a rate of 3.0% p.a. Feed consumption is projected to increase at 2.7% p.a. and industrial consumption at 4.2% p.a. in the next 10 years. Corn import is expected to exceed 10 million tons in 2020 and reach 12 million tons by 2023 with self-sufficiency rate of corn at about 93.0%.

Edible oil: Production is expected to increase steadily, but imports will decline. The growth of oil production mainly will come from the increase of yield over the next decade. In 2023, yields of soybean, rapeseed and peanut is projected to increase by 13.5%, 8.8% and 10.8% respectively, and the outputs will reach 13.03 million tons, 16.46 million tons and 20.14 million tons, the overall output of three crops is expected to grow by 8.6%, 14.3% and 18.5% respectively. Yield of cooking vegetable oil will have a growth rate of 1.5% p.a. and reach 27.15 million tons in 2023. The consumption of cooking vegetable oil is projected to rise at 0.7% p.a. to 28.98 million tons in 2023. Soybean import will increase slowly to 73.69 million tons. Direct import

of cooking vegetable oil is projected to decline by 3.5% p.a. to 4 million tons by 2023.

Cotton: Planting area and output will face “double decline” and consumption will experience a slow growth. Because of the declining comparative advantages, increasing production costs and the national food strategy, both planting area and output of cotton will decline. At the end of projection period, planting area of cotton is projected to fall by 6.7% to 60.85 million mu and production will reduce by 14.0% to 6.02 million tons. Cotton consumption will grow slowly to 8.52 million tons with a growth rate of 0.7% p.a. Affected by cancellation of cotton reserve policy, the slowdown of the development of China's textile industry and the fast development of textile industry in rival Asia countries, cotton import is projected to decrease to 1.6 million tons by 2023, 46.7% lower compared with the level of 2013.

Sugar: Consumption will remain strong growth and self-sufficiency rate is projected to decline. The shrink of sugar purchasing prices will affect farmers' incentive to produce. Sugar production will phase into the cycle of three-year decline (2014-2016). After that, sugar production is expected to increase by 3.9% to 14 million tons by 2023. Driven by population growth, urbanization progress and resident consumption structural change, sugar consumption will continue to maintain strong growth at a rate of 2.8% p.a. to reach 18.25 million tons by 2023. The gap between production and demand will exist for a long time over the projection period. Sugar imports will increase to 3.9 million tons in 2023 and self-sufficiency rate of sugar is projected to decline to 77%, 13% lower compared with the base period of 90%.

Meat: The output growth rate will be slightly lower than that of consumption, and 90% of increased meat imports will come from pork. In the following ten years, the outputs of pig meat, poultry, beef and mutton will increase at an average annual growth rate of 1.8%, slightly lower than that of the meat consumption which will be 1.9%. In 2023, the total meat output is expected to be 100 million tons. Meat imports in 2023 will reach 2.46 million tons, increased by about 40%, and 90% increased meat import is pork.

Pork: The pork consumption will maintain rapid growth, and its self-sufficiency rate will be kept at about 99%. In the next 10 years, for the resource constraints, the pork production growth rate will slow down by 1.6% annually and in 2023 the pork output is expected to be 64.4 million tons. The total pork consumption will grow at the average annual rate of 1.7% and reach 65.31 million tons in 2023. The consumption of processed pork products is increased by annually 5.6%, and the processed pork will account for 24% of the total pork output. The gap between pork supply and demand shows an increasing trend and by 2023 the pork import will exceed 1 million tons, but its self-sufficiency rate remains about 99%.

Poultry meat: Both the production and consumption of poultry meat is slowing down, but the poultry meat import will increase at a higher speed than that of exports. The average annual growth rate of poultry meat production is expected at 2.1%, slower than that of the past decade, at 3.8%. In 2023, the output of poultry meat will reach 22.15 million tons. The average annual growth rate of poultry meat consumption is projected at 2.2%, lower than that of the past 10 years, at 3.7%, and the poultry meat consumption will reach 22.43 million tons in 2023. During the outlook period, the poultry meat imports will increase by 27% and export increase by around 4%.

Beef and mutton: The beef production growth is slowing down, while the mutton production grows rapidly. In the next 10 years, the average annual growth rates of beef and mutton output are expected to be 1.9% and 2.7%, respectively, and in 2023 their annual outputs will reach 8.10 million tons and 5.35 million tons, respectively. The consumption of beef and mutton will grow at 2.0% and 2.2%, annually, respectively, and in 2023, their total consumption amounts are projected to be 8.53 million tons and 5.42 million tons, respectively. The gap between beef supply and demand will expand and the beef import is projected to increase by around 36% in 2023, while the mutton imports shows a significant decrease trend and by the end of the outlook period, the mutton import will decrease by about 74%.

Milk: The growth rate of milk production will slow down markedly and the significant import increase is projected. During the outlook, the dairy production

grows by an average annual rate of 3.5%, significantly lower than that of 7.1% in the past 10 years. In 2023, the milk output is expected to be 50.25 million tons. With the improvement of urban and rural resident's income, the continual implementation of school milk program, and the popularity of nutrition knowledge, China's dairy consumption will increase considerably and the total dairy consumption amount is expected to reach 62.65 million tons in 2023, 34.3% higher than that of the base period. Urban and rural resident per capita consumption of dairy products will reach 38.9 kg, with that of urban resident at 45.5 kg and that of rural resident at 27.0 kg. By 2023, China's dairy imports (raw milk) will reach 13.1 million tons, 47.9% higher than that of the base period.

Poultry Eggs: The production shows a steady increase, and eggs for processed use will grow rapidly. In the next 10 years, the average annual growth rate of egg production will be decreased from 2.1% of the past decade to 1.2%, and in 2023 the eggs output is expected to be 32.46 million tons, increased by 12.9% than that of 2013. The direct eggs consumption continues to grow slowly and in 2023 the per capita fresh egg consumption is expected to be 16.4 kg. The consumption of processed egg presents faster growth at an average annual rate of 2.0%, and in 2023 China's eggs processing capacity will reach 5.26 million tons, up 21.9% from that of 2013. After meeting the domestic demand, the eggs exports will still maintain an average of about 100 thousand tons and the trade surplus pattern will continue, while the breed egg imports will be slightly reduced with the improvement of China's breeding technology.

Fish and Seafood: The output increase of aquatic products is mainly from aquaculture production, and China will retain its world trade leading position. In the next 10 years, the aquatic products output will increase at an average annual rate of about 3% and in 2023 will reach 82 million tons, in which the aquaculture output accounting for about 55.0%. Its per capita consumption will increase at a lower speed, and in 2023 the per capita consumptions of aquatic products by urban and rural residents are expected to reach 20.3kg and 8.7 kg, respectively. China will maintain as the leading aquatic product export country in the world. Aquatic products export will

expand gradually, while the average annual growth rate will decrease to below 5.0%. The export of aquatic products in 2023 will exceed 6 million tons. Import will increase at a higher growth rate than export, at an average annual growth rate of more than 6.0%, and the imports would exceed 7 million tons in 2023.

Vegetables: The vegetables output will increase slightly, and the seasonal consumption of vegetables will grow rapidly. In the next 10 years, the planting area of vegetable will slightly increase, at an average annual growth rate of around 0.5%. By the average annual growth rate of 0.8%, in 2023 the vegetable output will reach 729.91 million tons. The direct per capita consumption of vegetable will increase from 149 kg in 2013 to 166 kg in 2023, with the average annual growth rate of about 1.1%. Vegetable processing industry will rapidly develop and the demand for processed vegetable is expected to reach 17.33 million tons.

Fruit: The fruits production will increase at a lower rate, but the consumption of processed fruits will grow rapidly. The total fruits output will reach 296 million tons in 2023. Within the outlook period, the consumer demand of fruits will increase at 2-3% annually, and the processing rate will be close to 20% in 2023, with the total processed fruits output at about 57.18 million tons. In 2023, the per capita consumption of fruits is expected to reach 60.1 kg, among which that of urban residents at 72.8 kg and that of rural residents at 36.9 kg. The fruits trade volume rise slightly, and the fruit and its products trade remains surplus, with the net fruit exports anticipated at about 1.7 million tons in 2023.

Feed: The feed output increase is mainly coming from the compound feed, and the feed consumption will grow steadily. Feed production will increase at a slower growth rate, with the average annual rate of 2.3%, significantly lower than that in the past 10 years of 7.6%. In 2023 the total output of China's feed products is forecasted to be 229.89 million tons, with the compound feed accounting for about 86.1%. Feed consumption will increase steadily, and is predicted to reach 234.22 million tons in 2023, increased by 28.4% than that of the base period.