Cutting China’s Massive Corn Inventory

China’s recent announcement to end its costly state stockpiling programme for the 2016/17 crop represents a significant change. With weak policy support, domestic corn prices have already taken a hit, and they are projected to experience a further drop in the market year 2016/17—affecting not only the domestic market, but also international trade. What kinds of measures can China take to shrink its over 250m tonne corn inventory? And how long will this de-inventory process take?

China has one of the highest corn prices in the world: 40% to 50% higher than US farmgate prices. On 28 March, effective as of the 2016/17 new crop, the Chinese government officially announced the end of its nine-year-old state corn procurement programme. The aim of this programme was to stabilise corn acreage and boost rural incomes. But the programme also distorted the market equilibrium, leading to artificially inflated domestic prices and a massive inventory held by the state reserve.

The reformed policy entails market-oriented pricing without governmental intervention, as well as producer subsidies to supplement some of the losses incurred by farmers. With weak government support, domestic corn prices are estimated to see a sharp decline, which is already reflected in the steep backwardation of the futures market.

As a result of the oversupply in previous years, the state reserve currently holds over 250m tonnes of corn. In 2015/16 alone, domestic production exceeds consumption by 60m to 80m tonnes. The government will bear an estimated USD 10bn to USD 15bn per annum in the coming years. This includes storage costs, interest subsidies and other fees—and that’s not even considering the inventory write-downs due to falling prices. So which measures can the Chinese government take to deal with this enormous inventory?

1. Switching corn acreage to soybeans and other crops

Facing excessive oversupply, the Chinese government plans to reduce corn acreage by 9% by 2020, especially in the so-called ‘sickle-shape region’—an environmentally fragile, cold, arid, mountainous and eroded area on the fringes of the key corn production regions. With declining corn prices, Rabobank expects some farmers to switch to other crops, such as soybeans, forage grass, potatoes and coarse grains. These measures come after the government has already encouraged crop rotation in order to improve soil fertility. Rabobank believes that the planting structure adjustment won’t be accomplished in the next planting season, but that it will take the next few years.

A chunk of the corn acreage reduction will be filled by domestic soybeans. The Chinese Ministry of Agriculture (MOA) released guiding opinions to increase domestic soybean acreage and improve yields in the next five years. According to MOA’s plan, the soybean output will reach 19m tonnes by 2020, compared to 10m to 12m tonnes in 2015. Nearly all of the additional domestic soybeans, which are non-GM, will be used for consumer foods such as tofu and soy milk.
2. Reducing China’s imports of non-corn feed grains

Although corn imports are protected by quota, China imports a significant amount of alternative feed grains, such as sorghum, feed barley and DDGS. It is worth mentioning that China accounts for roughly 20% of global feed grain imports—three-quarters of all sorghum trade, one-third of all barley trade (even though 30% of it is for brewing) and nearly half of US DDGS exports. In 2015, the import volume of sorghum, barley and DDGS were 10.69m tonnes, 10.73m tonnes and 6.82m tonnes, respectively.

On the one hand, plummeting corn prices will already reduce the appeal of imported feed grains. On the other, the government will still want to pose more protective trade policies, further impeding imports in order to boost domestic corn consumption and to absorb the massive overhang in state reserves.

China’s slowing demand will also have consequences for exporting countries. A proportion of the feed grains will need to find a different outlet in the world market, and therefore, they will be exported to other traditional destinations, while larger volumes will also need to be used in the country of production.

3. Expanding the bioethanol mandate

The next two solutions are a bit more challenging. Expanding the bioethanol mandate is an effective way to absorb excessive corn, as seen in the US in recent years. There, the bioethanol sector consumes one-third of the national corn output. However, since crude oil prices are low, the government will need to either implement mandated quantities that need to be blended into gasoline or to offer a considerably large amount of subsidies to corn processors.

On top of that, the milling capacity for ethanol in China is around 30m tonnes, and the utilisation ratio is 50% to 55%. In order to reduce corn stocks significantly through bioethanol, more milling plants would need to be established, resulting in high capex investment. And once the large domestic stocks have been lowered, the continuation of grain-based biofuel programmes remains a big question mark in China, given the scarcity of land and water in the long run.

4. Increasing exports of corn and corn-based derivatives

Corn exports could be another potential solution for a fast inventory reduction. China’s neighbours (such as Japan, South Korea, Taiwan and South-East Asia), import over 40m tonnes of corn every year. China has the advantage of geographic proximity when it comes to supplying these deficit regions. However, owing to the lack of scaled farming, high production costs make it extremely difficult to export without government subsidies, which have the potential to violate WTO rules. Rabobank projects that, instead, China will increasingly export certain types of corn-based derivatives, including—but not limited to—lysine, citric acid, MSG, HFCs and crystalline dextrose. But this can only mitigate the imbalance to a limited extent.
The process will take time

The Chinese government strives to relieve the corn imbalance, both on the supply and demand side. And more innovative measures could surface. However, keeping in mind social stability and long-term food security, the government also emphasises the need to keep corn acreage stable in key production regions. In addition, Chinese local farmers need time to change their farming habits. Therefore, domestic corn production is projected to see gradual, but not dramatic, shrinkage in the coming years. Without additional increases in demand, the whole de-inventory procedure could take more than a decade.