

Implications of geographic soya bean production concentration:

Historical production, consumption and trade

By Ikageng Maluleke, agricultural economist, Grain SA

The oilseeds market is considered a fast-growing crop segment in agriculture due to the growing demand for food amid a growing population. Soya beans are a crucial part of the global food chain, particularly as a source of protein for animal production. Global soya bean production has grown by over 100% in the past two decades, from 175 million tons in 2000 to 363 million tons in 2020 (Figure 1).

Although the 2019/20 season fell sharply, mainly on a sizeably reduced United States (US) harvest, there is an expected increase of about 7% in 2020/21. The forecast for 2021/22 seasons is expected to contain a much-improved global soya bean production with a 13% increase, to a record of 382 million tons. The predicted increase stems from expectations for a significant rebound in US output, tied to area gains and improved yields.

Over the past two decades, economic growth and restructuring of the feed industry intensified China's soya bean meal demands. Brazil, as well as Argentina and the US, stepped in to satisfy this increased demand. In the case of Brazil, rapid technical change coupled with an expansion in cultivated area, played a key role in meeting the increased soya bean demand in China, of which soya bean imports grew at 15% per year. In 2014, China's soya bean imports were about six times higher than its soya bean production, and China absorbed approximately 73% and 60% of Brazil's and the US's soya bean exports, respectively.

Figure 1: World production, demand, closing stocks and imports.
(Source: US Department of Agriculture)

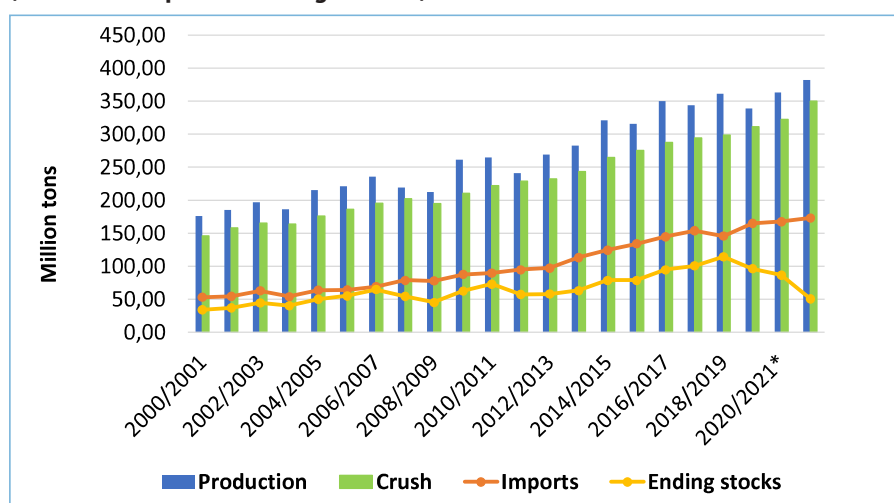
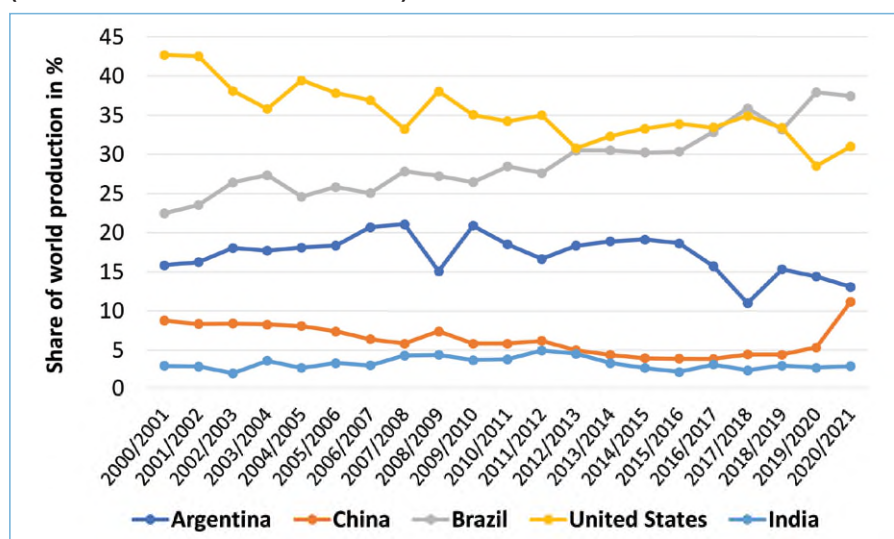


Figure 2: Share of world soya bean production by top five producing countries.
(Source: International Grains Council)



Although global soya bean production is projected to be high for the current

season, global usage is outstripping supply, with soya bean inventories expected

to fall in the 2020/21 season, marking a third consecutive year of declining global soya bean inventories (Figure 1).

Geographic concentration of production and trade

Soya bean production is geographically concentrated between five countries that make up the top producing countries globally, with a total market share of 95,6%. Currently, South America continues to capture the largest soya bean market share with around 50%, with Brazil at 37,4% and Argentina at 13%, followed by the US at 30,98%, China with 11,14% and India at 2,9% (Figure 2).

For the 2020/21 season, just over 170 million tons of soya beans were imported globally. China is by far the leading importer of soya beans, with an annual import volume of approximately 100 million tons. The importance of China as a market for soya beans, is driven by an explosion in demand for meat as consumers switch from a diet dominated by rice to one where pork, poultry and beef play an important part. However, China is not able to produce enough animal feed itself, hence the need to import soya beans from the US and Brazil.

Back in 2017, it was good news for American farmers when US exports made up about a third of Chinese purchases. That made soya beans the US's second-most valuable export to China after aeroplanes. However, US exports to China decreased dramatically during the US-China trade war. From 2018/19 to 2019/20, China stopped purchasing any US soya beans in retaliation to the Trump administration having raised tariffs on Chinese goods. As a result of the trade war, US soya bean farmers were among the biggest losers.

The Trump administration softened the blow by offering approximately \$28 billion in aid for producers. This led China to turn to Brazil, but with rising domestic usage and record sales to China, this drained supplies in 2019/20. The government ended up announcing the suspension of import duties in an attempt to encourage imports and suppress extensive domestic food inflation.

Figure 3: International soya bean prices. (Source: International Grains Council)

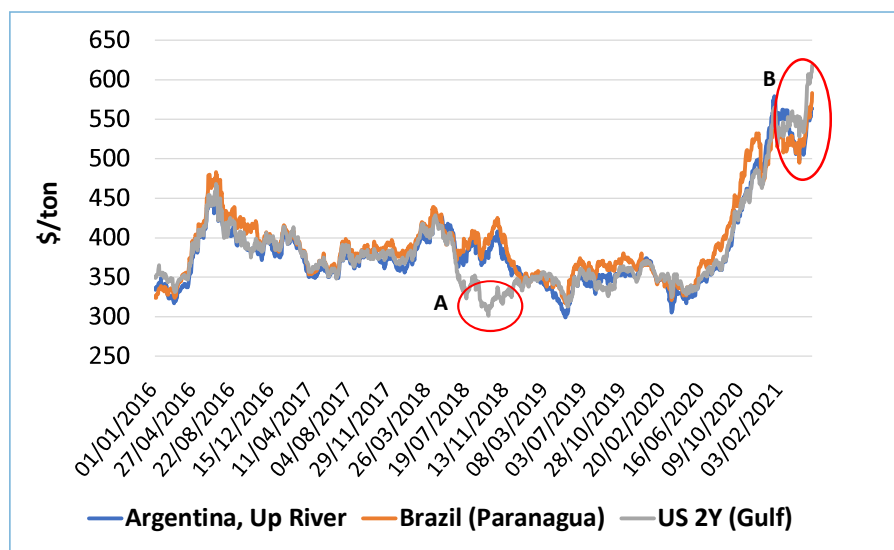
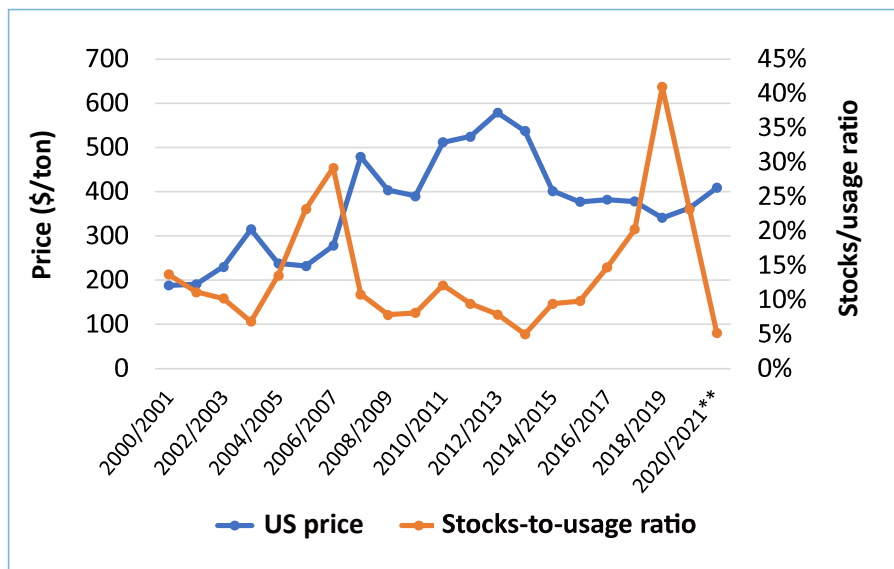


Figure 4: US stocks to usage ratio vs price. (Source: US Department of Agriculture)



Before the removal of import duties, the only countries from which Brazil could import soya beans without a tariff penalty, were the other members of the Mercosur regional trade agreement (Argentina, Paraguay and Uruguay). The US is the world's second-largest soya bean exporting country and the only major soya bean exporter outside of the Mercosur pact, which means the removal of import duties should allow imports from the US.

However, Brazil cannot import most genetically modified soya beans, which means it cannot easily turn to the US to fulfil its soya bean importing needs.

Brazil found itself in a squeeze when it came to soya bean importing sources.

Unfavourable effects

The issue of geographically concentrated production and consumption of soya beans, has unfavourable effects on the rest of the world's supply (Figure 1) and prices (Figure 3). This can clearly be seen in the above-mentioned geopolitical issues between China and the US (point A, Figure 3) that took place in previous seasons, where US prices took a dip due to increased stocks.

The current situation with record prices can also be observed (point b, Figure 3) which can be attributed to the

increased demand from China, where Brazil oversold their soya beans and China returned to buying US maize, thereby significantly reducing stock levels, not to mention unfavourable weather conditions in Latin America and the US.

Although Brazil generally produces soya beans for export, it should be noted that government regulations are sometimes a stumbling block when it comes to sourcing from there. Among international soya bean export prices (Figure 3), US prices increased the most by about 67% between April 2020 and April 2021, while Brazilian and Argentinian prices rose by 60% and 62% respectively.

Stocks-to-usage ratio

Another pertinent issue weighing on prices is the stocks-to-usage ratio for the US which are currently at a critical level, indicating that the level of carryover stock compared to the demand for soya bean, is extremely low. Current stocks-to-usage ratios in the US are at 5% compared to a norm of 13 to 15% or higher (Figure 4).

This is concerning as it means prices will continue at high levels. Historical trends indicate that when stock levels are low, prices move higher, causing a shift in both supply and prices for the rest of the world.

Implications for South Africa

The geographical concentration of soya bean production and trade is largely affected by geopolitical issues, government regulations as well as supply-side shifts in those regions, which causes instability for the rest of the world, especially the developing world. The situation of low stock levels and unfavourable weather conditions in the major producing countries, has pushed average soya bean prices in South Africa up by about 6% year-on-year, from about R6 700/ton in April 2020 to R7 100/ton in April 2021, despite the good production forecast and expected good yields.

According to the third production forecast by the Crop Estimates Committee (CEC), soya bean production is expected to reach approximately 1,794 million tons compared to 1,2 million tons in the

past season, with an increase in area planted from 122 100ha to 827 100ha and an expected yield of 2,17 tons/ha. Although production potential is good, South Africa still imports a substantial amount of soya bean meal and oil into the country, making us vulnerable to international price movements.

Given the above implications, South Africa needs to continue stepping up its local soya bean production by riding the wave of both the Poultry Master Plan to increase production capacity, and the Soya Bean Strategy implemented in 2012 to increase local crushing capacity. Success can be achieved through improved production practices and technologies, as well as increasing research and development activities in the soya bean sector. This will cushion the country from negative sentiments and price movements internationally. 🌱

For more information, email the author at ikageng@grainsa.co.za.

Verseker effektiewe aksie van sout-sensitiewe onkruidodders met Power-Up®!

Power-Up® is 'n hoë kwaliteit ammoniumsulfaat gebaseerde waterkondisioneerder vir gebruik saam met sout-sensitiewe onkruidodders soos bv. glifosaat.

Power-Up® bevat ook 'n benatter en herbevogtiger om die optimale spuitoplossing te verkry vir effektiewe onkruidbeheer.

Verseker effektiewe onkruidbeheer deur jou waterkwaliteit te ken en die werking van byvoegmiddels te verstaan.

WWW.ROLFESAGRI.CO.ZA

Rolfes Agri (Pty) Ltd | 288 Mundt street | Waltloo | Pretoria

Power-up Reg. No. L6463 Act No. 36 of 1947

Rolfes
Agri