Global vegetable oils: Oilseeds and oilseed products

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Prices of oilseeds and oilseed products were at their lowest in several years in 2019 – a reflection of the slowdown in global demand for oils and protein meals, as well as the uncertainties stemming from bilateral trade disputes. Since trade relations between the United States (US) and China improved towards the end of 2019, trade policies have had less short-term influence on world prices, especially for soya beans.

Global soya bean production declined in 2019/20 due to the considerable decrease in plantings in the US. In contrast, the soya bean harvest in South America set a record exceeding 190 megatons (Mt). Despite the decline in global soya bean production, prices did not increase because of an even more pronounced contraction in consumption.

Notwithstanding expectations of a partial recovery in China's swine herd, African swine fever (ASF) continues to weigh on the country's livestock sector, curbing feed demand, especially of soya bean meal which is the dominant protein meal. World production of other oilseeds (rapeseed, sunflower, groundnut) declined slightly in 2019/20.

The vegetable oil sector was characterised in January and February 2020 by a slowdown in demand in China and India caused by the decreases in out-of-home consumption. In China, this was due to the Covid-19 pandemic and in India high domestic prices were to blame. Several countries also expanded their crushing capacity, thus increasing their seed imports at the expense of oil and meal purchases.

Projection highlights

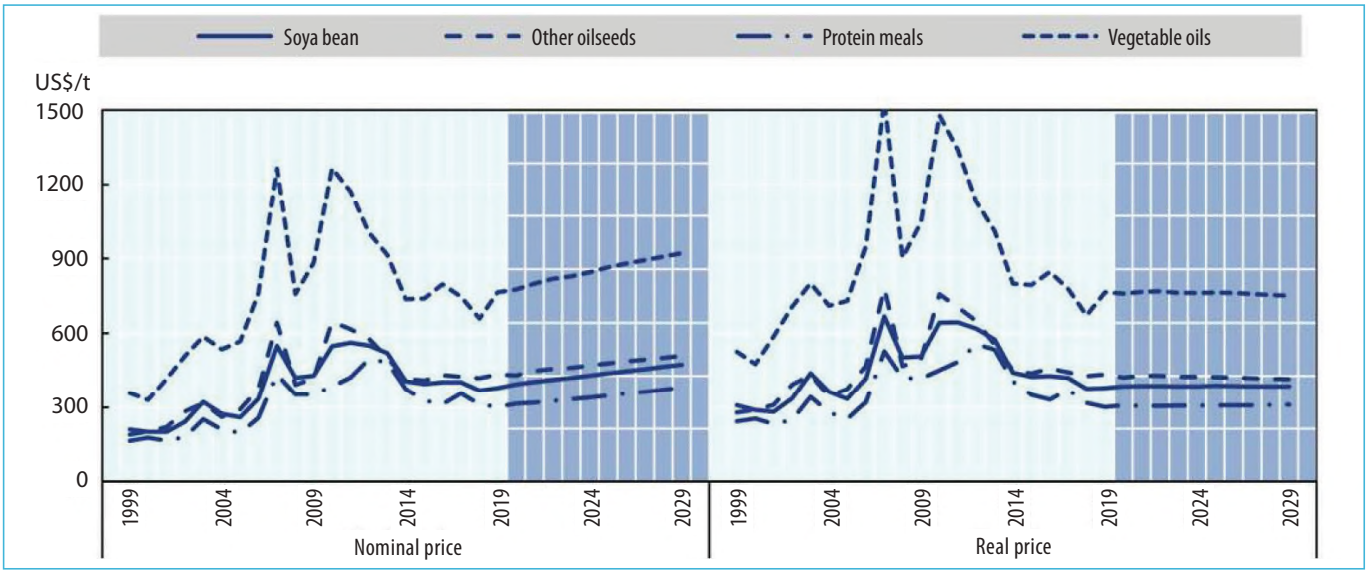
During the outlook period, global soya bean production is projected to continue to expand at 1,3% per annum, with the expansion of area harvested accounting for around a third of global output growth. With domestic output projected to reach 140Mt by 2029, Brazil is expected to be the world's largest producer, ahead of the US with a projected production of 120Mt by 2029. Together, these countries are expected to account for around two-thirds of global soya bean production.

Production of other oilseeds is projected to increase by 1,2% per annum over the next decade, implying slower growth relative to the last ten years. This is partially due to curbed demand for rapeseed oil as a feedstock in European biodiesel production. Crushing of soya beans and other oilseeds into meal (cake) and oil will continue to dominate demand.

Vegetable oil includes oil obtained from the crushing of soya beans and other oilseeds (roughly 55% of world vegetable oil production), palm oil (35%), as well as palm kernel, coconut and cottonseed oils. In view of a slowdown in the expansion of the mature oil palm area, further production growth in Indonesia (1,7% per annum) and Malaysia (0,8% per annum) is projected to be limited. In addition, the rise in Indonesia's domestic biodiesel requirement will place upward pressure on global vegetable oil supplies in the medium term.

Soya bean meal dominates protein meal production and consumption. Compared to the past decade, the expansion of protein meal utilisation (1,4 vs 3,6% per annum) is expected to be constrained by

Figure 1: The evolution of world oilseed prices.



Note: Soya beans, US, c.i.f. Rotterdam; other oilseeds, rapeseed, Europe, c.i.f. Hamburg; protein meal, production weighted average price for soya bean meal, sunflower meal and rapeseed meal, European port; vegetable oil, production weigthed average price for palm oil, soya bean oil, sunflower oil and rapeseed oil, European port. Real prices are nominal prices deflated by the US GDP deflator (2019=1).

slower growth in global production of swine and poultry, and by efforts in China to adopt a lower protein meal share in livestock feed rations. As a result, Chinese protein meal use is expected to grow slightly slower than animal production.

Protein meal demand is linked to the expansion of animal production. The uncertainty around the future of swine production due to ASF in East Asia could affect the projections as swine might be replaced in the long term by other animal protein (e.g. poultry and fish), requiring less feed in the production.

The outbreak of several diseases in China's swineherd during recent years induced a slowing of demand for protein meal. In addition, concerns about genetically modified products have led growing numbers of European Union (EU) dairy producers to refrain from using genetically modified products as feed, especially soya bean meal. This might further reduce demand as the EU accounted for 15% of world protein demand in from 2017 to 2019.

Prices

The price of oilseeds and oilseed products increased in 2019 as supply increased slower than demand. Stocks, however, remain ample. The assumed stable real price of crude oil and sustained economic growth should support the price of oilseed and oilseed products over the projection period, whereas continued productivity growth will put downward pressure on real prices. The Covid-19 pandemic reduced economic activity in 2020 and could have a considerable impact on the development over the next decade.

Real prices for soya bean, other oilseeds, vegetable oils and protein meal are projected to decline slightly as productivity growth is expected to keep pace with growing demand over the coming ten years. Real prices will nonetheless remain above historical troughs (*Figure 1*). In nominal terms, prices of oilseeds and oilseed products are expected to rise over the medium term.

Oilseed production

The production of soya beans is projected to grow by 1,3% per annum, compared to 4% per annum over the last decade. The production of other oilseeds (rapeseed, sunflower seed, groundnuts) will grow at a slower pace at 1,2% per annum, compared to 2,8% per annum over the previous ten years (2010 to 2019).

Growth in other oilseeds is dominated by yield increases, accounting for 78% of production growth, compared to 66% of overall production growth derived from yields in the case of soya beans. Soya beans benefit from their fast growth, which allows for double-cropping production, especially in Latin America.

Brazil and the US are currently producing similar amounts of soya beans (around 115Mt in 2017 to 2019), but over the next decade, the projected growth in Brazil (1,5% per annum) should be stronger than in the US (0,6% per annum), mainly due to the possibility of increased cropping intensity by double cropping soya bean with maize. Overall, the production of soya beans is projected to grow strongly in Latin America, with Argentina and Paraguay producing 61 and 12Mt, respectively, by 2029.

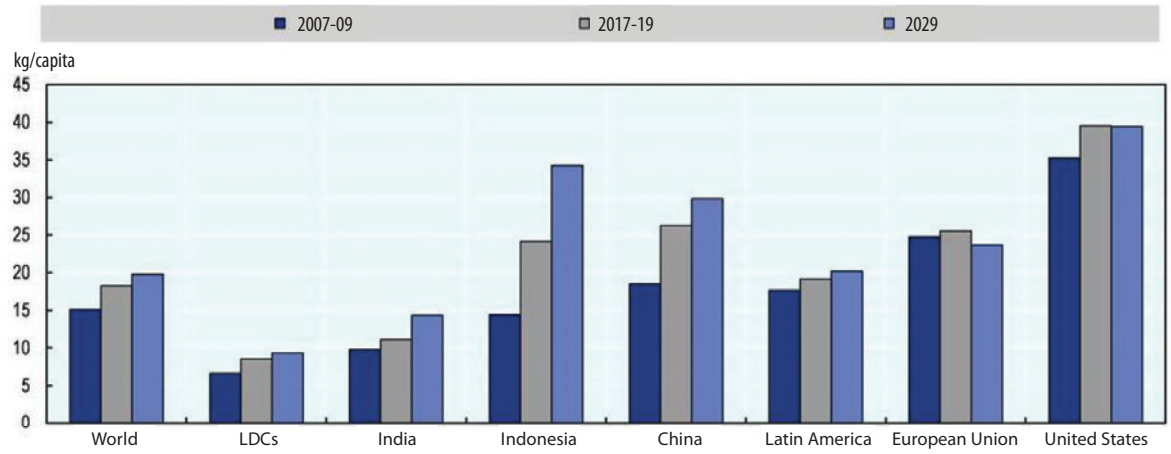
In China, after a decade of decreased production, soya bean growth is expected to resume in response to reduced policy support for the cultivation of cereals. Soya bean production is also expected to grow in India, the Russian Federation, Ukraine and Canada.

Soya bean stocks are projected to remain unchanged, which implies that the world stock-to-use ratio would decline from 12,4% from 2017 to 2019 to 11,3% in 2029. Given the global trend to gradually concentrate oilseed production in a few major producing countries, the declining stock-to-use ratio could result in increased price volatility.

Vegetable oil consumption

Due to saturated per capita food demand, per capita consumption of vegetable oil for food is projected to grow by 0,9% per annum, considerably less than the

Figure 2: Per capita food availability of vegetable oil in selected countries.



2,3% per annum increase observed from 2010 to 2019. In China (30kg/capita) and Brazil (24kg/capita), the per capita level of vegetable oil food availability is set to reach levels comparable to those of developed countries, for which growth in vegetable oil food consumption is projected to level off at 27kg/capita, growing at 0,6% per annum (*Figure 2*).

India, the world's second largest consumer and number one importer of vegetable oil, is projected to maintain a high per-capita consumption growth of 2,3% per annum, reaching 14kg/capita by 2029. This substantial growth will be the result of both expansion of its domestic production, crushing of increased domestic oilseed production, and a further increase in imports of mainly palm oil from Indonesia and Malaysia.

For least developed countries (LDCs), the per capita availability of vegetable oil is projected to increase by 0,8% per annum, to reach 9kg per capita by 2029. As urbanisation increases in developing countries, dietary habits and traditional meal patterns are expected to increasingly shift towards more processed food having a high content of vegetable oil.

The uptake of vegetable oil as feedstock for biodiesel is projected to increase at a considerably slower pace over the next ten years, compared to the 4,3% per annum increase recorded over the previous decade when biofuel support policies took effect.

Argentina is expected to maintain an export-oriented biodiesel industry. Vegetable oil uptake by Argentina's biodiesel industry is projected to be 3,1Mt by 2029, equivalent to 74% of domestic vegetable oil consumption (*Figure 3*). In Indonesia, the growth in the use of vegetable oil to produce biodiesel is projected to remain strong due to supportive domestic policies. Thus, Indonesia is the main driver for the increasing use of vegetable oil as feedstock for biodiesel in the world.

Protein meal consumption

Protein meal consumption is projected to continue to grow at 1,4% per annum, considerably below the last decade's growth rate of 3,4% per annum. The growth in protein meal consumption is closely linked to the development of feed demand, as protein meal is exclusively used as feed. Several factors influence the link between feed use of protein meal and animal production: intensification of animal production increases demand for protein meal, whereas feeding efficiencies led to a reduction of protein feed per animal production output; composition of animal husbandry and herd sizes are additional determining factors.

The link between animal production and protein meal consumption is associated with a country's degree of economic development. Lower income countries, which rely on backyard production, consume less protein meal, whereas higher income economies that employ intensive production systems use higher amounts of protein meal. As economies develop, production shifts towards more feed-intensive production systems, and protein meal consumption increases.

Because of a shift to more feed-intensive production systems in developing countries in response to rapid urbanisation and increasing demand for animal products, growth in protein meal consumption tends to exceed growth in animal production. In LDCs, where the use of protein meals is very low, intensification in livestock production with more widespread use of compound feed is expected to continue. With intensification, the use of protein meal per unit of livestock production increases considerably, leading to fast growth in total demand in these countries.

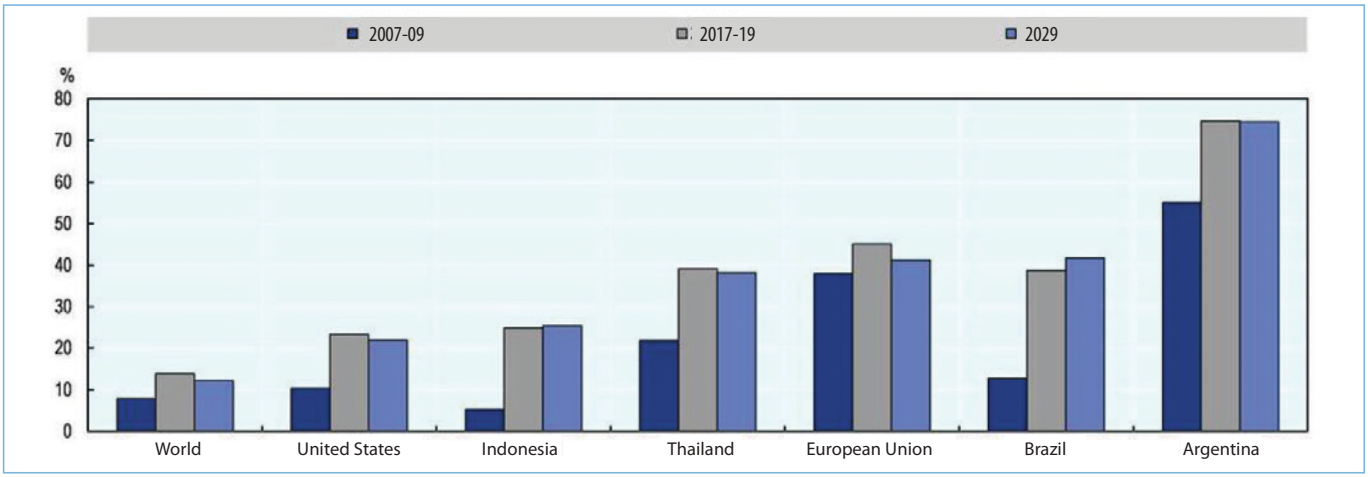
Trade

Over 40% of world soya bean production is traded internationally – a high share compared to other agricultural commodities. Compared to the previous decade, the expansion in world soya bean trade is expected to decelerate considerably during the outlook period. This development is directly linked to projected slower growth of the soya bean crush in China and subsequent imports. Chinese soya bean imports are projected to grow by 1,8% per annum to around 105Mt by 2029, accounting for some two-thirds of world soya bean imports.

Exports of soya beans originate predominately from the Americas and are projected to account for a stable 88% of world soya bean exports by 2029. Whereas the US was historically the largest global exporter of soya beans, Brazil has taken over that role with steady growth in its export capacity. By 2029, it is projected that Brazil will account for 48% of total global exports of soya bean.

Vegetable oil exports, which amount to 40% of global vegetable oil production, continue to be dominated by a few players. Indonesia and Malaysia are expected

Figure 3: Share of vegetable oil used for biodiesel production.



to continue to account for 60% of total vegetable oil exports during the outlook period. Argentina is projected to become the third largest exporter (mainly of soya bean oil), with around 7,4% of the world vegetable oil exports by 2029.

In all three countries, it is expected that more than two-thirds of the domestic production of vegetable oil will be exported. However, this share is projected to contract slightly in Indonesia and Malaysia as domestic demand for food, oleochemicals and, especially, biodiesel uses is expected to grow.

The projected growth in world trade of protein meal is around 0,8% per annum over the outlook period, down from 1,8% per annum during the last decade, and will be characterised by a declining share of trade in global production. This shift is projected as the global expansion of meat production will be concentrated in the main oilseed-processing countries, where the use of locally produced protein meal will increase, and thus trade will expand only slightly.

Main issues and uncertainties

The pandemic spread of the Covid-19 has resulted in a reduction of movement with strong implications for away-from-home consumption. This could affect demand for vegetable oil, which is widely used for deep-frying. In addition, the decline in economic activity, combined with reduced crude oil price, curb the demand for vegetable oil as biodiesel feedstock.

Most production and processing of oilseeds and products are highly mechanised, and labour mobility is of less importance. Nevertheless, some disruption in palm oil and coconut harvesting due to restrictions on mobility have been reported. In addition, the long-term implications depend on the speed of the economic recovery as vegetable oil consumption per capita grows strongly with economic growth and protein meal used as feed in the more elastic animal production.

Consumer concerns regarding soya beans stem from the high share of soya bean production derived from genetically modified seeds. In the EU in particular, certification schemes of animal products based on feed free of genetically modified products are gaining momentum and may shift feed demand to other protein sources.

Environmental concerns are also on the rise, especially with respect to a potential link between deforestation and increasing soya bean production in Brazil and Argentina. These concerns have motivated the private sector to incentivise the use of land already cleared for further area expansions and to refrain from additional deforestation. If successful, these voluntary initiatives should discourage further clearing of land by soybean producers.

The scope for increasing palm oil output in Indonesia, and especially in Malaysia, will increasingly depend on replanting activities and yield improvements. In recent years, growth in production has been sluggish given the low profitability of the sector and rising labour costs in Malaysia. There has been some replanting progress by major palm oil companies in Indonesia.

Sustainability concerns also influence the expansion of palm oil output as demand in developed countries favours deforestation-free oils and seeks sustainability certifications for vegetable oil used as biodiesel feedstock and, increasingly, for vegetable oils entering the food chain.

Certification schemes, labelling and environmental legislation might curb area expansion in key palm oil-producing countries and purchases by major importers, which would eventually affect supply growth. These concerns present specific constraints to the further expansion of oil palm plantations and exports of palm oil from Malaysia and Indonesia.

Protein meals compete in part with other feed components in the production of compound feed and are thus reactive to any change in cereal prices. In addition, changing feeding habits, especially in the cattle sector, can alter the demand for protein meals.

Ongoing adjustments in domestic cereal prices in China, for example, will affect the composition of its compound feeds, which currently contain a higher share of protein meal than in developed countries and other major emerging economies. The rate of recovery of the Chinese swine industry from ASF and Covid-19 will have a large influence on feed demand for livestock, as faster recovery of swine production requires more protein meal for feeding.

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