

Outlook 2022: Hell in the Handbasket

Agri Commodity Markets Research

RaboResearch
Food & Agribusiness



Rabobank

*Growing
a better world
together.*

Outlook 2022: Hell in the Handbasket

Agri Commodity Markets Research

Lead authors:

Agri Commodity Markets Research – London, UK

Carlos Mera

Head of ACMR

+44 20 7664 9512

carlos.mera@rabobank.com

Michael Magdovitz

Senior Commodities Analyst

+44 20 7664 9969

michael.magdovitz@rabobank.com

Andrew Rawlings

Commodities Analyst

+44 20 7664 9512

andrew.rawlings@rabobank.com

Contributing authors:

Don Close – St. Louis, US

don.close@raboag.com

Andy Duff – São Paulo, Brazil

andy.duff@rabobank.com

Ryan Fitzmaurice – New York, US

ryan.fitzmaurice@rabobank.com

Jane Foley – London, UK

jane.foley@rabobank.com

Mary Ledman – Chicago, US

mary.ledman@rabobank.com

Christine McCracken – New York, US

christine.mccracken@rabobank.com

Oscar Tjakra – Singapore

oscar.tjakra@rabobank.com

Editor: Patricia Geursen
Contributing editor: Carly Brown
Design: Julio Pijnappel

Marketing Communication

far.rabobank.com
www.rabobank.com

RaboResearch
Food & Agribusiness



Rabobank

Foreword

2021 has been a year of unprecedented challenges on different fronts. The world is still trying to shake off Covid-19 and its economic and social consequences, some of which are still largely uncertain. Through the pandemic, farmers have done an extraordinary job of keeping the world fed; traders have kept moving goods; and food processors and retailers have kept food on the shelves. We all take our hats off to them. It is clear that the F&A sector showed resilience during the past year. However, there have been numerous inflationary forces on agricultural commodity prices in 2021, ranging from erratic weather to generally very good global demand. Agricultural commodity prices have increased by around 28% in the last year and by 40% above pre-pandemic levels. The increase in agricultural commodity prices is also exacerbated by other inflationary pressures in the economy, such as the astronomical rise in gas prices ahead of the northern hemisphere winter, labor scarcity, rising rents, and a rapid increase in prices of inputs like fertilizer, crop protection products, and machinery, among others. Yet inflationary pressures are not the only challenge.

The global mindset around climate change has shifted and accelerated the race to net zero. Scope 3 accounting and reporting standards will result in more attention and investments along the supply chain to reduce greenhouse gas emissions. Furthermore, reviews of trade policy in several countries could incorporate an assessment of environmental standards in countries of origin in the years ahead, with uncertain consequences for the production and trade of agricultural products and farm inputs. We see this as a field of both challenges and opportunities for our clients.

The importance of managing risk is growing, and the ability to do so is an asset in our changing world. Rabobank is committed to making a difference, as a cooperative customer-driven bank and as a bank investing in the major transitions that are needed in society, such as the move to more sustainable and equitable food and energy systems. Solid and well-informed risk management is a part of business sustainability, and we hope you will find the current report useful for your decisions related to agricultural commodities. For consumers, the frequency of extreme climate events seen in 2021 – ranging from droughts to floods – makes it even more compelling to protect against potential further price surges ahead. Meanwhile, increasing costs for farmers threaten their profitability, even in the light of relatively high agricultural commodity prices. For these rural clients, a consistent risk management policy and access to risk management tools are also valuable assets.

With Rabobank's in-depth knowledge of agriculture, we would like to continue our ongoing efforts in growing a better world together with you, our valued clients.



Sincerely,

Berry Martin

Member of the
Managing Board



Rabobank

Table of contents



Sections

| | | |
|-----------------|--|----|
| 1 | <u>Key Takeaways</u> | 5 |
| | <u>Introduction</u> | 6 |
| 2 | <u>Agri Commodity Outlooks</u> | 12 |
| | <u>Wheat</u> | 14 |
| | <u>Corn</u> | 16 |
| | <u>Soybeans</u> | 18 |
| | <u>Soymeal</u> | 20 |
| | <u>Soy Oil</u> | 21 |
| | <u>Palm Oil</u> | 22 |
| | <u>Sugar</u> | 24 |
| | <u>Coffee</u> | 26 |
| | <u>Cocoa</u> | 28 |
| | <u>Lean Hogs</u> | 29 |
| | <u>Live Cattle</u> | 30 |
| | <u>Dairy</u> | 31 |
| Appendix | | |
| | <u>Balance Sheets</u> | 32 |



Global Agri Commodity Markets Outlook 2022: Key takeaways

In 2022, incipient dryness in the **US** Northern and Central Plains will combine with high input/fertilizer costs to threaten yields for grains like wheat and corn. Growing biodiesel and ethanol demand will put pressure on soy oil and corn supplies.

In **Europe**, low stockpiles of milling wheat and rising input prices threaten to limit farmer sales from this key exporter.

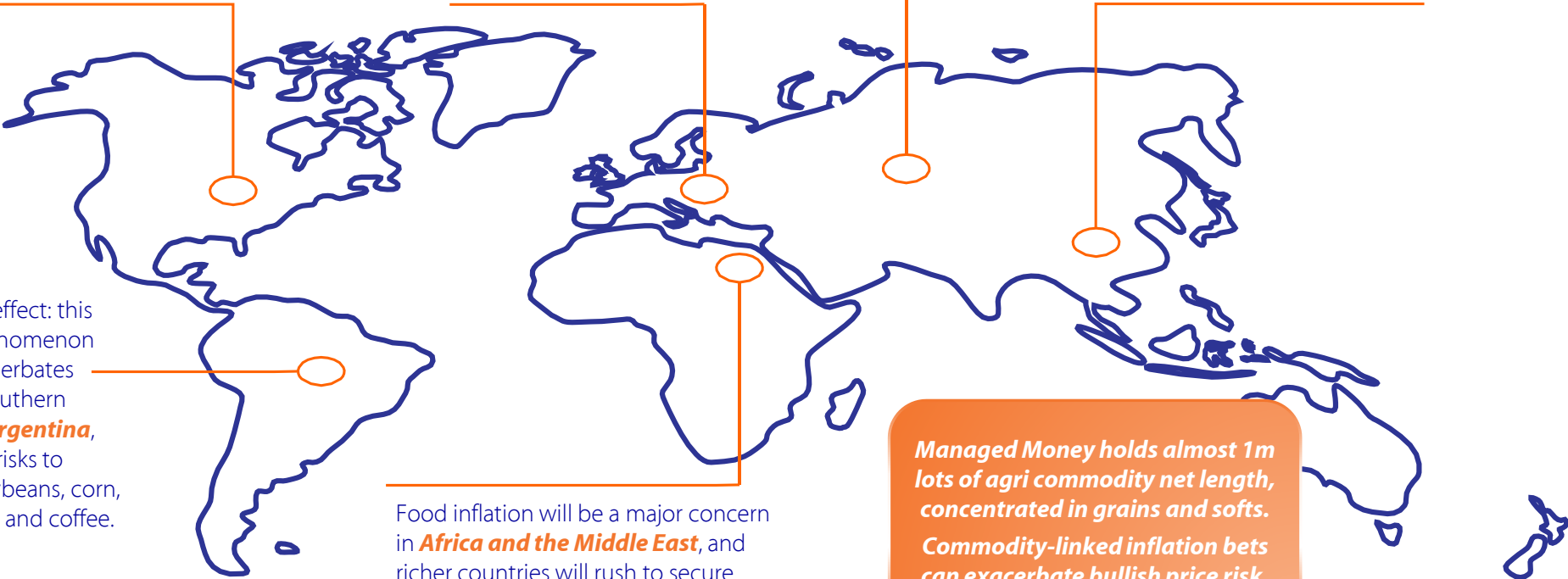
In **Russia**, export taxes threaten to limit the export potential from this wheat powerhouse and dampen a supply-side response to high prices.

China's world-beating feed grain import program is likely to continue in coming years, putting pressure on global supplies.

La Niña is in effect: this weather phenomenon typically exacerbates dryness in Southern **Brazil and Argentina**, posing yield risks to crops like soybeans, corn, cotton, sugar and coffee.

Food inflation will be a major concern in **Africa and the Middle East**, and richer countries will rush to secure supplies. Social discontent is likely.

Managed Money holds almost 1m lots of agri commodity net length, concentrated in grains and softs. Commodity-linked inflation bets can exacerbate bullish price risk.





Rabobank

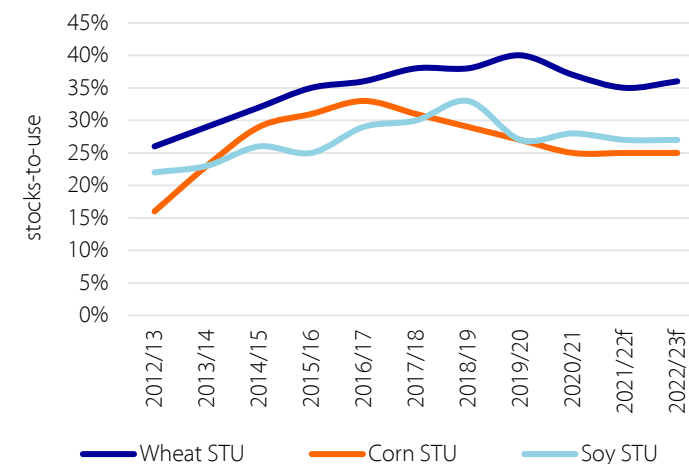
Introduction

After another puzzling year, 2022 will present challenges, but also opportunities.

The world is still fighting Covid and its economic and social consequences, which are still largely uncertain. Climate has been extreme in a number of geographies, with clear adverse effects on crops, and climate-change awareness is growing, potentially leading to higher demand for biofuels ahead. Generally, demand for agricultural commodities has been stellar, not only for consumption but also for 'just in case' stocks, putting pressure on supply chains that are already

stressed on a number of fronts. Inflationary pressures extend upstream to inputs and downstream to animal protein and the general economy. 2022 will likely bring fewer Covid-related disruptions, but when it comes to agricultural commodity prices, any sense of normalcy looks unlikely, and inflation in this space is almost certainly not just 'temporary.' Any significant drop in agricultural futures prices will likely be met by significant pent-up consumer hedging, which has been restricted in this period of high prices. 2022 will start from a position of low stocks in many agricultural commodities, which should lead to heightened volatility.

Global wheat, corn, and soy stocks-to-use have fallen, with a quick recovery unlikely



Source: USDA, Rabobank 2021

Food inflation likely to remain

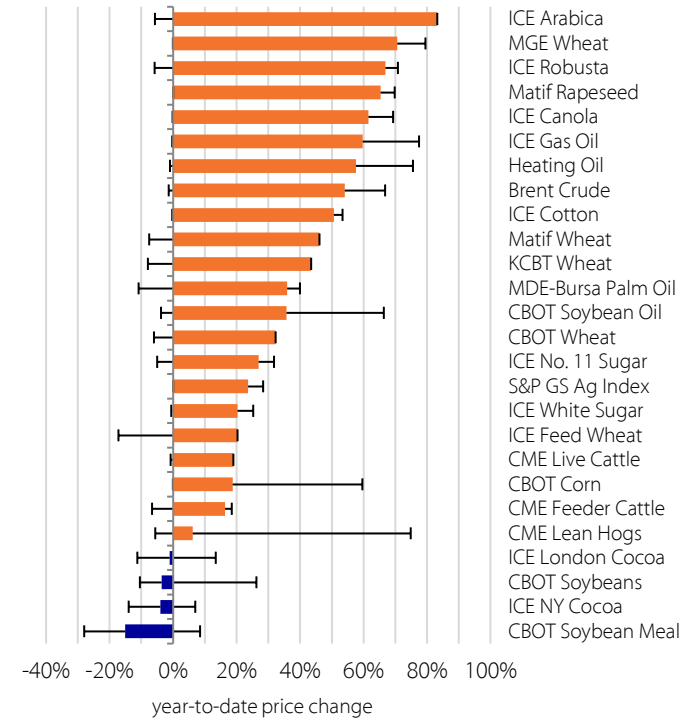
Like a spiral, the higher commodities prices go, the more buyers want to stock up, to avoid shortages and disruptions ahead and guarantee normal operations. For key food staples like wheat, exporting countries have been increasing export taxes to cool domestic prices, while importers have been trying to front-load their import programs to keep food inflation under check. Amid the pandemic – still peaking in parts of the world – keeping a good supply of agricultural commodities, and food staples like wheat in particular, is a critical government goal to avoid further discontent.

It is highly unlikely that food prices will go back to the five- or ten-year average in 2022, as commodity prices are now supported by inflation in the general economy, including high shipping costs (astronomical for containers), energy and fertilizer prices, as well as a shortage of labor in many countries. Urea prices in the US Gulf, for example, are up 272% YOY, posing questions about how much fertilizer will be used in places where farmers do not have access to finance and/or struggle financially. Global container prices are up 240% YOY (and 583% higher vs. two years ago), posing major headaches for the transport of coffee (among other softs), while bulk shipping costs are up by 132% YOY, making the trade of grains and oilseeds more expensive. Supply inelasticity is likely to continue as a result of expensive fertilizers, shrinking farmer margins, and limited acreage expansion.

As we move into 2022, an element of panic buying might subside in some commodities as vaccination rates improve, Covid-related deaths go down, and lockdowns become less likely, shorter, and/or less severe. With less strict social distancing measures, ports worldwide might be better able to cope with the backlog and increased demand. However, a ‘normalization’ of the supply chain in 2022 is unlikely, and players will have to find solace in just a bit of a price drop off historical highs, and hopefully fewer booking cancellations.

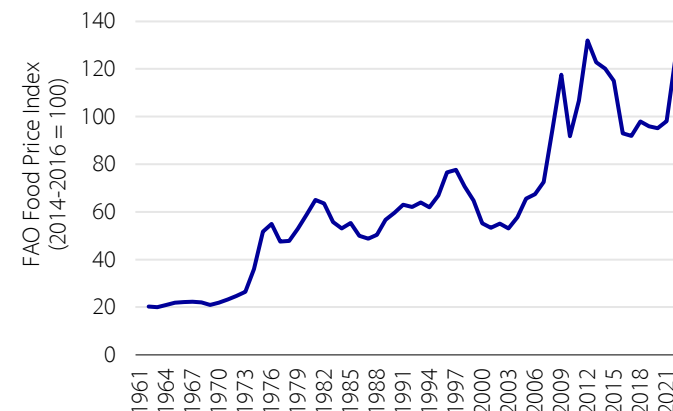
Higher farm input costs, expensive shipping, and good demand provide for a grim combination. We should see these inflationary pressures upstream move along the supply chain to reach consumers in 2022, with uncertain social consequences. The proportional increase in prices on supermarket shelves will of course be much smaller, as commodity prices are usually only a relatively small proportion of the prices of final goods. But social discontent is already being felt in a few countries, and more is likely to come in 2022.

A rising tide lifts all boats



Source: Bloomberg, Rabobank 2021

Rampant food inflation has left prices at their highest since 2011



Source: FAO, Rabobank 2021



Rabobank



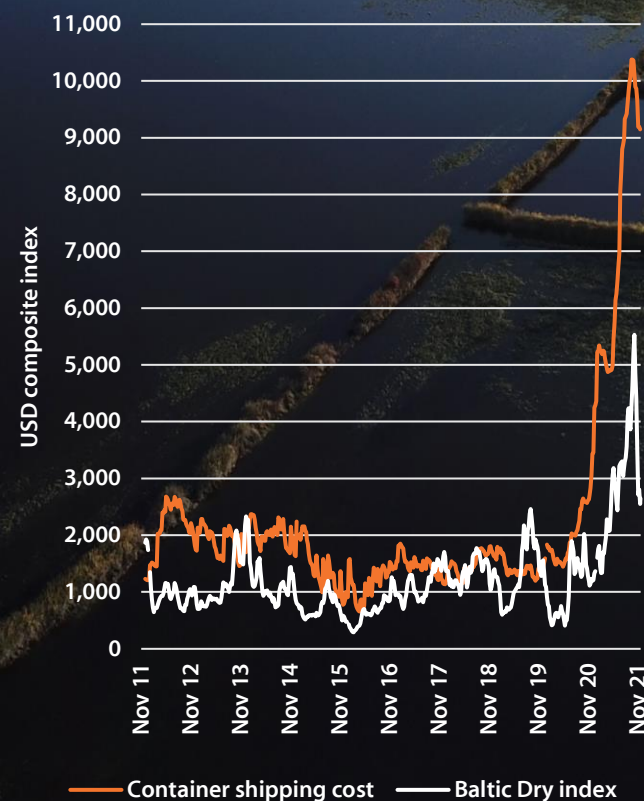
Rabobank

Weather will likely continue to be adverse

We are under La Niña conditions, the second such event in as many years, and the weather cannot be expected to be normal until Q2 2022 at the earliest. The last time agricultural commodity prices were this high was in 2012, after two consecutive La Niña events (between mid-2010 and mid-2012). La Niña is clearly a bullish influence, as it correlates with dryness in Argentina (already present in the last few months), the south of Brazil, and the southern part of the US. These three countries already saw significant droughts in the last year, though not necessarily correlated with La Niña – but likely exacerbated by it. The safrinha corn crop in Brazil shrank by more than 20% because of dryness in the south of the country. The sugar and coffee crops also suffered from the dryness in Brazil, which affected not only the 2021/22 crops but also 2022/23 crops. October and November rainfall has been excellent in most agricultural areas of Brazil, but there is a risk that La Niña might create further dryness ahead.

We have seen also weather events not necessarily correlated with La Niña. On top of an extended drought, Brazil saw the worst frost in over two decades on July 20, 2021. It impacted coffee in particular and, to a lesser extent, sugarcane. North America is still suffering under a major drought that started in the west in late 2020, but extended to the north in mid-2021, slashing spring wheat production in the US by 40% (as well as adversely affecting Canadian spring wheat and canola). This drought is likely to expand into Kansas and the surrounding areas in the coming months, threatening the development of winter wheat. Europe saw strong rainfall and some flash floods over the summer that affected the quality of wheat, with Matif Wheat reaching record highs recently, despite the fact that total volumes of wheat saw a clear increase year-on-year. Europe as a whole and Canada broke maximum temperature records, leading us to worry about the frequency of extreme weather events in the future. In the short term, however, the risks are salient: low stocks in a number of commodities will make it hard to absorb further supply shocks, resulting in demand being rationed.

Shipping costs still contribute to inflation



Source: Bloomberg, Rabobank 2021

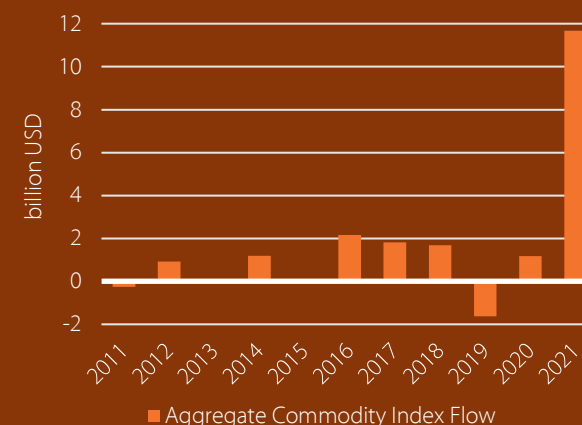


Rabobank

Energy and oil markets flying hot into 2022

The outlook for the broader energy markets, and oil markets in particular, is quite promising heading into 2022. For starters, global oil demand has bounced sharply higher from the pandemic lows, and growth is now penciled in for next year as air and sea travel normalize. On top of that, oil demand expectations for this winter have increased anywhere from +500,000 bbl/day to +1m bbl/day, following the explosive rally witnessed in global natural gas prices during the second half of this year, which will result in more oil being used in power generation given current economics. On the supply side, OPEC+ is in full control of the market and has gained increased pricing power given US crude oil production remains 1.7m b/d below the pre-pandemic highs. Furthermore, US shale drillers are facing mounting inflationary pressures across their budgets, ESG investor pressures, and political headwinds at home. Moreover, the sharp rise in consumer inflation has triggered meaningful inflows into commodity index products this year, as large asset allocators look to mitigate growing inflation risks to bond- and equity-heavy portfolios. This is a trend we only expect to accelerate next year as institutional fund managers chase what looks like very strong commodity returns for the current year. Importantly, oil markets will be on the receiving end of a large portion of those capital inflows, given that energy markets hold a very high weighting in most commodity indices, providing a strong investor tailwind in addition to the tight fundamental balances at play.

Commodities are a favorite for investors in 2021, with energy gaining a lot of attention. High volatility is likely



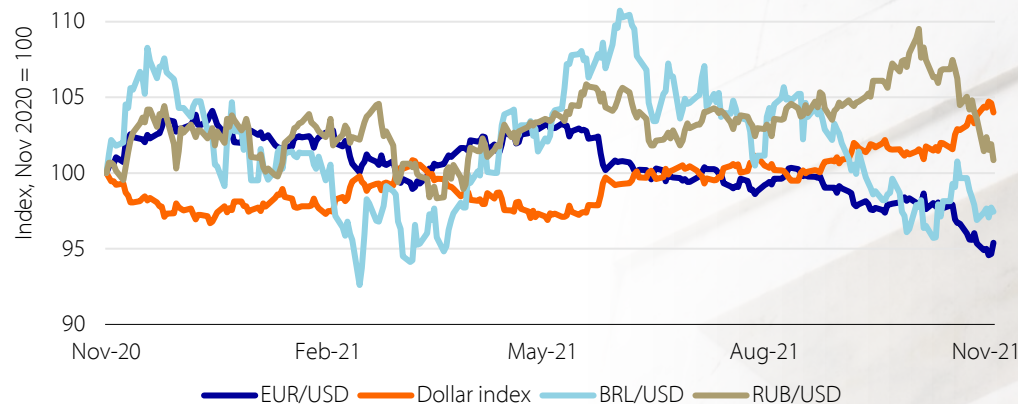
Source: Bloomberg, Rabobank 2021

Currencies: the (further) rise of the dollar

With recent positive US economic data and the possibility of a Fed rate hike in 2022, we expect that the USD will be a favored currency in the months ahead. A strong economic recovery in the US should provide a positive impulse to the global economy. However, the USD's dominance in the global payments system has always meant that a stronger USD has unwelcome secondary implications likely to impact developing nations in particular. Most obviously, the prices of commodities denominated in USD have an inverse relationship to movements in the dollar. Clearly, this has implications for the external trade accounts of commodity exporters, many of whom are emerging economies.

The negative impact of USD strength is significantly larger in countries that are more exposed to changes in global credit conditions, because of high foreign investment in local currency bond markets or high dollar debt. USD-denominated debt issued by emerging markets surged in 2020 after the Federal Reserve slashed the FFR to zero and the value of the USD dropped. The Bank for International Settlements reported last October that dollar-denominated debt in emerging markets had risen past USD 4 trillion for the first time, with credit to Africa and the Middle East registering the highest growth in the first months after the start of the pandemic. The pace of growth in USD-denominated debt in emerging Asia-Pacific and in Latin America was also strong. That said, broadly speaking, the large rise of USD-denominated debt should provide some headwind to growth in emerging markets in an environment in which US rates are headed higher and where the USD is appreciating.

US dollar expected to strengthen in 2022



Source: Bloomberg, Rabobank 2021



Rabobank

A golden wheat field at sunset with a combine harvester and tractor working. The sun is low on the horizon, casting a warm glow over the scene. The sky is filled with soft, golden light, and the wheat stalks in the foreground are in sharp focus. In the background, a combine harvester and a tractor are visible, working in the field. The overall atmosphere is peaceful and industrious.

Agri Commodity Outlooks

Outlook 2022: Hell in the Handbasket

Rabobank

Rabobank's quarterly agri commodity average price forecasts for 2022



| Commodity | unit | Q1'21 | Q2'21 | Q3'21 | Q4'21e | Q1'22f | Q2'22f | Q3'22f | Q4'22f |
|-----------------------------|---------|-------|-------|-------|--------------|--------------|--------------|--------------|--------------|
| Wheat (CBOT) | USc/bu | 646 | 680 | 698 | 788 | 820 | 810 | 750 | 750 |
| Corn (CBOT) | USc/bu | 538 | 659 | 560 | 570 | 585 | 590 | 595 | 585 |
| Soybeans (CBOT) | USc/bu | 1,388 | 1,497 | 1,361 | 1,260 | 1,270 | 1,275 | 1,280 | 1,265 |
| Soy oil (CBOT) | USc/lb | 48 | 63 | 62 | 60 | 60 | 59 | 59 | 58 |
| Soymeal (CBOT) | USD/t | 426 | 400 | 352 | 345 | 348 | 350 | 347 | 345 |
| Palm oil (MDEB) | MYR/mt | 3,634 | 3,892 | 4,245 | 4,914 | 4,700 | 4,500 | 4,300 | 4,300 |
| Sugar (ICE #11) | USc/lb | 15.5 | 16.9 | 19.4 | 19.5 | 20.0 | 20.5 | 20.8 | 20.8 |
| Arabica coffee (ICE) | USc/lb | 129 | 147 | 181 | 220 | 200 | 178 | 174 | 166 |
| Robusta coffee (ICE) | USD/mt | 1,372 | 1,512 | 1,918 | 2,197 | 2,000 | 1,880 | 1,820 | 1,800 |
| Cocoa (ICE NY) | USD/mt | 2,496 | 2,436 | 2,519 | 2,587 | 2,580 | 2,630 | 2,680 | 2,710 |
| Live Cattle* | USD/cwt | 117 | 119 | 123 | 130 | 134 | 142 | 141 | 147 |
| Lean Hogs (CME) | USc/lb | 80 | 111 | 98 | 78 | 80 | 88 | 89 | 78 |
| Dairy (WMP**) | USD/mt | 3,652 | 4,093 | 3,750 | 3,950 | 4,000 | 4,000 | 3,850 | 3,750 |

* US Five-Market Fed Steer Price

**WMP FOB Oceania

Our price forecast methodology

A range of quarterly price forecasts is presented throughout this outlook. The 'base case' represents the most likely price trajectory in our view, given a set of drivers discussed. However, agri markets are inherently volatile and influenced by a range of both probable and unforeseeable factors. We discuss the range of price scenarios with a lower probability of being realized in the high- and low-case price scenarios. These high and low cases represent potential quarterly average highs and lows, and not a daily high or low. Price forecasts current as of November 25, 2021.

Wheat

La Niña, low exporter stocks, and panic buying

12-month outlook



Wheat, as a food staple, is the commodity where any potential shortage causes fear.

High wheat prices have even been considered a contributing factor to both the Arab Spring and the French revolution. The world has not fully recovered from Covid-19 and its economic and social consequences, leading, in many places, to popular discontent. And, with that as a backdrop, many governments are not comfortable seeing wheat prices surge. Besides a series of droughts and heatwaves around wheat-producing regions in 2021/22 (often coinciding with the usual effects of La Niña), export taxes were introduced – and later raised – in Russia, a key exporter, at a time when importing countries were competing for available wheat. Also, the astronomical rise in fertilizer and crop protection product prices causes concern about their use in 2022, especially in countries that are not major producers and/or have lackluster infrastructure. To some extent, 2021 will finish with an element of panic buying and fear, but the rate of vaccinations will continue to rise in 2022, hopefully leading to fewer disruptions along supply chains ahead. Also, there is every incentive for North American spring wheat plantings to expand and save the day in 2022, but, of course, the market will see tightness before the spring crops are harvested in the northern hemisphere.

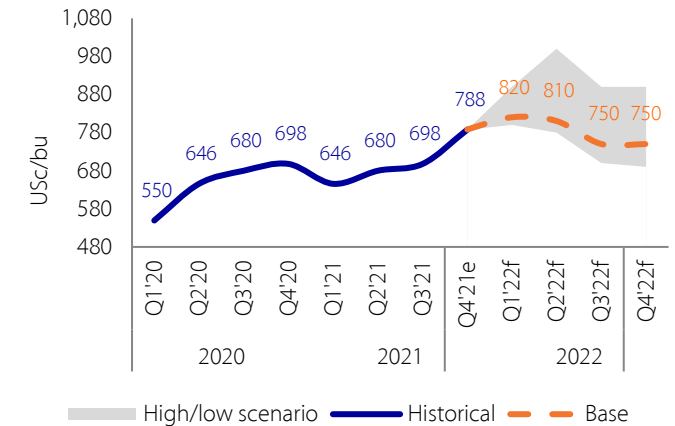
A small increase in global wheat production in 2021/22, of around 4m mt, is dwarfed by a 19m mt increase in demand, resulting in the largest deficit since 2012/13, at 11.5m mt. Furthermore, quality has suffered significantly, given lower spring wheat supplies, as a major drought and heat wave decimated the US and Canadian 2021/22 spring wheat harvests, and rainfall during the harvest affected the quality of the EU and Australian crops.

Dryness is still present in parts of the US and in the Russian winter wheat belt, and some moisture will be needed before the 2022/23 crops go into the winter. La Niña could exacerbate the dryness over the southern part of the US, further affecting winter crop development and probably leading to winter kill issues.

Base case

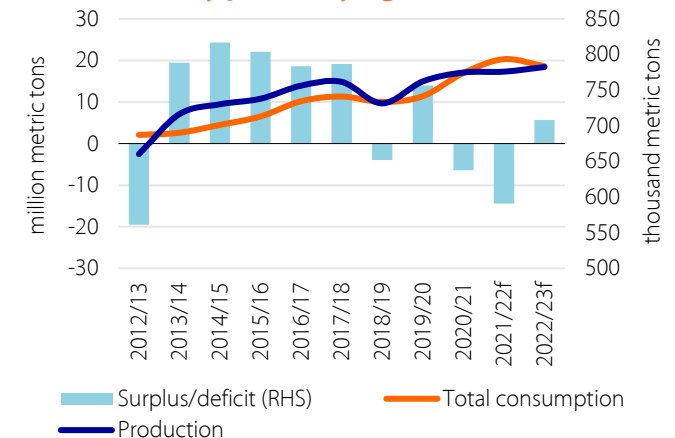
Our base case for 2022/23 shows a small surplus in the global balance sheet after two years of deficits, but it will take more than half a year for this to materialize. Despite excellent prices, production is expected to increase only marginally, and it will be the drop in demand for feed wheat that will allow that surplus to emerge.

After a period of panic buying, prices are likely to go down a little, especially in 2H 2022



Source: Bloomberg, Rabobank 2021

The global S/D deficit in 2021/22 has been exacerbated by panic buying



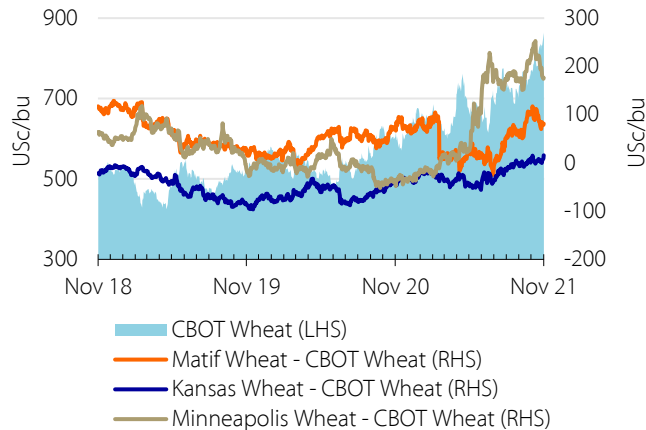
Source: USDA, Rabobank 2021

Wheat

12-month outlook

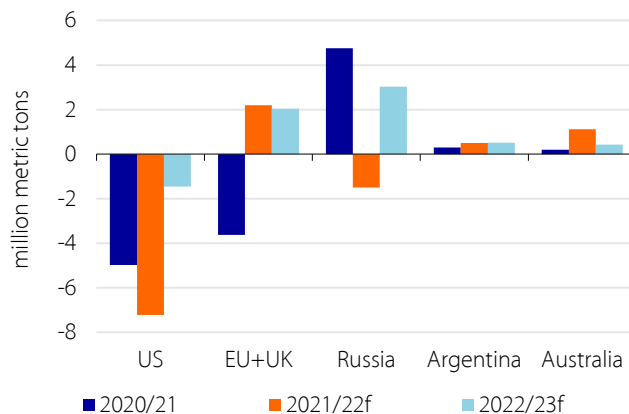


A disastrous US spring wheat crop and low quality in the EU strengthened the protein premium



Source: Bloomberg, Rabobank 2021

Big depletion of US stocks is not likely to be reversed in 2022/23



Source: USDA, Rabobank 2021

High input costs will likely keep yields from their full potential, while global weather will continue to be influenced by La Niña, potentially exacerbating drought conditions in the US winter wheat heartland. We expect both US winter and spring wheat acreage to expand by a combined 2.1m acres, or 4.5%, but yields might not be stellar under the current weather conditions. We estimate 2022/23 US production to climb to 2020/21 levels, at 1.8bn bu.

Russian wheat production seems to have suffered under the export tax uncertainties in 2021/22, and it will likely continue to do so in 2022/23. Therefore, we assume some limited recovery in wheat production, to 79.5m mt. Farmers may have some stocks available for sale, and they will likely sell if they believe quotas or higher taxes will be introduced in the future. For now, with high inflation and current export taxes, farmers may decide to build some stocks.

The European Union will also likely see area expansion, following strong exports and record Matif Wheat prices, but dryness is a concern. 2021 saw record temperatures in Europe, and even though heat was not a big issue for wheat this time, the chances of summer heat waves seem to be increasing. With some dryness already occurring, we estimate EU+UK production at 150m mt, down 4m mt from 2021.

High case

La Niña could cause more dryness in the US, affecting winter wheat development and exacerbating existing dryness. With high wheat prices, Russia could introduce export quotas on top of their existing export taxes. Also, Argentina could hike export taxes in an attempt to contain domestic food price inflation, and it is not a given that Australia will harvest a third very good crop in a row in 2022/23. Middle Eastern countries, especially those enjoying high oil export revenues, could also accelerate their wheat buying. In this scenario, we see wheat prices going to USD 10/bu by mid-2022.

Low case

After some panic buying, the world might find itself with more wheat than expected. Having trebled imports in the last two years, China could import a little less, given that wheat is not competitive in the feed mix anymore, and this may be the case for some time to come. Furthermore, the 2022/23 Russian crop could fully recover, especially since the export ban on fertilizers might make fertilizers more available domestically. A Russian crop of 85m mt, like the one in 2020/21, could flood the market and depress prices.

Corn

High-priced inputs may restrain supply growth and farmer sales



12-month outlook



The northern hemisphere corn harvest is complete, and its golden kernels are demanding a king's ransom.

In a Covid-comeback story for the ages, CBOT Corn prices rode a 75% gain from April 2020 through to a May 2021 peak, before settling in a lofty mid-USD 5/bu range (+45% YOY) that could endure for the coming two years.

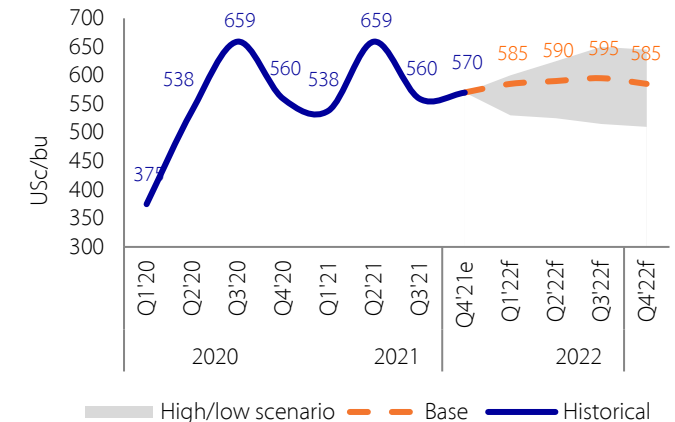
CBOT Corn's climb has been powered by irrepressible demand for low, inelastic supplies. Over the next two years, these tailwinds do not stand to weaken much; global exporter stocks will remain, at best, one-third below historic levels, creating a sturdy foothold for CBOT Corn above USD 5.00/bu.

The 2022/23 season will offer farmers the opportunity to respond to soaring prices, but margin-squeezing inflation – for fertilizer, seed, machinery, labor, and rent – will hamper expansion, yields, and farmers' selling enthusiasm. Rising input costs and intense crop competition will limit corn farmers' ability to match growing demand. Global corn stocks-to-use looks to languish near nine-year lows of 25% through 2023, and elevated price risk will accordingly remain a challenge for consumers.

Base case

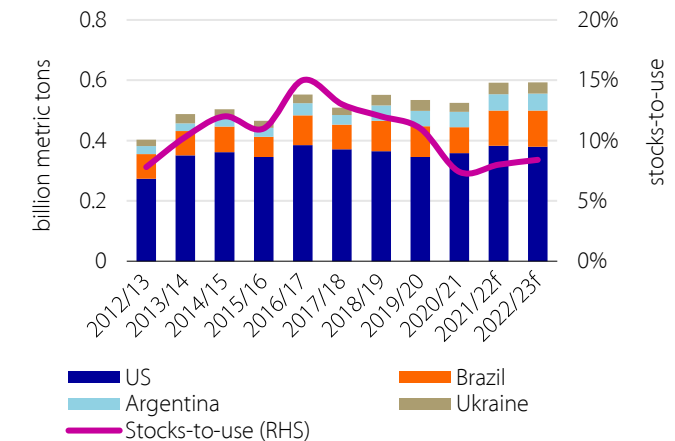
Our base forecast for CBOT Corn is bullish for a second consecutive year, albeit more modestly, reflecting historically high prices. We see consolidation near USD 5.90/bu in 2022, as harvests are fully drawn upon to sate long-repressed global demand. CBOT Corn's commercial net positioning last month touched its seasonal lowest in ten years; uncovered buyers and oversold farmers will keep price breaks elusive. China's corn import primacy (2020/21 imports were approximately 29m mt, +22m mt YOY) will ease only slightly next year, as domestic production constraints (in acreage, yield, and quality) and lower wheat use will require continued dependence on global supplies. US 2021/22 corn export sales commitments are front-loaded, as the crop failure of the second-largest exporter, Brazil (approximately 85m mt production, -18% YOY), leaves it unable to relieve demand pressure until 2H 2022. Ukrainian and Argentine exports will be stretched thin, and the US will once again be called on to shoulder over one-third of a global corn trade that is growing in response to the Covid-19 recovery, as well as a deep USD 2.50/bu discount to wheat.

CBOT Corn's trajectory maintained, as soaring input costs and demand keep pressure on supplies



Source: Bloomberg, Rabobank 2021

Major exporters' corn supply expansion constrained by high fertilizer prices



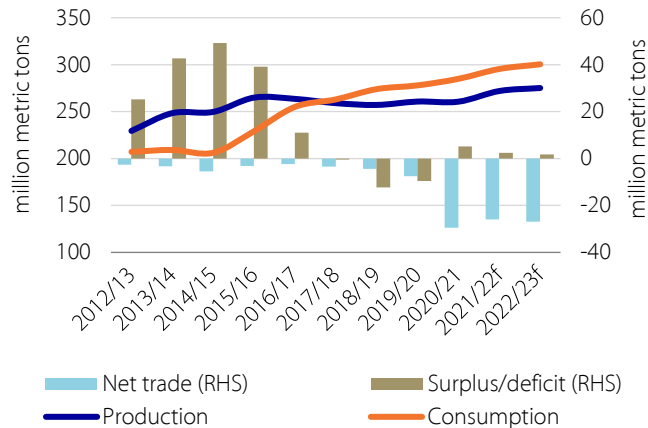
Source: USDA, Rabobank 2021

Corn

12-month outlook

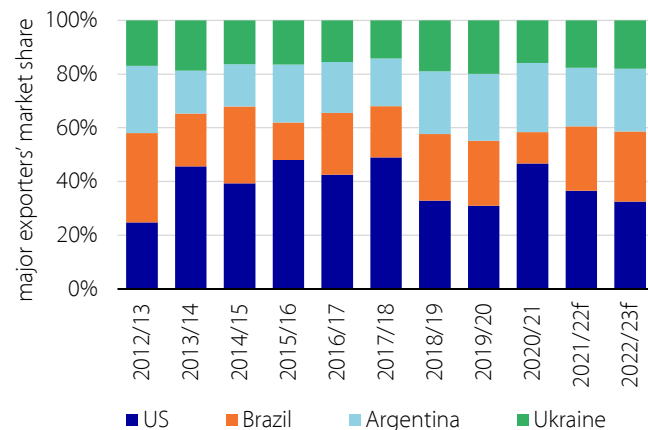


China's world-beating corn imports will continue as rationed demand is unleashed



Source: USDA, Rabobank 2021

Brazil's harvest recovery in 2H 2022 would provide relief for stretched US export demand



Source: USDA, Rabobank 2021

The ongoing US ethanol demand renaissance will bring greater competition to the export market and push US corn demand in 2021/22 to a record 14.98bn bu. Production will barely exceed use, leaving ending stockpiles near 1.35bn bu.

Supply inelasticity will be the main contributor to CBOT Corn price support through 2023. In the US, Rabobank expects 2022/23 corn acreage will fall to 91.8m acres (-1.5m acres YOY) as input-squeezed margins, unfavorable crop rotations, and competition outweigh CBOT Corn's high price and historically advantageous ratio to soy. Yields are seen at 178.0 bu/acre (+0.5% YOY), below trend for a fourth straight year, due to price-restrictive inputs and residual dryness. US demand cuts (-125m bu YOY), largely dependent on a replenished Brazil's export relief, will allow stockpiles to grow to 1.45bn bu. The 2022/23 US stocks-to-use level will remain snug at 9.8%, one-third lower than 2013-2020. Our base view sees further consumer pain, as low global stocks and high input inflation will make corn farmers reluctant sellers.

High case

Our high case, which came to fruition last year, foresees demand denied once again by a scarcity event. La Niña-afflicted South America or disrupted US harvest could see production losses of 30m mt, with yield losses somewhat offset by larger acreage. The

US's position as global corn reserve will be undermined by low carry-in stocks; half of the global production shortfall will be absorbed by US buffers and the remainder by rationed demand. Global importers will scale back imports. CBOT Corn prices will remain near USD 6.50/bu, reflecting the global scarcity risk and incentivizing demand to wait for better harvests ahead.

Low case

Successful 2022 corn production expansions in the Americas and eastern Europe would push CBOT Corn towards USD 5.15/bu by Q3 2022, where it would remain steady. A near-term bear market is unlikely, with high input inflation and Argentina the only exported harvest before Brazil's July safrinha crop. A rise in 2022/23 exporter corn availability and stocks-to-use (9.1%, +14% YOY) would deflate CBOT Corn price risk and existing speculation, though not near levels seen in 2013-2020 – that will take another year or two. Similarly, a renewed trade war between the US and China would only afford a modest price cut, given the >12m mt in sales already booked for 2021/22. As availability grows, global demand would strengthen with it (+1.5% in 2022/23). CBOT Corn's support is solid, and the low case for prices is still relatively elevated vs. historic levels. Corn demand can absorb added availability in 2022/23.

Soybeans

Exporter soy supplies improve from their low base



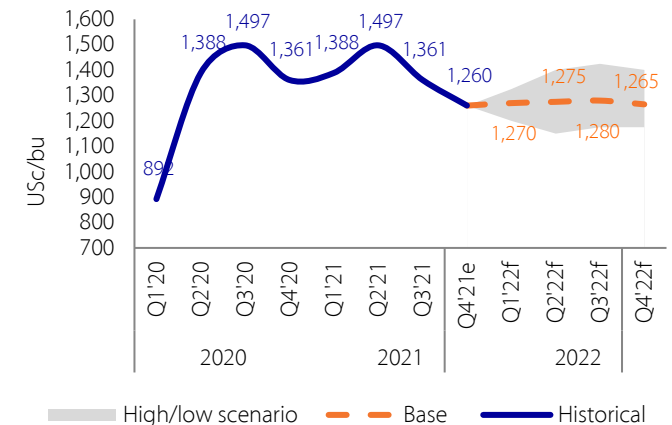
CBOT Soybeans' dramatic arc may be nearing its end, to the satisfaction of price-repressed global consumers. In Oscar-worthy fashion, the 2020/21 crop year introduced US supplies under siege by unrelenting, evolving demand led by China. The front-loaded 35% annual rise in US exports (a record 2.265m bu) roughly halved the stocks-to-use ratio for a second consecutive year, down to a mere three weeks' worth of supplies, and raised CBOT Soybeans as much as 50% to nine-year highs in May. Prices have regressed 35% since, thanks to a successful 2021/22 US soy harvest (+5% YOY) and softer, diversified Chinese soy procurement. A Hollywood-like discovery of a US soybean treasure trove (September supplies were 82m bu above expectations) further helped raise 2021/22 ending stockpile expectations by 185m bu since August to more comfortable levels. In 2022, a lightning-quick Brazilian harvest and higher US planted acres could accelerate CBOT Soybeans' denouement. Tail risks are shrinking – from Brazil to China – but soybean consumers must remain wary of inflation-tightened farmer margins and scarce grain/cotton stockpiles that require CBOT Soy to remain price competitive in the crop rotation for the coming years.

Base case

Our neutral base view for CBOT Soy may appear anticlimactic to readers, especially relative to our supreme bullishness from last year, but high price levels and negative demand sentiment make a repeat of 2021's outbreak unlikely. Our base case for soy sees prices trading between USD 12.50/bu and USD 13.00/bu next year, as supportive external factors offset a modest rise in global stockpiles to more manageable levels. China's crush margin recovery will drive higher procurement of 100.5m mt (+0.7% YOY), as soymeal demand may benefit from higher and less wheat-intense feeding. In South America, inflation and La Niña dryness will restrain production growth and farmer sales, particularly in Argentina. US 2021/22 ending stocks will finish at 380m bu (+48% YOY but 11% below the 2014-2020 average), amid decent exports and strong crush demand, especially for soy oil-based biodiesel.

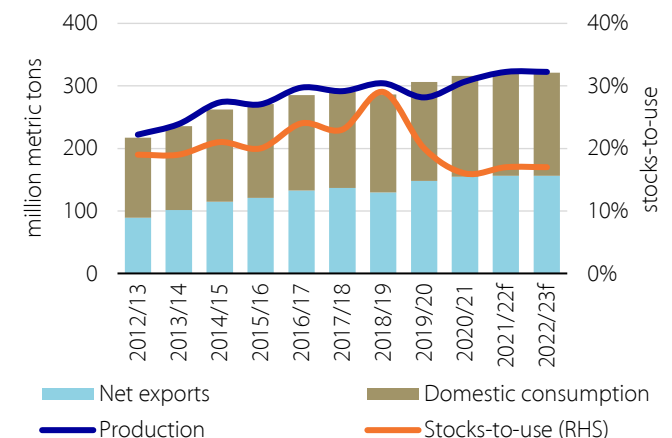
CBOT Soy competitiveness is challenged by bedfellows corn, cotton, and spring wheat, but its favorable rotation and nitrogen-fixing properties will raise its 2022/23 planted area to 88.2m acres (+1.0m acres). US farmers will demand a premium for their soy; low margins will leave them wary sellers below USD 12.00/bu. CBOT Soy is unlikely to see much easing from the Q1 2022 South American

CBOT Soybeans' tail-risks are shortening slightly ahead of the expected South American resupply



Source: Bloomberg, Rabobank 2021

Major soy exporters' stocks/usage will rebound in 2021/22, but remain well below historic levels

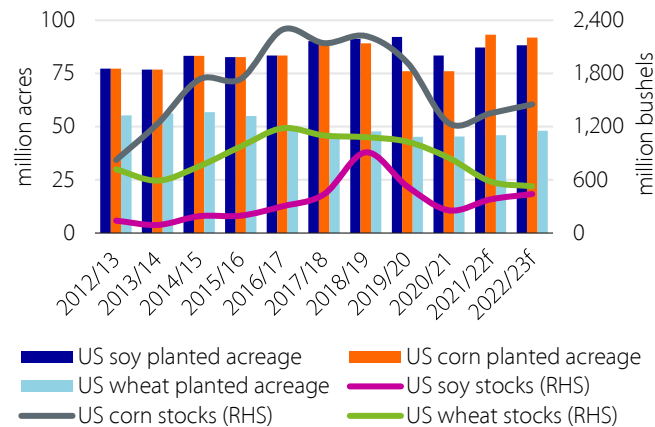


Source: USDA, Rabobank 2021

Soybeans

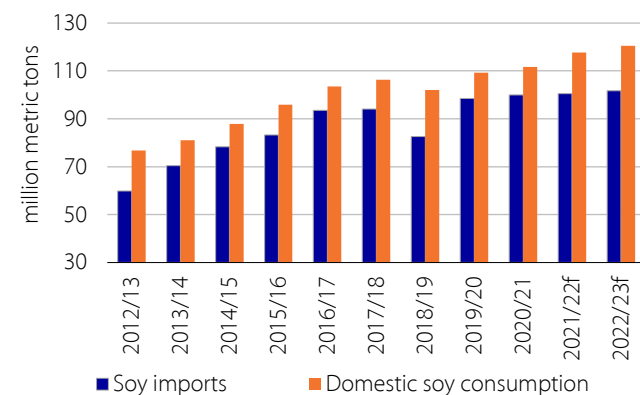


High fertilizer prices advantage soy and wheat vs. corn in the 2022/23 US acreage rotation



Source: USDA, Rabobank 2021

Growth of China's soy imports will stagnate amid lower pork prices and grain-intensive feed rations



Source: USDA, Rabobank 2021

harvest, tethered as it is to rising inputs and CBOT Corn prices. Once northern hemisphere summer crop farmers successfully plant acres in Q2 2022, CBOT Soy prices will fall, with greater pressure exerted at harvest in Q4. An equilibrium could form just north of USD 12.60/bu. US 2022/23 exports and crush demand will continue to benefit from post-Covid demand recovery, and its stocks accumulation will be modest (+60m bu YOY to 440m bu). CBOT will remain supported to encourage farmers' sales.

High case

Any strong bull case for CBOT Soybeans is neutered by the improvement in US stockpiles and limited demand growth from China's animal feed producers, whose broader switch to a more grain-intensive feed ration comes at the expense of soymeal. The upside risks for CBOT Soybeans are primarily from La Niña, whose dangers are mitigated by early, large plantings across Brazil and Argentina. A moderate La Niña event could lead US stockpiles to absorb an additional 150m bu, drawing its ending stockpiles down to a bare 230m bu. CBOT Soy prices could conceivably touch USD 14.25/bu, though not much higher given lackluster global demand. US 2022/23 soy acreage would rise to 89.5m acres in response, and a modestly successful harvest would ebb CBOT Soy levels towards USD 14.00/bu into 2023, until supplies enjoy a reflation in early 2024.

Low case

Our low case paints a strong South American soy harvest or a repeat breakdown in trade relations between the US and China that causes the latter to engage in draconian replacement of soymeal inclusion in feed. Under either of those scenarios, CBOT prices could decline towards USD 11.75/bu, although they would remain about 30% above historic trade-war levels. The reason is a front-loaded US sales program to China and low US ending stockpiles into 2023. If Chinese demand suddenly evaporated, or South American supplies improved, it would be too late to impact the current season; US commitments are already ~60% of the USDA's full-year export expectations, roughly in line with the five-year average. Finally, it's unclear where massive bearish sentiment would come from; farmers (in North and South America) are wary of rising input inflation, and Non-Commercials are sitting in a neutral position. US farmers have plenty of time to adapt to our bearish scenarios with unchanged 2022/23 plantings of 87m acres in favor of scarce corn, cotton, and wheat. Rabobank is wary of a trade war for 2022/23, but CBOT Soybeans has good fundamental support for the current season.

Soymeal

Elevated grain prices provide modest demand switch upside



12-month outlook



CBOT Soymeal was set to be the odd commodity out in an otherwise very bullish year for CBOT G&O, before a torrid November rally left it up 1% YOY. Soymeal's divergence with its co-product, soy oil, has been historic, with soymeal's value of crush margin falling to 13-year lows in September, near 50%, despite making up 80% of its volume. Bereft of soy oil's evolving, alternative uses, soymeal has been at the mercy of China's usage (typically 30% of global demand). China's soymeal demand will grow but offers no panacea for CBOT bulls; concerted efforts are in place to achieve a less soymeal-intense diet in animal protein. Prices of grains, like wheat, have risen much faster than soymeal. Consumers may drive a pendulum-like swing back from products like wheat towards corn or soymeal. Still, CBOT Soymeal's bullish price risk appears muted.

Base case

Our base case for CBOT Soymeal is slightly bearish, amid a 2021/22 surplus in exporting countries' soybean stocks (+2.3m mt YOY). Mid-single-digit Chinese soymeal demand growth, amid low crush margins and a predilection towards grains, combine with a good South American exporter harvest (+5.5% YOY) to block CBOT Soymeal's concerted attempts above USD 350/t. Higher US crush margins and output provide some support for

demand, thanks in large part to the soy oil frenzy. High grain prices also pull demand back to soymeal into 2021/22. Greater US soy availability in 2021/22 is a relief for consumers and tempers our price outlook to USD 350/t.

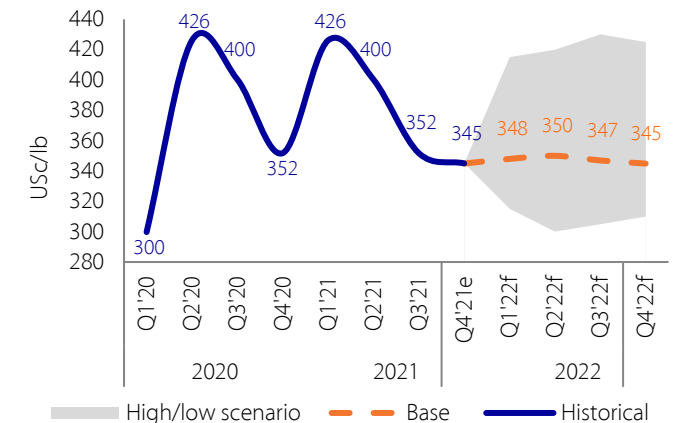
High case

Our high case involves weather issues in South America, concentrated on higher La Niña risk in Brazil and Argentina. Dryness-linked production losses of 6m mt will drive scarcity in soy by-products, with US supplies needed to avoid global rationing. CBOT Soymeal will rise to USD 430/t, before declining on demand destruction, looser Argentine farmer supplies, and US soy acreage expansion for the 2022/23 season.

Low case

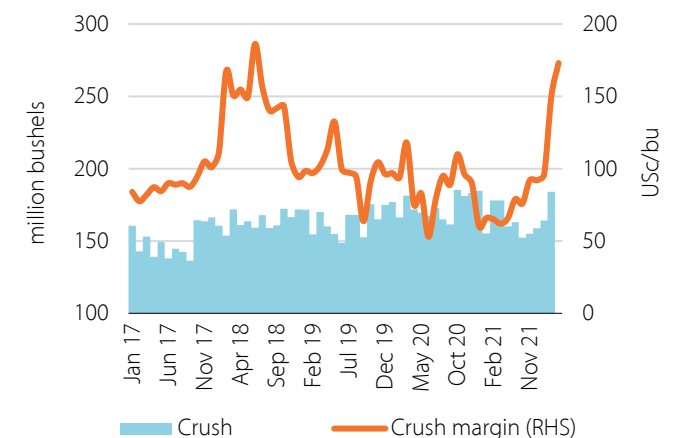
US-China trade embargos could accelerate China's shift to South American beans and lower soymeal inclusion in herd diets. Without its main trade partner, US soy stockpiles would inevitably rise, with bearish ramifications for CBOT Soymeal. An excellent harvest in Argentina, combined with strong crush, would achieve a similar result by cutting record US soymeal exports. A front-loaded US soy 2021/22 program and Argentine farmer inflation concerns would minimize CBOT Soymeal price risk downside to USD 300/t and leave 2022/23 soy production to adjust lower.

CBOT Soymeal's price outlook underwhelms due to China's move towards a grain-intense feed diet



Source: Bloomberg, Rabobank 2021

US crush margins have soared of late, benefiting US soy crushings



Source: USDA, Bloomberg, NOPA, Rabobank 2021

Soy Oil

Continued growth in biodiesel use of soy oil



CBOT Soy Oil prices increased by 75% last year, and not because of a cook-out.

New, non-food demand drivers for vegetable oils have overshadowed shuttered retail consumption and given the product a prominent position in the FAO's ten-year high commodity inflation basket. Vegetable oil's irrepressible global disappearance is being driven by multiple factors: the green energy transition, high Brent crude prices, prohibitive feed grain prices, weather woes in Canada, labor shortages in Malaysia, and growing oilseed imports from Europe. In the US, biodiesel demand growth is overwhelming, and soy oil is its primary feedstock. Speculative bullish enthusiasm for CBOT Soy Oil is joining multifaceted consumer demand growth to drive strong bullish CBOT price risk

Base case

Soy oil's incandescence is unlikely to be dimmed in 2022, amid a fiery backdrop in global vegetable oil demand (of 3.0%) that dissolves stockpiles (-4%) for a second consecutive year and pushes stocks-to-use sub-10% for the first time in a decade. CBOT Soy Oil's futures are seen steady around USc 59/lb, twice their historic average, as the US is forced to cull exports to 18-year lows and transition to a domestically-focused market. New uses for soy oil, traditionally a high-quality food ingredient, continue to overwhelm

capacity, even to the point of cannibalizing food demand. Last year's soy oil headline was an animal feed frenzy that led China to singlehandedly grow global demand by 35%; now biodiesel has taken the mandate. In the US in particular, biodiesel has quickly become a bigger part of soy oil demand than ethanol is for corn – and demand growth in the coming years will stretch capacity. Some key exporting countries are scaling back biodiesel mandates amid vegetable oil supply constraints and high food inflation, but in the US and Europe, the green transition has staying power. Strong biodiesel prices, Covid-19 convalescence, and supply risks provide support for CBOT Soy Oil to remain near record highs in the year ahead.

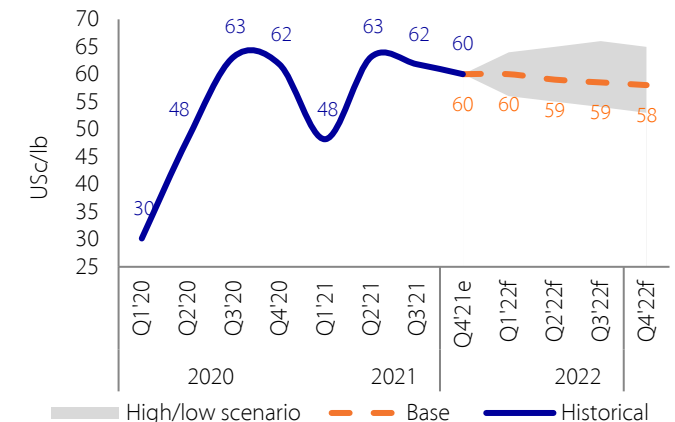
High case

With global oilseed supplies low and farmers recalcitrant, a modest dryness event in North or South America would shrink soy oil availability to critical levels, force rationing, and push CBOT Soy Oil to USc 66/lb.

Low case

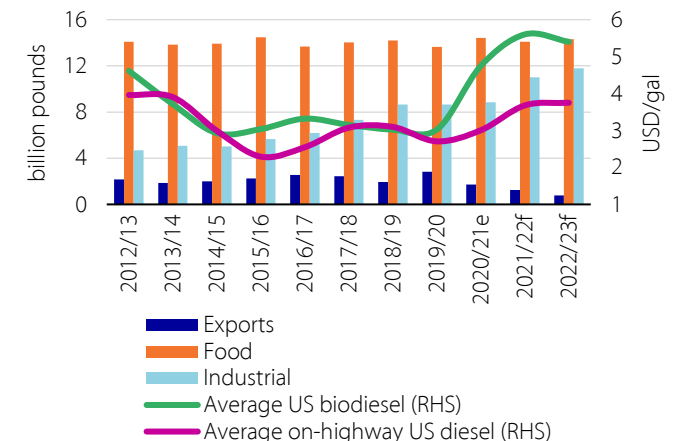
Good weather in the Americas in 2022, combined with positive crush margins, raise soy oil production by 7% YOY. The resumption of biodiesel mandate growth in South America, combined with farmers' sales and US soy oil's outsized reliance on the domestic market, limit CBOT Soy Oil downside to USc 53/lb.

CBOT Soy Oil price strength on strong biodiesel use in the US and limited veg oil alternatives



Source: Bloomberg, Rabobank 2021

US biodiesel demand is soaring, cannibalizing exports and even food use



Source: USDA, US DOE, Rabobank 2021

Palm Oil

No room for production disruption in 2022

12-month outlook



Rabobank expects global vegetable oils will remain in a deficit situation in 2021/22,

which will provide support to palm oil prices in 2022. The combination of a less-than-optimal palm oil production increase and minimal year-on-year biodiesel demand increase in 2022 in Southeast Asia will result in a slight surplus situation for palm oil globally in 2021/22. However, the year-on-year decrease in global soft oil inventories in 2021/22 will be larger than the increase in global palm oil inventories. This is due to an expectation of increasing year-on-year global soy oil demand, on the back of rising demand from the renewable diesel industry and lower year-on-year global rapeseed oil production in 2021/22.

Base case

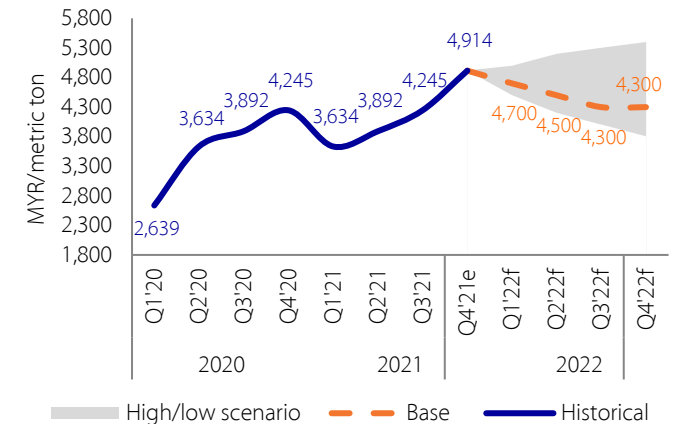
Global total supply (production plus imports) of vegetable oils in 2021/22 is forecast to increase by 12.2m mt, or 4.1%, to 307.1m mt. This is mainly driven by an 8.4m mt YOY increase in total global palm oil and soy oil supply. Meanwhile, total global vegetable oil usage (consumption plus exports) in 2021/22 is forecast to increase by 12m mt, or 1%, to 308.2m mt. Hence, global vegetable oil inventory levels in the 2021/22 season are expected to decrease by 4.7% YOY, or 1.1m mt. Thus, the stocks-

to-use ratio for global vegetable oils is poised to decrease by 0.8% YOY, to 9.8%, in 2021/22.

Global palm oil production in 2021/22 is forecast to increase by 3.4m mt, or 4.3% YOY, to 81.4m mt, on the back of production increases in Indonesia and Malaysia. Due to a high global fertilizer price environment, some smallholder oil palm farmers in Indonesia and Malaysia reduced their fertilizer applications in 2H 2021. We expect this trend to continue in 2022. Meanwhile, the La Niña weather phenomenon is expected to last only until Q1 2022. These two factors will limit the year-on-year palm oil production increase in Indonesia and Malaysia in 2022.

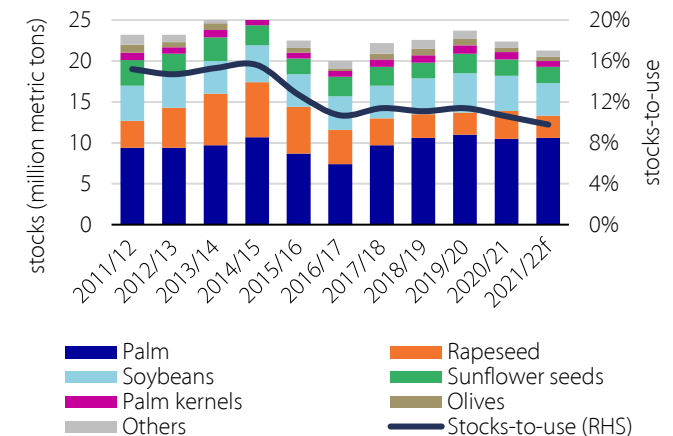
The harvested area of Indonesian oil palm trees is expected to increase by 1.4% YOY, to 14.9m ha, in 2022. This will result in 4.5% YOY production growth, to 50.7m mt, in the 2021/22 season. Meanwhile, the harvested area of Malaysian oil palm trees is expected to be flat year-on-year, at 5.4m ha, in 2022. However, we expect the labor shortage situation in Malaysia, which limits fresh fruit bunch harvest volumes, will slightly improve in 2022. This will result in a 2.2% YOY production growth in Malaysia, to 18.4m mt, in 2021/22.

BMD average palm oil prices will be higher YOY in 2022



Source: Bloomberg, Rabobank 2021

Global vegetable oil stocks will decline, decreasing the stocks-to-use ratio for 2021/22 to 9.8%



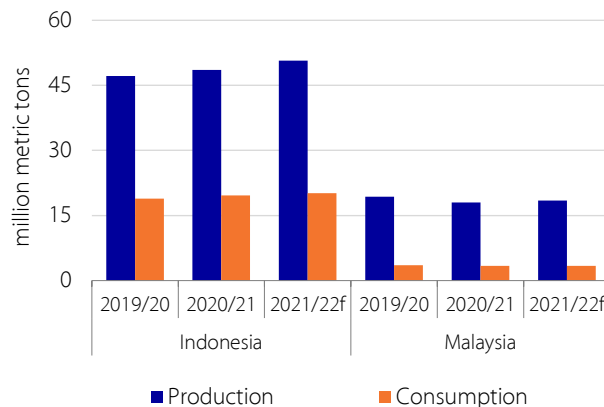
Source: USDA, Rabobank 2021

Palm Oil

12-month outlook

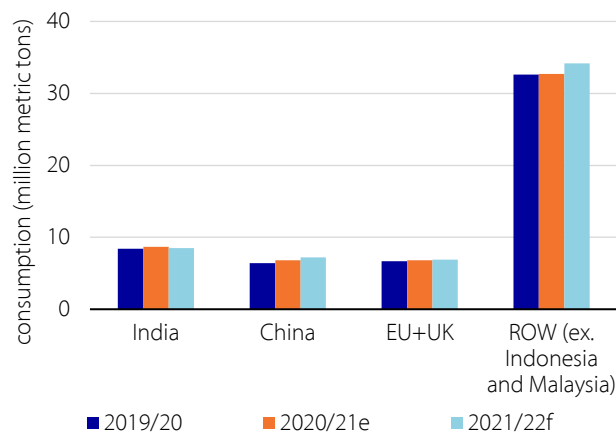


Indonesian and Malaysian palm oil production will increase to 50.7m mt and 18.4m mt in 2021/22



Source: GAPKI, MPOB, Rabobank 2021

Palm oil consumption in China and the EU is expected to improve YOY in 2021/22



Source: USDA, Rabobank 2021

Meanwhile, global palm oil demand is forecast to increase in 2021/22 by 2.3m mt, or 3% YOY, to 80.2m mt. We forecast Indonesian domestic palm oil consumption to increase by 0.5m mt, or 2.7% YOY, to 20.1m mt in 2021/22. The Indonesian government will most likely continue to implement its B30 mandate, instead of the B40 mandate, in 2022 due to an unfavorable palm oil/gas oil spread. We forecast Indonesian biodiesel demand will increase by 2.2% YOY, or 0.2m kiloliters, to ~9.2m kiloliters in 2022.

We forecast Indian palm oil consumption to decrease to 8.5m mt in 2021/22, a decrease of 0.2m mt, or 2.2% YOY. Indian palm oil consumption in 2021/22 will be limited by relatively high domestic soybean production. A high domestic soybean price environment motivated Indian farmers to increase soybean planting area in 2021. This, combined with favorable weather, will result in Indian soybean production of 11m mt in 2021/2022, an increase of 0.6m mt, or 5.2% YOY.

We forecast China's palm oil consumption will increase by 0.4m mt, or 5.6% YOY, to 7.2m mt in 2021/22, on the back of a post-Covid recovery in palm oil demand from the processed food and foodservice industries. Similarly, EU palm oil consumption is expected to increase by 1.6% YOY, or 0.1m mt, to 6.9m mt in 2021/2022.

Based on the supply-and-demand factors of palm oil, and global vegetable oils as a whole, we forecast average palm oil prices will increase by 7.0% from 2021 levels, to an average of MYR 4,425/mt in 2022.

High case

The worsening labor shortage situation in Malaysia could result in lower year-on-year domestic palm oil production. Persistent global crude oil prices above USD 100/bbl could also lead to our high case. Higher-than-expected domestic biodiesel consumption in Indonesia, or stronger-than-expected import demand from India and China, would also be bullish catalysts. Combined, this results in our high-case price of MYR 5,225/mt in 2022.

Low case

Our low case sees weaker-than-expected import demand from India and China or lower-than-expected domestic biodiesel consumption in Indonesia and Malaysia. Higher-than-expected Indonesian and Malaysian palm oil production would have a similar impact, as would a correction in global crude oil prices. Combined, this results in our low-case price of MYR 4,125/mt in 2022.

Sugar

Sugar and ethanol in fierce competition

12-month outlook



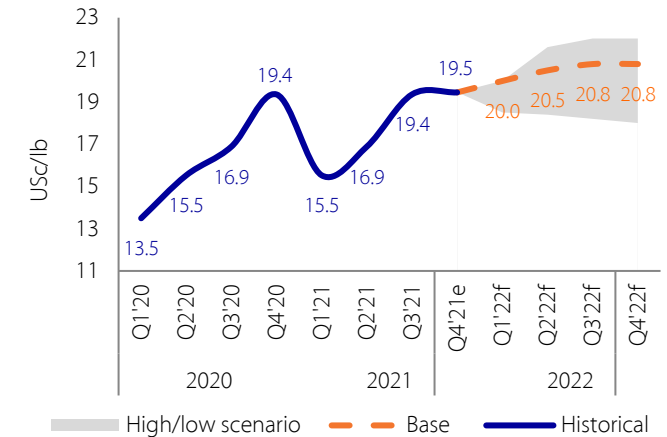
The sugar balance sheet is seeing two consecutive deficits in 2020/21 and 2021/22, and even though these deficits are not huge (-1.2m mt and -2.3m mt respectively), they paint a bullish background, especially because 2022/23 might see a potential further deficit on the back of strong ethanol prices in Brazil. Furthermore, like other commodities with long supply chains, there are many uncertainties in estimating supply and demand. Furthermore, it is difficult to assess demand, as supply chains have transitioned from 'just in time' to 'just in case,' and consumption might not be higher even if international trade is. As long as logistical issues persist, the 'just in case' approach to procurement is unlikely to change.

Brazil's next crop will be a key focus in the coming months. The wet season has started with flying colors, with October rainfall levels well-above normal. However, it will be the consistency of rain through the wet season that will determine the growth of the cane in the coming season. More concerning is the scramble between sugar and ethanol for the share of cane in 2022/23. Sugar prices will have to remain competitive to avoid a significant global deficit. However, ethanol prices have shown to be very resilient through the

2021/22 harvest, defying the typical seasonality and the economic weakness seen during the pandemic. In principle, the economic recovery and high international energy prices paint a very bullish picture for domestic ethanol in 2022. This is especially the case since ethanol prices in the US – Brazil usually imports from the US during the off-season in the cane harvest – have reached seven-year highs, in line with more expensive corn and a recovery in US energy demand. For these reasons, we are expecting ethanol to at least claw back some cane away from sugar, but given the tightness in the sugar market, this share cannot be too high. Sugar prices will have to match any increase in ethanol prices. Political decisions taken ahead of the presidential election in Brazil in October 2022 might help keep domestic energy prices in check, but for now, ethanol prices seem to be on an impressive uptrend that mimics the rise in energy prices globally.

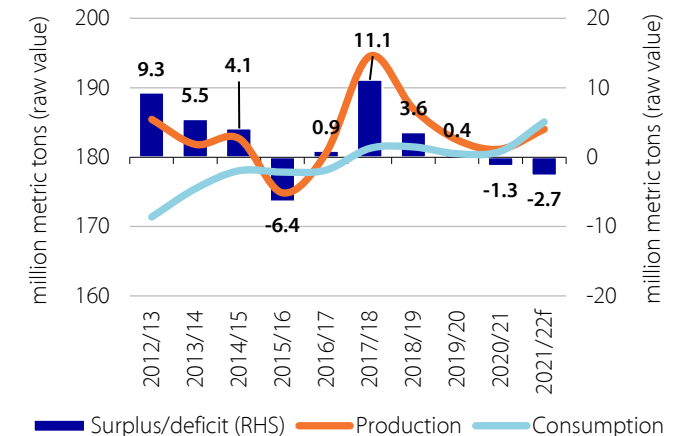
India is likely to continue to produce large volumes of sugarcane in 2022 and beyond. If anything, a potential La Niña event is likely to result in increased rainfall over India. However, high fertilizer prices and competition from other products will limit growth.

Sugar prices will need to stay elevated and compete with ethanol for Brazil sugar cane



Source: Bloomberg, Rabobank 2021

Global S/D shows two consecutive deficits, though relatively small, historically



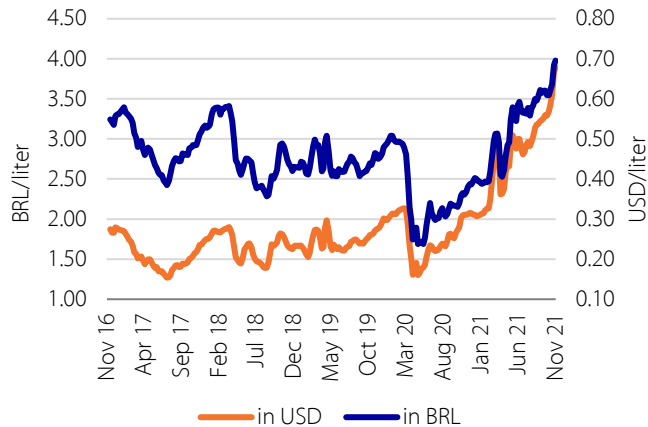
Source: F.O. Licht, Rabobank 2021

Sugar

12-month outlook

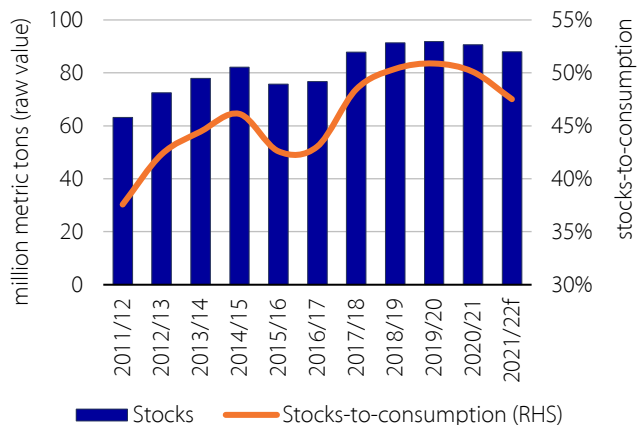


Surging ethanol prices in Brazil will likely prevent a total sugar max in 2022



Source: Cepea, Rabobank 2021

Global stocks-to-consumption ratio declining for a second consecutive year



Source: F.O. Licht, Rabobank 2021

With this in mind, we expect increasing ethanol demand to erode the exportable surplus of sugar in the coming years in all of our scenarios. Also, in all of our scenarios we see a further improvement in the Thai crop in 2022/23.

Base case

Brazil CS will likely have a good recovery in terms of sugarcane production in 2022/23, to 545m mt. But the ethanol market is likely to continue to stay strong on the back of strong international energy prices. Given that the sugar market cannot afford a large deficit, sugar will have to match any potential rallies in ethanol. We expect La Niña to remain weak, not significantly affecting rainfall over Brazil CS. In any case, any small adverse effect on Brazil could be easily compensated by La Niña-induced rainy conditions over Australia and Southeast Asia. We expect an unchanged cane production volume in India because, although La Niña could result in good rains over Southeast Asia, farmers will also face more expensive farm inputs

High case

In the high case, we see increasing international energy prices being fully passed on to the Brazilian domestic market and La Niña resulting in much

reduced rainfall over the key months of December and January. In this case, the amount of sugarcane in Brazil will be similar year-on-year, and sugar prices will need to rise well above a spiraling ethanol parity. We still see increasing production in Thailand and a declining, but still solid exportable surplus in India. In this case, we expect panic buying and 'just in case' inventory accumulation to continue through 2022. Rife geopolitical tensions will continue to stress supply chains and logistics, while some container scarcity will likely be prevalent through 2022.

Low case

In our low case, La Niña does not influence the Brazilian cane crop adversely, following excellent rainfall in October. Brazil could also intervene in its energy market to contain domestic ethanol and energy prices in order to prevent widespread discontent in the population in a year of presidential elections. This would likely result in a 2022/23 sugar mix where sugar takes more than half of the cane. This extra sugar would also combine with a better-than-expected recovery in Thailand in 2021/22 and a further recovery in 2022/23. Furthermore, the increase in vaccination rates would likely result in more normal operations across the supply chain, leading to less stockpiling.

Coffee

Prices to come down after a period of panic buying



The coffee balance sheet has transitioned from a large surplus of 13m bags in 2020/21, to a deficit of 5.2m bags in 2021/22, and potentially a relatively balanced market in 2022/23. In our view, the deficit in 2021/22 is relatively small in comparison to the surplus in 2020/21, and there are other variables at play that explain the price surge seen so far this year. While production was relatively unaffected by Covid and there is still uncertainty about any potential demand growth in 2021, we believe sales of green coffee have been faring better than expected because coffee was directly impacted by the scarcity of container availability in 2021, leading companies to over-purchase in order to guarantee production and sales. Furthermore, shipping disruptions and panic buying have muddled the statistical exercise. The size of the crops is now not necessarily reflected in the exports, because exports are often affected by delays and disruptions. On the demand side, imports into non-producing countries, usually seen as a gauge of demand, are influenced by large changes in stocks stored near roasting plants and not visible to the market.

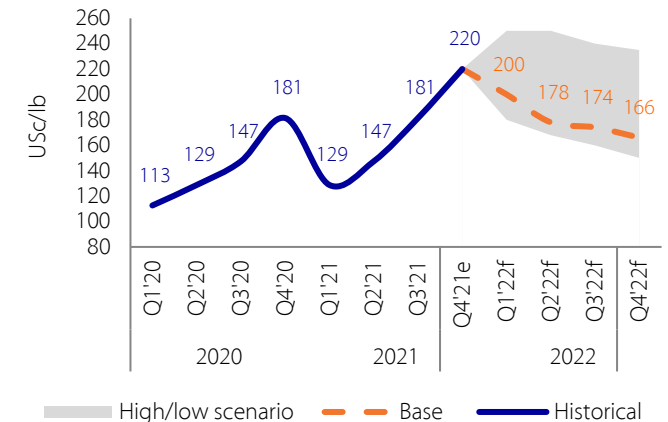
Top producer Brazil, which saw its tree population suffering from a year of dry weather that lasted until September 2021 and then the worst frost in over two

decades on July 20, 2021, will likely see an arabica crop between 42m and 48m bags in 2022/23. The width of the range shows the degree of unknowns affecting the Brazilian crop. This uncertainty underpins our scenarios below. Meanwhile, we expect that the robusta crop will react to high prices to see a new record of over 21m bags. In any case, a year of presidential elections may result in moments of weakness for the Brazilian real, providing farmers with excellent selling opportunities.

Base case

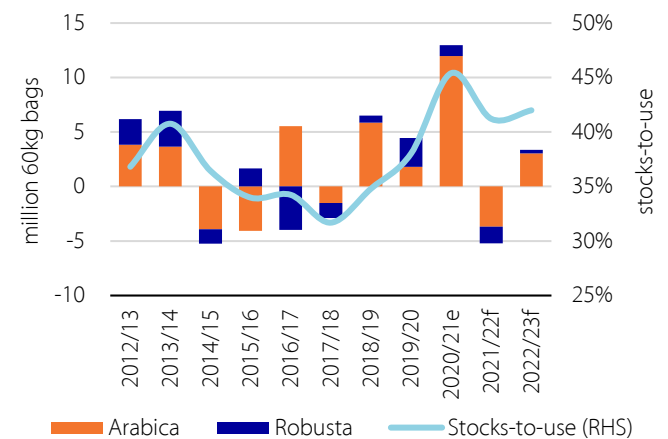
In our base case, we believe Brazil's harvest will come in at around 45m bags of arabica and 21.5m bags of conillon in 2022/23. Arabica production will remain well-below the record 53m bags produced in 2020/21. While Brazilian production will remain somewhat subdued until 2023/24 due to the weather issues, other producing countries will start ramping up production and profit from prices well above cost of production. Colombia might be the first to benefit. We already expect to see an increase of around 0.4m bags in production in 2021/22, to 14.1m bags, as the mitaca crop should already benefit from the price hike. In 2022/23, we could see a higher increment, with the country approaching or even passing 15m bags.

Panic buying is likely to be alleviated after Christmas, allowing prices to drop



Source: Bloomberg, Rabobank 2021

High prices should incentivize better production in 2022/23 and beyond



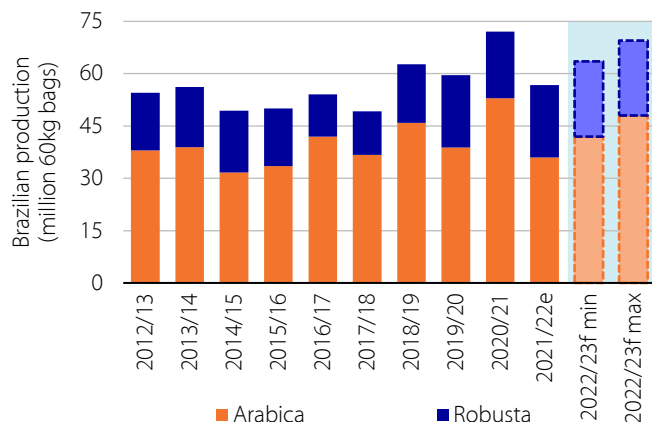
Source: Rabobank 2021

Coffee

12-month outlook

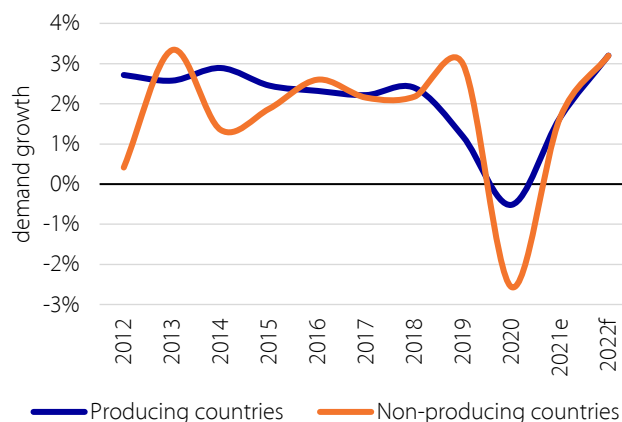


Brazil has seen extreme conditions in 2021, leading to uncertainty over 2022/23 output



Source: Rabobank 2021

Global coffee demand has been recovering, but there are still uncertainties ahead



Source: Rabobank 2021

Central America may see only modest increases in 2021/22, but a thorough harvest might bring crops slightly higher. Sales and export volumes out of Honduras have already started the crop year strongly. The price spike has not found its way to farmers' pockets yet. However, here we also expect to see higher production of around 0.3m bags in 2021/22, given that farmers will try to harvest every bean. Vietnam's 2022/23 production could easily be a record, following a very decent 2021/22 crop. These changes mean that production outside of Brazil should increase by 1.3m bags in 2021/22 and by a significant 3.5m bags in 2022/23. The materialization of a surplus in 2022/23 will likely act as a deterrent for higher prices, once the shipping disruptions stabilize. 2023/24 could potentially see a large deficit, given that Brazil will have an off-cycle. However, that off-cycle will likely be a very strong one, following lackluster production in 2022/23. With this in mind, in our base case we maintain a bearish view, with prices set to reach USc 166/lb by the end of 2022.

High case

Many countries may find it difficult to expand production because of the higher fertilizer costs that need to be paid up front. It may actually be possible

that fertilizer use in coffee decreases despite high coffee prices. Also, the availability of crop protection products could be delayed because these products are usually shipped in containers. Brazilian production could come in towards the lower range, as La Niña could generate dry weather over the coffee belt during the wet season. Here, we expect both the shipping disruptions and the general inflation in major economies to continue through 2022. In this scenario, we see coffee reaching USc 250/lb by mid-2022.

Low case

Following outstanding rains in Brazil in October, trees seem reinvigorated and have managed to produce leaves faster than anticipated. Also, farmers might give up pruning plans in light of the extraordinary prices – in the hope to maximize production before these prices evaporate. Once Colombia and Central American countries show that they can respond at least to some extent to higher prices, we might see a wave of selling. Also, higher vaccination rates could result in fewer disruptions ahead, at least in ports. In this scenario, we see prices returning to USc 150/lb by the end of 2022.

Cocoa

Low production meets higher demand

12-month outlook



Base case

Production is expected to decline in 2021/22 as a result of lower input use and poor weather at the start of the season, although there has been an improvement more recently. We see global crops declining 5.4% YOY, while demand is seen rising slightly more than in 2020/21, at 2.1%. The combined result will deliver a deficit for 2021/22 of 128,000 mt. As we look out to 2022/23, we expect input use to increase, assuming relatively normal weather ahead of the main crop development, resulting in production growth of 4.3% YOY. On the demand side, we expect continued growth as economies continue to open up and shipping and logistics issues subside. We expect demand growth to be at 2.3% as logistics issues cool. Our initial supply and demand estimates suggest a relatively balanced market, with the possibility of a small deficit estimated at 36,000 mt at present.

High case

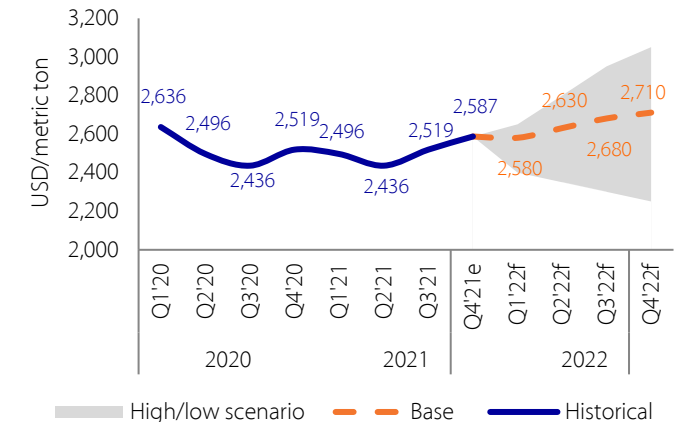
Once uncertainty subsides with regards to the global economic recovery and Covid-19, we could see a stronger return to demand growth through 2022 and into 2023. This could boost our demand estimates during the year, resulting in a greater

deficit. Asian demand growth is slow, as part of the region still has social distancing measures in place. An improvement in vaccinations could see a release of pent-up demand. 2021/22 production in West Africa is vulnerable to a shift in weather patterns given late development, but at present, conditions seem conducive to improving production prospects.

Low case

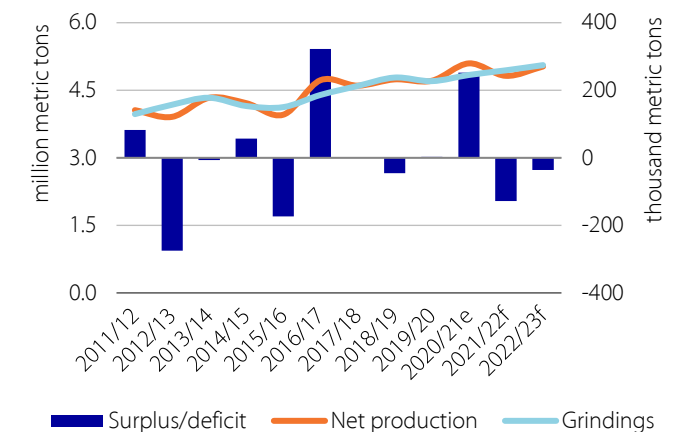
The nascent La Niña could mean another mild dry season that provides the extra growing days that immature West African pods need for 2021/22, bringing production nearer 2020/21 levels. A continuation of mild West African weather into 2023 would further exacerbate overproduction, which could mean consecutive surpluses as opposed to deficits. A knock-on effect may be that we see accumulating stocks at both origin and destination that keep prices range-bound and limit cocoa price upside.

Two consecutive deficits are likely to keep prices well supported



Source: Bloomberg, Rabobank 2021

The cocoa balance sheet will likely see two consecutive deficits as demand recovers



Source: ICCO, Rabobank 2021

Lean Hogs

Support in 1H, but softening demand in 2H 2022

12-month outlook



Base case

Supply fundamentals remain supportive to lean hogs in 2022, with lower market inventories to start the year and limited production growth expected. We expect a 1.4% YOY drop in 1H 2022 production, based on current inventories, realizing there will be a carryover of slaughter from Q4 2021 due to labor constraints. Our baseline assumes 1.8% YOY growth in production in 2H 2022, as herd productivity returns to trend, but does not anticipate any material growth in the sow herd. Regulatory uncertainties (Proposition 12) and slaughter capacity constraints are expected to limit any sizable change in the existing breeding herd, acting as a governor on industry growth. For the year, our baseline assumes no meaningful change in US pork production.

Larger 2H 2022 supplies, modest growth in exports, and some softening of domestic demand are expected to drive an 11% YOY drop in the lean hog index in 2022. While packer profitability is expected to remain strong on low ending stocks and reduced supplies of competing proteins, domestic pork demand is expected to slow as higher pork costs reach consumers and as buyers face widespread cost inflation.

High case

Larger pork exports, or more limited production gains, in 2H 2022 would drive a more favorable 2022 outlook for lean hogs. A faster recovery in Asian demand, or a greater-than-expected shortfall in Chinese production following recent liquidation, would support stronger 2022 exports and higher lean hog values.

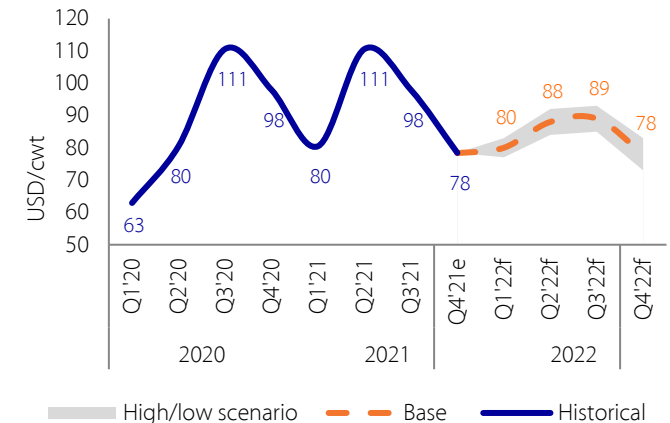
More serious herd health challenges due to ongoing PRRS 1-4-4 challenges could limit 2H 2022 production growth. If there is no productivity growth in 2022, that would drive the index to the top of our expectations.

Low case

Larger hog supplies tied to an upward revision in existing market hog inventories or better-than-expected productivity would strain the overtaxed packing sector and push prices to the lower end of our forecast. The risk of oversupply is greatest in Q4, given packing capacity constraints.

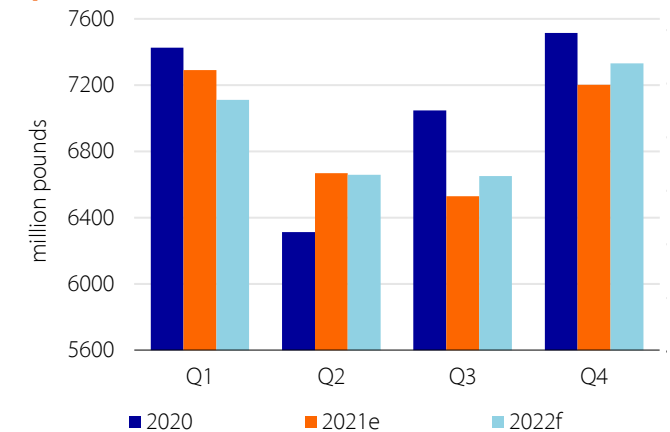
Our low case assumes a 2% drop in exports, led by a modest decline in sales to China and a 4% drop in exports to Mexico. Growing export competition from Spain and Brazil could also hurt US pork competitiveness in 2022.

Lean Hog prices may see initial price support wane into 2H 2022



Source: Bloomberg, Rabobank 2021

US pork production in 2022 will improve slightly, up 0.2% YOY



Source: Rabobank 2021

Live Cattle

Chinese demand to support prices



12-month outlook



Base case

Estimated fed cattle supply averaged 15% above operational packing capacity in 2020 and 2021. By Q2 2022, cattle numbers and packing capacity will find relative balance. We expect 2022 annual fed slaughter to fall by 2.5% YOY. 2H 2022 fed cattle supply could fall to 96% to 97% of operational packing capacity, still above the pre-disruption (2002-2018) average of 95% and well above the 88% to 90% of 2014-15. Although packers will still have healthy margins compared to pre-pandemic levels, the price spread between beef and cattle will begin a multi-year narrowing trend in 2022. Even as domestic beef demand (willingness to pay) falls slightly from its pandemic highs, continued export growth, declining beef production (down 2.7% YOY), and general economic inflation will provide price support.

Despite the production decline, China will spur a 2.8% YOY total US beef export growth in 2022, following 2021's expected 17% YOY growth. We expect US beef cow numbers to fall 1.8% YOY to a January 1, 2022 inventory of 30.6m head.

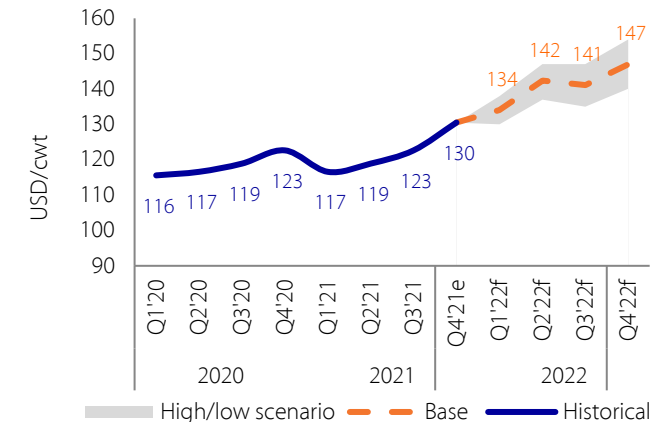
High case

Faster-than-anticipated supply chain relief offers upside potential. If beef packing labor shortages improve, even to the still challenging pre-pandemic level, the reduction of historically large cattle supplies and subsequent increases in cattle feeder leverage would be accelerated. Decreasing supply chain bottlenecks in all goods could help mitigate inflation and boost economic recovery. In turn, real consumer incomes, a key component in beef demand, could be maintained or even strengthened. Mitigating shipping challenges and a reopening global economy would add further support to already strong export demand.

Low case

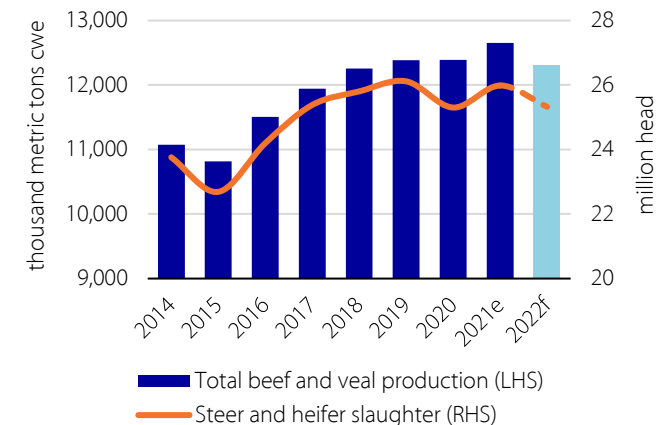
Supply chain corrections could stall or get worse. Additional restraints on operational slaughter capacity would slow the rebalancing of fed cattle supplies. More broadly, long-term supply-side inflationary pressures and slow economic growth could damage consumer wallets and beef demand. While total US red meat and poultry production is expected to be marginally lower year-on-year in 2022, maintaining export demand will be important to managing domestic supply.

Increasing US export demand will have a bullish effect on the live cattle contract



Source: Bloomberg, Rabobank 2021

US beef production relative to federally inspected steer and heifer slaughter to decline in 2022



Source: USDA, LMIC, Rabobank 2021

Dairy

Exceptional Chinese demand to slow down

12-month outlook



Milk production growth in the Big-7 dairy export regions slowed dramatically during Q3 2021, putting global dairy product prices on an upward trajectory. Unfavorable weather in Oceania and margin pressure in the US and EU have put an end to months of robust production gains from the Big-7 dairy-exporting countries.

Exceptional Chinese demand set the stage for Oceania WMP prices to ascend to levels not seen since 2014. Since then, there has been limited upside in global milk powder prices due to removal of the EU milk quotas and related large stocks. But those days, and stock levels, are behind us, and we do not foresee any regulatory or market conditions that would result in elevated stock levels, such as those that persisted from 2016 to 2019, capping milk powder prices. There is a potential for additional upside in the absence of rapid supply growth and stocks.

Base case

China's import demand was up 35% YOY in volume during the first three quarters of 2021. Our base case assumption is a 20% reduction in Chinese import demand from these elevated levels in 2022. Considering the tightening of global milk production, other importers may absorb this slowdown in Chinese demand.

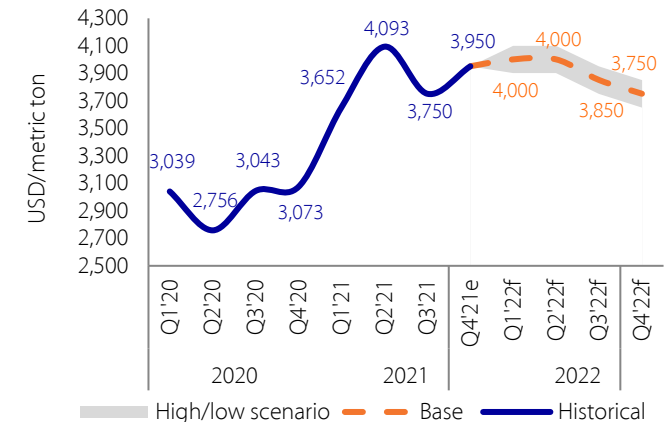
High case

China could maintain its 2021 import levels into 2022. In that case, markets would continue to rise due to tighter global milk supplies. Further weather-related challenges in Oceania, and lackluster production gains in Europe, could provide additional market support. In recent months, milk cow numbers have declined rapidly in the US, contributing to a tightening of supply. Still, a rebound toward rebuilding the herd will be more challenging when faced with inflation in construction costs and questionable feed quality and availability in the coming year.

Low case

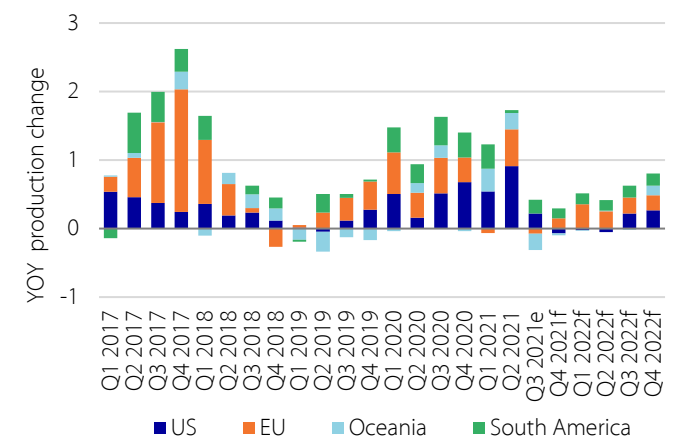
Despite rising logistics challenges and container costs, global dairy trade in 2021 outpaced the prior year. Strong global import demand has helped keep products moving for the major dairy-exporting regions. If there is further logistical disruption that leads to reduced trade, a rise in product costs to consumers, or greater-than-expected Chinese domestic production resulting in lower-than-expected imports, we would expect to see stock-building and pressure on prices.

Slower demand growth should result in a small price drop in 2022



Source: Bloomberg, Rabobank 2021

Milk production among Big-7 exporters to grow



Source: USDA, Rabobank 2021



Balance Sheets

Global agri commodity balance sheets

Global wheat supply and demand



| (1,000 ha/1,000 mt) | USDA | | | | | | Rabobank | |
|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 21/22f | 22/23f |
| Beginning stocks | 246,931 | 265,407 | 284,592 | 280,691 | 295,504 | 287,950 | 287,950 | 273,452 |
| Area harvested | 222,275 | 218,139 | 215,403 | 215,568 | 221,165 | 223,328 | 224,128 | 226,015 |
| Yield (mt/ha) | 3.40 | 3.49 | 3.40 | 3.54 | 3.50 | 3.47 | 3.46 | 3.46 |
| Production | 756,144 | 761,541 | 731,411 | 762,211 | 774,656 | 775,277 | 775,349 | 782,202 |
| Imports | 183,376 | 183,874 | 174,016 | 188,170 | 194,177 | 201,049 | 201,050 | 197,505 |
| Total supply | 1,186,451 | 1,210,822 | 1,190,019 | 1,231,072 | 1,264,337 | 1,264,276 | 1,264,349 | 1,253,159 |
| Exports | 186,783 | 185,432 | 176,175 | 194,332 | 202,246 | 203,163 | 196,688 | 192,863 |
| Feed consumption | 147,213 | 147,478 | 139,825 | 139,189 | 157,138 | 158,561 | 165,311 | 154,285 |
| FSI consumption | 587,048 | 593,320 | 593,328 | 602,047 | 617,003 | 626,748 | 628,898 | 629,228 |
| Total consumption | 734,261 | 740,798 | 733,153 | 741,236 | 774,141 | 785,309 | 794,209 | 783,513 |
| Total usage | 921,044 | 926,230 | 909,328 | 935,568 | 976,387 | 988,472 | 990,897 | 976,375 |
| Surplus/deficit | 18,476 | 19,185 | -3,901 | 14,813 | -7,554 | -12,146 | -14,498 | 3,331 |
| Ending stocks | 265,407 | 284,592 | 280,691 | 295,504 | 287,950 | 275,804 | 273,452 | 276,783 |
| Stocks/usage | 36% | 38% | 38% | 40% | 37% | 35% | 34% | 35% |

Global agri commodity balance sheets

Global corn supply and demand



| (1,000 ha/1,000 mt) | USDA | | | | | | Rabobank | |
|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 21/22f | 22/23f |
| Beginning stocks | 311,743 | 351,922 | 341,409 | 322,372 | 306,481 | 291,868 | 291,868 | 297,906 |
| Area harvested | 196,927 | 192,925 | 192,457 | 193,609 | 198,461 | 201,327 | 201,535 | 202,974 |
| Yield (mt/ha) | 5.73 | 5.61 | 5.86 | 5.78 | 5.64 | 5.98 | 5.96 | 5.95 |
| Production | 1,128,523 | 1,081,660 | 1,127,663 | 1,119,677 | 1,119,016 | 1,204,623 | 1,201,546 | 1,207,516 |
| Imports | 138,441 | 153,097 | 166,674 | 167,755 | 187,600 | 183,416 | 185,160 | 192,460 |
| Total supply | 1,578,707 | 1,586,679 | 1,635,746 | 1,609,804 | 1,613,097 | 1,679,907 | 1,678,574 | 1,697,882 |
| Exports | 162,083 | 149,777 | 182,628 | 172,331 | 176,560 | 203,469 | 203,206 | 199,151 |
| Feed consumption | 659,006 | 673,560 | 705,136 | 715,654 | 724,786 | 747,232 | 750,788 | 760,958 |
| FSI consumption | 405,696 | 421,933 | 425,610 | 415,338 | 419,883 | 424,789 | 426,674 | 434,134 |
| Total consumption | 1,064,702 | 1,095,493 | 1,130,746 | 1,130,992 | 1,144,669 | 1,172,021 | 1,177,462 | 1,195,092 |
| Total usage | 1,226,785 | 1,245,270 | 1,313,374 | 1,303,323 | 1,321,229 | 1,375,490 | 1,380,668 | 1,394,243 |
| Surplus/deficit | 40,179 | -10,513 | -19,037 | -15,891 | -14,613 | 12,549 | 6,038 | 5,733 |
| Ending stocks | 351,922 | 341,409 | 322,372 | 306,481 | 291,868 | 304,417 | 297,906 | 303,639 |
| Stocks/usage | 33% | 31% | 29% | 27% | 26% | 26% | 25% | 25% |

Global agri commodity balance sheets

Global soybean supply and demand



| (1,000 ha/1,000 mt) | USDA | | | | | | Rabobank | |
|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 21/22f | 22/23f |
| Beginning stocks | 78,652 | 94,872 | 100,105 | 114,096 | 95,492 | 100,112 | 100,112 | 104,330 |
| Area harvested | 119,986 | 124,748 | 125,231 | 122,893 | 127,867 | 131,561 | 131,529 | 132,938 |
| Yield (mt/ha) | 2.92 | 2.75 | 2.89 | 2.77 | 2.86 | 2.92 | 2.91 | 2.92 |
| Production | 350,102 | 343,403 | 361,318 | 339,885 | 366,229 | 384,011 | 382,465 | 388,315 |
| Imports | 144,819 | 153,821 | 145,789 | 164,974 | 166,235 | 169,781 | 169,766 | 173,718 |
| Total supply | 573,573 | 592,096 | 607,212 | 618,955 | 627,956 | 653,904 | 652,343 | 666,364 |
| Exports | 147,567 | 153,241 | 148,938 | 165,059 | 164,797 | 172,090 | 169,072 | 172,191 |
| Crush | 287,666 | 294,997 | 298,577 | 312,480 | 316,042 | 328,816 | 329,446 | 337,877 |
| Seed/feed/residual | 43,468 | 43,753 | 45,601 | 45,924 | 47,005 | 49,215 | 49,495 | 49,818 |
| Total consumption | 331,134 | 338,750 | 344,178 | 358,404 | 363,047 | 378,031 | 378,941 | 387,695 |
| Total usage | 478,701 | 491,991 | 493,116 | 523,463 | 527,844 | 550,121 | 548,013 | 559,886 |
| Surplus/deficit | 16,220 | 5,233 | 13,991 | -18,604 | 4,620 | 3,671 | 4,218 | 2,147 |
| Ending stocks | 94,872 | 100,105 | 114,096 | 95,492 | 100,112 | 103,783 | 104,330 | 106,477 |
| Stocks/usage | 29% | 30% | 33% | 27% | 28% | 27% | 28% | 28% |

Global agri commodity balance sheets

Global palm oil supply and demand



| (1,000 ha/1,000 mt) | USDA | | | | | | Rabobank | |
|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 21/22f | 22/23f |
| Beginning stocks | 8,783 | 10,088 | 12,340 | 13,566 | 13,725 | 12,378 | 10,539 | 10,635 |
| Production | 65,252 | 70,535 | 74,169 | 72,973 | 72,863 | 76,519 | 81,414 | 84,801 |
| Imports | 46,383 | 46,907 | 50,579 | 47,812 | 48,210 | 50,995 | 50,995 | 52,078 |
| Total supply | 120,418 | 127,530 | 137,088 | 134,351 | 134,798 | 139,892 | 142,948 | 147,514 |
| Exports | 49,072 | 48,828 | 51,907 | 48,446 | 48,867 | 52,125 | 52,125 | 53,689 |
| Food consumption | 43,943 | 45,990 | 48,220 | 48,138 | 49,350 | 50,842 | 55,658 | 57,050 |
| Industrial | 16,645 | 19,679 | 22,691 | 23,304 | 23,457 | 23,925 | 23,818 | 24,079 |
| Feed | 670 | 693 | 704 | 738 | 746 | 732 | 711 | 712 |
| Total consumption | 61,258 | 66,362 | 71,615 | 72,180 | 73,553 | 75,499 | 80,188 | 81,842 |
| Total usage | 110,330 | 115,190 | 123,522 | 120,626 | 122,420 | 127,624 | 132,313 | 135,530 |
| Surplus/deficit | 1,305 | 2,252 | 1,226 | 159 | -1,347 | -110 | 96 | 1,349 |
| Ending stocks | 10,088 | 12,340 | 13,566 | 13,725 | 12,378 | 12,268 | 10,635 | 11,984 |
| Stocks/usage | 16% | 19% | 19% | 19% | 17% | 16% | 13% | 15% |

Global agri commodity balance sheets

Global coffee supply and demand



| | | | | | | Rabobank | |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|
| (1,000 60kg bags) | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 22/23f |
| Producing countries | 27,523 | 27,054 | 25,330 | 29,768 | 35,898 | 42,001 | 37,838 |
| Non-producing countries | 24,718 | 26,718 | 25,544 | 27,624 | 25,950 | 32,809 | 31,768 |
| Beginning stocks | 52,241 | 53,772 | 50,874 | 57,393 | 61,848 | 74,810 | 69,607 |
| Arabica | 97,638 | 93,362 | 103,908 | 94,029 | 106,827 | 90,800 | 101,330 |
| Robusta | 60,959 | 64,297 | 67,539 | 73,093 | 70,957 | 72,943 | 75,781 |
| Brazil (A+R) | 54,100 | 49,200 | 62,700 | 59,540 | 72,000 | 56,700 | 66,500 |
| Total exports from all producers | 128,128 | 129,592 | 140,254 | 132,817 | 135,480 | 127,437 | 138,806 |
| Total production | 158,597 | 157,659 | 171,447 | 167,122 | 177,785 | 163,742 | 177,111 |
| Producing countries | 47,522 | 48,630 | 49,889 | 48,948 | 50,497 | 51,416 | 53,263 |
| Non-producing countries | 109,544 | 111,927 | 115,040 | 113,718 | 114,326 | 117,529 | 120,501 |
| Robusta demand | 64,957 | 65,669 | 66,872 | 70,433 | 69,972 | 74,455 | 75,473 |
| Arabica demand | 92,109 | 94,888 | 98,057 | 92,234 | 94,851 | 94,491 | 98,291 |
| Total demand | 157,066 | 160,557 | 164,929 | 162,667 | 164,823 | 168,946 | 173,764 |
| Surplus/deficit arabica | 5,528 | -1,526 | 5,851 | 1,795 | 11,976 | -3,691 | 3,039 |
| Surplus/deficit robusta | -3,998 | -1,372 | 668 | 2,660 | 986 | -1,512 | 308 |
| Surplus/deficit total | 1,531 | -2,898 | 6,518 | 4,455 | 12,962 | -5,203 | 3,347 |
| Ending stocks | 53,772 | 50,874 | 57,393 | 61,848 | 74,810 | 69,607 | 72,954 |
| Stocks/usage | 34% | 32% | 35% | 38% | 45% | 41% | 42% |

Global agri commodity balance sheets

Global cocoa supply and demand



| | | | | | | | Rabobank | |
|-------------------|--------------|--------------|--------------|--------------|--------------|---------------|-----------------|---------------|
| (1,000 mt) | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 21/22f | 22/23f |
| Production | 4,719 | 4,598 | 4,737 | 4,706 | 5,092 | 4,816 | 5,023 | 4,719 |
| Côte d'Ivoire | 2,020 | 1,964 | 2,154 | 2,105 | 2,200 | 2,100 | 2,200 | 2,020 |
| Ghana | 969 | 905 | 812 | 800 | 1,040 | 875 | 900 | 969 |
| Grindings | 4,397 | 4,596 | 4,783 | 4,703 | 4,840 | 4,944 | 5,059 | 4,397 |
| Surplus/deficit | 322 | 2 | -46 | 3 | 251 | -128 | -36 | 322 |
| Ending stocks | 1,753 | 1,755 | 1,710 | 1,713 | 1,964 | 1,836 | 1,800 | 1,753 |
| Stocks/usage | 40% | 38% | 36% | 36% | 41% | 37% | 36% | 40% |

Global agri commodity balance sheets

Global sugar supply and demand



| (1,000,000 mt) | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f |
|-----------------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Beginning stocks | 75.7 | 76.7 | 87.8 | 91.4 | 91.8 | 90.6 |
| Production | 180.6 | 194.5 | 187.0 | 182.5 | 181.2 | 184.0 |
| Consumption | 178.2 | 181.3 | 181.5 | 180.5 | 180.9 | 185.1 |
| Surplus/deficit | 0.9 | 11.1 | 3.6 | 0.4 | -1.3 | -2.7 |
| Ending stocks | 76.7 | 87.8 | 91.4 | 91.8 | 90.6 | 87.9 |
| Stocks/usage | 43% | 48% | 50% | 51% | 50% | 48% |

US agri commodity balance sheets

US corn supply and demand



| <i>(m acres/m bu)</i> | USDA | | | | | | Rabobank | |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 21/22f | 22/23f |
| Beginning stocks | 1,737 | 2,293 | 2,140 | 2,221 | 1,919 | 1,236 | 1,236 | 1,349 |
| Area harvested | 87 | 83 | 81 | 81 | 82 | 85 | 85 | 84 |
| Yield (mt/ha) | 175 | 177 | 176 | 167 | 171 | 177 | 177 | 178 |
| Production | 15,148 | 14,609 | 14,340 | 13,620 | 14,111 | 15,062 | 15,063 | 14,925 |
| Imports | 57 | 36 | 28 | 42 | 24 | 25 | 25 | 25 |
| Total supply | 16,942 | 16,939 | 16,509 | 15,882 | 16,055 | 16,323 | 16,324 | 16,299 |
| Exports | 2,296 | 2,437 | 2,068 | 1,777 | 2,753 | 2,500 | 2,550 | 2,225 |
| Feed consumption | 5,468 | 5,304 | 5,427 | 5,900 | 5,601 | 5,650 | 5,700 | 5,750 |
| FSI consumption | 6,885 | 7,057 | 6,793 | 6,286 | 6,465 | 6,680 | 6,725 | 6,875 |
| Total consumption | 5,438 | 5,600 | 5,601 | 5,602 | 5,603 | 5,250 | 5,300 | 5,450 |
| Total usage | 12,353 | 12,361 | 12,219 | 12,186 | 12,066 | 12,330 | 12,425 | 12,625 |
| Surplus/deficit | 14,649 | 14,798 | 14,288 | 13,963 | 14,819 | 14,830 | 14,975 | 14,850 |
| Ending stocks | 556 | -153 | 80 | -301 | -683 | 257 | 113 | 100 |
| Stocks/usage | 2,293 | 2,140 | 2,221 | 1,919 | 1,236 | 1,493 | 1,349 | 1,449 |

US agri commodity balance sheets

US soybean supply and demand



| <i>(m acres/m bu)</i> | USDA | | | | | | Rabobank | |
|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 21/22f | 22/23f |
| Beginning stocks | 197 | 302 | 438 | 909 | 525 | 256 | 256 | 380 |
| Area harvested | 83 | 90 | 88 | 75 | 83 | 86 | 86 | 87 |
| Yield (mt/ha) | 52 | 49 | 51 | 47 | 51 | 51 | 51 | 51 |
| Production | 4,297 | 4,412 | 4,428 | 3,552 | 4,216 | 4,425 | 4,424 | 4,477 |
| Imports | 22 | 22 | 14 | 15 | 20 | 15 | 15 | 15 |
| Total supply | 4,516 | 4,735 | 4,880 | 4,476 | 4,761 | 4,696 | 4,695 | 4,872 |
| Exports | 2,167 | 2,134 | 1,753 | 1,679 | 2,265 | 2,050 | 2,210 | 2,260 |
| Crush | 1,901 | 2,055 | 2,092 | 2,165 | 2,141 | 2,190 | 120 | 122 |
| Seed/feed/residual | 146 | 108 | 126 | 108 | 99 | 116 | 2,330 | 2,382 |
| Total consumption | 2,047 | 2,163 | 2,218 | 2,273 | 2,239 | 2,306 | 4,315 | 4,432 |
| Total usage | 4,214 | 4,297 | 3,971 | 3,952 | 4,505 | 4,356 | 4,549 | 4,486 |
| Surplus/deficit | 105 | 137 | 471 | -384 | -268 | 84 | 124 | 60 |
| Ending stocks | 302 | 438 | 909 | 525 | 256 | 340 | 380 | 440 |
| Stocks/usage | 7% | 10% | 23% | 13% | 6% | 8% | 9% | 10% |

US agri commodity balance sheets

US wheat supply and demand



| <i>(m acres/m bu)</i> | USDA | | | | | | Rabobank | |
|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22f | 21/22f | 22/23f |
| Beginning stocks | 976 | 1,181 | 1,099 | 1,080 | 1,029 | 846 | 846 | 584 |
| Area harvested | 43.8 | 37.5 | 39.6 | 37.4 | 36.8 | 37.1 | 37.1 | 39.3 |
| Yield (mt/ha) | 52.7 | 46.4 | 47.6 | 51.7 | 49.7 | 44.3 | 44.3 | 46.0 |
| Production | 2,309 | 1,741 | 1,885 | 1,932 | 1,828 | 1,646 | 1,646 | 1,807 |
| Imports | 118 | 158 | 135 | 104 | 100 | 115 | 115 | 100 |
| Total supply | 3,403 | 3,080 | 3,119 | 3,116 | 2,957 | 2,607 | 2,607 | 2,491 |
| Exports | 1,051 | 906 | 937 | 969 | 991 | 860 | 860 | 834 |
| Feed consumption | 161 | 47 | 88 | 97 | 95 | 135 | 135 | 86 |
| FSI consumption | 1,010 | 1,027 | 1,014 | 1,021 | 1,024 | 1,028 | 1,028 | 1,028 |
| Total consumption | 1,171 | 1,074 | 1,102 | 1,118 | 1,120 | 1,163 | 1,163 | 1,114 |
| Total usage | 2,221 | 1,980 | 2,039 | 2,087 | 2,111 | 2,023 | 2,023 | 1,948 |
| Surplus/deficit | 205 | -82 | -19 | -51 | -183 | -262 | -262 | -41 |
| Ending stocks | 1,181 | 1,099 | 1,080 | 1,029 | 846 | 584 | 584 | 543 |
| Stocks/usage | 53% | 56% | 53% | 49% | 40% | 29% | 29% | 28% |

Disclaimer

Non Independent Research

This document is issued by Coöperatieve Rabobank U.A. incorporated in the Netherlands, trading as "Rabobank" ("Rabobank") a cooperative with excluded liability. The liability of its members is limited. Authorised by De Nederlandsche Bank in the Netherlands and regulated by the Autoriteit Financiële Markten. Rabobank London Branch (RL) is authorised by De Nederlandsche Bank, the Netherlands and the Prudential Regulation Authority, and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Further details are available on request. RL is registered in England and Wales under Company no. FC 11780 and under Branch No. BR002630. This document is directed exclusively to Eligible Counterparties and Professional Clients. It is not directed at Retail Clients.

This document does not purport to be impartial research and has not been prepared in accordance with legal requirements designed to promote the independence of Investment Research and is not subject to any prohibition on dealing ahead of the dissemination of Investment Research. This document does NOT purport to be an impartial assessment of the value or prospects of its subject matter and it must not be relied upon by any recipient as an impartial assessment of the value or prospects of its subject matter. No reliance may be placed by a recipient on any representations or statements made outside this document (oral or written) by any person which state or imply (or may be reasonably viewed as stating or implying) any such impartiality.

This document is for information purposes only and is not, and should not be construed as, an offer or a commitment by RL or any of its affiliates to enter into a transaction. This document does not constitute investment advice and nor is any information provided intended to offer sufficient information such that is should be relied upon for the purposes of making a decision in relation to whether to acquire any financial products. The information and opinions contained in this document have been compiled or arrived at from sources believed to be reliable, but no representation or warranty, express or implied, is made as to their accuracy, completeness or correctness.

The information contained in this document is not to be relied upon by the recipient as authoritative or taken in substitution for the exercise of judgement by any recipient. Any opinions, forecasts or estimates herein constitute a judgement of RL as at the date of this document, and there can be no assurance that future results or events will be consistent with any such opinions, forecasts or estimates. All opinions expressed in this document are subject to change without notice.

To the extent permitted by law, neither RL, nor other legal entities in the group to which it belongs accept any liability whatsoever for any direct or consequential loss howsoever arising from any use of this document or its contents or otherwise arising in connection therewith.

Insofar as permitted by applicable laws and regulations, RL or other legal entities in the group to which it belongs, their directors, officers and/or employees may have had or have a long or short position or act as a market maker and may have traded or acted as principal in the securities described within this document (or related investments) or may otherwise have conflicting interests. This may include hedging transactions carried out by RL or other legal entities in the group, and such hedging transactions may affect the value and/or liquidity of the securities described in this document. Further it may have or have had a relationship with or may provide or have provided corporate finance or other services to companies whose securities (or related investments) are described in this document. Further, internal and external publications may have been issued prior to this publication where strategies may conflict according to market conditions at the time of each publication.

This document may not be reproduced, distributed or published, in whole or in part, for any purpose, except with the prior written consent of RL. By accepting this document you agree to be bound by the foregoing restrictions. The distribution of this document in other jurisdictions may be restricted by law and recipients of this document should inform themselves about, and observe any such restrictions.

A summary of the methodology can be found on our website www.rabobank.com

© Rabobank London, Thames Court, One Queenhithe, London EC4V 3RL +44(0) 207 809 3000



Rabobank